

# Making District Disaster Management Plan Pro-Poor



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#### Editorial Advisors:

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

**Dr. Ian Davis**  
Senior Professor in Disaster Risk Management for Sustainable Development, Lund University Sweden and Visiting Professor in Cranfield, Oxford Brookes and Kyoto Universities

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

**Mihir R. Bhatt**  
All India Disaster Mitigation Institute, India

**Dr. Satchit Balsari, MD, MPH**  
The University Hospital of Columbia and Cornell, New York, USA

**Dr. T. Nanda Kumar**  
Member, National Disaster Management Authority (NDMA), India

**Zenaida Delica Willison**  
Advisor, Special Unit South-South Cooperation in UNDP, Thailand

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# Making District Disaster Management Plan Pro Poor: Local Experience

Governments around the world play a pivotal role in today's historic effort to achieve the Millennium Development Goals (MDGs). Disaster-proofing development is one of the most cost-effective investments in poverty reduction that a country can make. Time and again, the poor fall victim to, or see schools, hospitals, homes and whole livelihoods destroyed by floods, earthquakes or other natural hazards. Yet this reversal and destruction of development gains are mostly avoidable.

The MDGs have widely benefitted children and young people. But it is still a major unfinished business as the achievements of the MDG 2015 did not go with expected rates. There are as well emerging and neglected issues, such as growing urbanisation and insufficient investment of efforts in disaster risk reduction and climate change adaptation, that must be addressed boldly in the post-2015 development agenda to ensure a world fit for children.

A starting point in the context of India will be to strengthen disaster preparedness and disaster risk reduction effort at the forefront district level. A critical review of district disaster management plans and identification of bottlenecks in implementation needs to be done when applying the pro-poor lens. Making disaster risk reduction an essential part of poverty reduction strategies outlined in DM plans at the district level will protect and enrich the poor by increasing their disaster resilience. Such approaches will include the broad involvement of



Photo: AIDMI.

Women and children are the key stakeholders to make DDMP inclusive.

communities, especially the most vulnerable and marginalised, as active participants in the revision processes of the DDM plans in taking their opinion and suggestions on how resilience can be improved. It is essential that communities have the opportunity to plan for themselves. Such approach will safeguard development investments. This will require the transfer of funds, technology and knowledge to the most vulnerable communities through multi-stakeholder and multi-disciplinary collaboration and partnerships at all levels.

Particular attention needs to be given to involving women and children as active participants. Empowering women and children in disaster risk reduction decision-making, especially for community development, natural resource management, drought-prevention, water management and subsistence

agriculture, will accelerate the achievement of the MDGs. Making schools, health facilities, and water and sanitation infrastructure disaster resilient will protect access to universal education, and primary health and emergency care. It will also help lower infant mortality, improve maternal health, and safeguard efforts to eradicate major diseases. Curbing rapid and ill-planned urban growth will decrease disaster risks.

Giving a voice to the poor and designing pro-poor plans and policies is a guarantee for success as each human being wants to live in safe environment. Communities are also best placed to offer innovative, cost effective solutions. We must listen to the most deprived to ensure the preservation of development gains. ■

– Margarita Tileva,  
United Nations Children's Fund (UNICEF)

# A Human Rights-based Approach and District Disaster Management Plans

Developing disaster management plans at the local level is the right thing to do. While national policies and plans are essential, when a disaster occurs it is almost always local communities and local authorities who are on the front line of response. Such planning processes should include both measures to reduce the risks of disasters and to enable an effective response when disasters do happen. And there are ways to ensure that such plans and policies respect the human rights of affected communities. In our work to promote a rights-based approach to disaster management, we have found that one of the most important components is to simply raise awareness among communities and political leaders of rights issues. People shouldn't lose their basic human rights when a disaster occurs!

International guidelines on protecting people in situations of natural disasters<sup>1</sup> identify four categories of rights which should be upheld when planning for, responding to or recovering from a disaster. In a sense they form a sort of checklist which can be used when evaluating disaster management plans.

First is the imperative to protect the lives, security and physical integrity of persons affected by disasters and to uphold family unity. This group of rights directs attention to life-saving measures, such as evacuations and protection against the secondary impacts of natural disasters. People sometimes need to be moved from

areas where their lives are at risk but they need to be moved in a way that upholds their rights. Measures should be taken to ensure that families are not separated and that people are safe when they live in temporary shelters, with families or among communities. And people also need to be protected against violence, including gender-based violence, which unfortunately often increases in the aftermath of a conflict.<sup>2</sup>

Secondly, there is an imperative to protect rights related to the provision of food, health, shelter and education in the aftermath of a disaster and to do so in ways that uphold the rights of affected people. This means that particular attention must be paid to groups who are particularly vulnerable and marginalised and to ensure that assistance is provided to people on the basis of need and is not discriminatory in nature.



Photo: AIDMI.

Rights of old-aged people in emergencies cannot be neglected.

A third set of rights relates to housing, land and property; restoration of livelihoods; and secondary and higher education. Issues around land and property are particularly contentious in many parts of the world and women (particularly widows) and orphaned children often need particular assistance to reclaim housing or land deeds after a disaster. Rehabilitation of livelihoods after a disaster requires not only political commitment and technical expertise, but also a sensitivity to the needs and rights of particular groups.

Finally, there is a set of rights related to documentation, freedom of movement, and to civil and political rights that need to be upheld, particularly as time goes on.

In applying a rights-based approach to disaster management, the issues of information and participation of affected communities are crucial. People have a right to information and a right to participate in decisions that affect their lives – including preparedness training and measures to reduce the risks of disasters. These are not 'luxuries' to be considered after basic needs have been met, but should be incorporated into all phases of disaster management. Moreover, experience has shown that supporting community participation isn't just the morally right thing to do—it also results in more effective disaster preparedness, response and recovery. ■

– Elizabeth Ferris,  
Brookings-LSE Project on Internal  
Displacement

1 IASC Operational Guidelines on the Protection of Persons in Situations of Natural Disasters, 2011, <http://www.brookings.edu/research/reports/2011/01/06-operational-guidelines-nd>

2 See Canadian Red Cross, "Predictable, preventable: Overcoming the challenges of violence during and after disasters", <http://www.redcross.ca/article.asp?id=42867&tid=001>

## Placing Community First...

Community involvement in designing DDMP is equally important as the other stakeholders. Caritas India has wide experience in implementing program with a close involvement different communities especially *Dalits* and Tribals.

During any planning process, the affected people are treated merely as beneficiaries. They are deprived of any opportunity to participate in decision-making processes meant for them.

Caritas India under Community Managed Disaster Risk Reduction (DMDRR), this aspect has been challenged in a major way. It has been argued that the affected people have traditional wisdom, accumulated over years, as they have experienced hazards over many years. This knowledge needs to be integrated in the formal planning process. Traditional planning process does not allow sharing of such knowledge. It has been identified that as the affected people may not be able to present

their ideas in same way, as planners would do. It is important to use a technique that would facilitate them to articulate their ideas in a comprehensible manner. In this process, tools of Participatory Learning and Action are used to involve the community in information sharing and decision making processes.

Experiences show that these exercises not only allow retrieving knowledge from the local community but also instill in them a sense of confidence and changing mindsets. The involvement of excluded community is given importance, especially validating the information with community leaving in isolation.

Participatory Disaster Risk Assessment is a process oriented technique that provides an opportunity to the concerned people (affected people) to participate in different exercises/ discussions so that they can develop an in-depth understanding on the various aspects

pertaining to their village/slum/ward. While participating in these exercises, people get a chance to explore, understand and draw lessons on various aspects of the concerned issue. It enables people to do their own analysis and develop their own points of view in a more informed way. The exercises are designed in such a way that different kinds of data/information that is required for taking appropriate decision or to prepare plan of action, implementation and monitoring, emerges through these discussions. As the entire process is participatory, people get aware why certain decisions are taken and take ownership of such decisions. This has proven to be a useful technique to tap the potential of the people. The picture of community can be changed though this process of community involvement. Involvement of community is assessment and planning exercise will make the DDMP pro poor. ■

– Girish Peter

State Officer, Caritas India, Bihar



Community Members Analysing the Problem.



Women in Planning Process.

Photo: Caritas India, Bihar

# "A Change of Mind is Needed"

## *Ecosystem-based Adaptation and Disaster Risk Reduction Measures in West Champaran*

Ecosystem-based climate change adaptation (CCA) and disaster risk reduction (DRR) are approaches that build resilience and reduce the vulnerability of local communities to disasters through the use of natural resources. These natural resources are considered as ecosystem services, and they can include both natural or managed ecosystems. The ecosystem services contributing to CCA and DRR were identified in three villages in West Champaran district of the state of Bihar in order to find out sustainable strategies for the District Disaster Management Plan (DDMP).

The role of ecosystem services in supporting adaptation to climate change is a relatively new issue in the scientific arena. There is currently a global discussion going on, exploring whether ecosystem-based solutions can be more cost-effective and beneficial for societies than adaptation measures that are technical or infrastructural in their nature. Although the scientific evidence base relating to the role of ecosystem services in reducing vulnerabilities to many disasters is nascent, investment in natural ecosystem management has long been used to reduce the risk of disaster. Ecosystems can be seen as contributing in two ways. Firstly, they can reduce the physical exposure to a natural hazard by serving as a barrier or buffer. Secondly, ecosystems can reduce peoples' vulnerability to hazards by providing essential goods and livelihoods.

Bihar is not just one of the poorest but also one of the most disaster-prone states of India. It lies in the Himalayan catchment in the foothills

of Nepal. The state is especially prone to severe floods every year, affecting 22 of its 38 districts.

West Champaran district is the northern-most district of Bihar. The main source of income in the district is agriculture. Floods are the main hazard in West Champaran: the floods occur in July after the rainy season has started and they may continue until September. While the largest river, Gandak, floods for several weeks, the smaller Sikrahana brings flash floods that last only for 2-3 days. The major problem on the banks of Gandak is erosion and siltation. During the floods, many people migrate to other villages and cities. Floodwater damages houses, warehouses and belongings, kills domestic animals and leads to displacements and even human trafficking when children are separated from their parents. The crops that are exposed to flooding are rice and sugarcane all the other crops are harvested before the floods occur.

The ecosystems that contribute to adaptation and disaster risk reduction in the three villages are mainly managed ecosystems. None of the villages had forest or other natural ecosystems in their respective areas.

Bamboo is one of the most important ecosystem services in the villages as it provides material for houses, warehouses and shelters. The roots of bamboo plants are deep so they are used in erosion control. The leaves are also an important source of food for animals during the floods.

Bamboo grows quickly and does not require fertilisers or pesticides. It is

seldom affected by flood. Bamboo is also very easy to reproduce and grow. Furthermore, households can earn additional income from selling the bamboo they do not need for themselves. The downside of bamboo is that it suffocates other plants so it cannot be grown together with e.g. edible plants. The availability of land may also restrict the possibilities for growing bamboo.

Two of the studied villages are taking part in an experiment by Bettiah Sewa Kendra on flood-tolerant rice variety Swarna Sub1. Swarna Sub1 has a gene from a weed and it is expected to survive 14-15 days submerged. If the results of the experiment are promising, the farmers are expected to change from the conventional hybrid variety into Swarna Sub1. At the moment the price of the seeds are said to be the same as that of the conventional Swarna rice.

Trees are important in preventing erosion on the riverbanks. However, the village communities had not been planting trees themselves. All the trees for prevention of erosion were planted as part of governmental job scheme and mainly on the artificial embankments. The trees included also fruit trees such as mango and guava.

Sugarcane is often mentioned as more flood-tolerant than rice since it can tolerate flooding for 3-5 days. Because the flooding in one of the villages was more short-term than in the other two villages, the farmers changed successfully from rice to sugarcane. The sugarcane, however, requires nearby sugar mills in order to be profitable and there were

significant differences in people's access to sell their sugarcane to the mills. It was mentioned that "powerful people" can sell their sugarcane to the mills at a better price than the others, who have to sell it at the local market with a smaller profit.

Overall, the ecosystem-based solutions were not emphasised by the communities or government actors. The approach was novel also to the NGOs working in West Champaran. It was notable that there is a high dependency among the people on the government or NGO programmes and a lack of community-based action and solutions.

Ecosystem-based solutions was sometimes considered as "too simplistic", or beneficial only to the environment and not to the people. As one of the NGO representatives said, "A change of mind is needed" - although ecosystem-based solutions are not a panacea either, it should be recognised that healthy ecosystems have a positive impact on people and livelihoods in a long run.

The DDMPs should have a focus on adaptation and risk reduction. The districts should do comprehensive ecosystem assessments and study their role in disaster risk reduction.

While the projections of the impacts of climate change in Himalayan region have still low confidence according to the Intergovernmental Panel on Climate Change, the DDMP should address the possibility of variation in monsoons and increased precipitation. After all, climate change potentially increases the vulnerability of the poor and those dependent on natural resources, especially agricultural farmers. ■

– **Maaria Haikarainen**,  
King's College London

## INFORMATION SHARING

# Embankment Legacies and their Effects on Social Systems

## *A Case Study of West Champaran, Bihar*

Natural hazards can lead to disasters through the actions of human interventions. Artificial embankments or "bunds" are technical forms of flood management. They are constructed to protect people and assets from river flooding. However, there is a spectrum of opinion regarding the benefits and disadvantages of employing them as a means of flood protection.

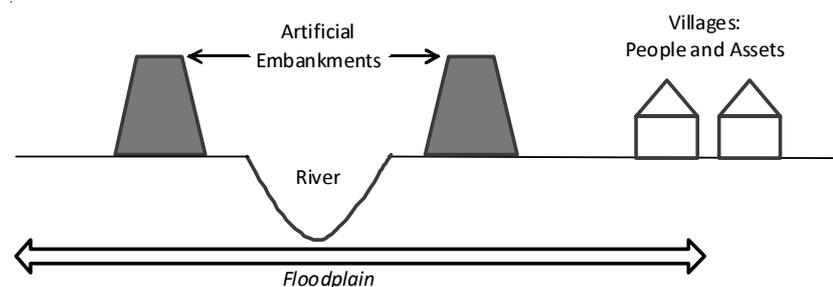
This summary looks at the villages of Pujaha, Godhia and Badiya Tola in West Champaran, Bihar. They were all once protected by artificial embankments that have since failed with many repercussions on the social systems within the three villages. The impacts are explored through interviews and mapping exercises with villagers, village leaders, NGO workers and policymakers to provide a body of research to inform readers on the merits and negatives of embankments.

The research found that artificial embankments provided benefits to the villages, but that these were overwhelmed by the number of drawbacks observed. Their effectiveness appeared to decrease over time and they were undermined by upstream factors, whilst themselves affecting downstream settlements.

The embankments altered villager's perception of risk and seemed to lead to complacency with regard to flood threats. The embankment breach had also led to outwards migration to urban settlements; those who remained were largely forced to due to financial restrictions from decreased land values. Some chose to remain, despite offers of government land compensation, for their livelihoods and some because of their social connections in the area. Several coping mechanisms for those that remained were explored including the use of flood-tolerant strains of rice.

Disaster capitalism and corruption seemed to be spurred by contractors and their ability to influence politicians to construct embankments and to reduce material quality in order to maximise profits. Accounts of this were gained from villagers and NGO workers.

The technical structures may also be maladapted to cope with future climate change due to their observable inflexibility and other non-structural flood management solutions may be required. A spectrum of opinion was discovered during the study with villagers, NGO workers and policymakers having different opinions. They can be



grouped into (1) those that hate them, (2) those that want more of them and (3) those that see advantages and disadvantages in them and want to review their construction on a case-by-case basis.

Overall, embankments can be good in offering flood protection to individual villages in the short-term. However, they can be undermined by upstream barrages, siltation, soil erosion and natural changes in the river, all of which cannot be predicted with total accuracy. Therefore, they are not guaranteed in the long-term and can cause great damage if/when they fail in the future. Their impacts extend beyond where they are built and can negatively affect downstream villages. As Dixit (2009:77) commented on embankments, "[there are] two types: those that have breached and those that will breach".

There are several recommendations for the DDMP of West Champaran on the subject of artificial embankments. In the 'Hazard Analysis' of the proposed DDMP, settlements near to existing artificial embankments should be considered as exposed despite the presence of these technical structures. They are exposed to the possibility of embankment failure and the risk of flash floods. The villagers near to embankments may also become less resilient to the effects of the river due to the adverse effects on their livelihoods and social structures.

The Water Resources Department (WRD) appears to be in charge of the release of water from upstream barrages in the district. Better coordination between District Officials and the operators of the upstream barrages such as the WRD could lead to improved water management and water release. This could in turn benefit villages that are downstream from the barrages by reducing the incidence of high river volume releases, reduce flash flood risk and reduce the undermining of



Photo: Steven Forrest (2012)

Embankments can be good in offering flood protection.

artificial embankments downstream. The WRD should be encouraged to take a role in the DDMP, which could also improve their accountability and reduce sudden upstream barrage water releases.

Embankment monitoring takes place in some but not all villages in the district. Community-run monitoring can lead to the identification of sections of the embankment that may breach before flood events. A system to then report these incidents to district officials, for repair, could decrease the likelihood of embankment failures.

Mock drills and attempts to improve awareness of the risk from flooding should be undertaken in villages in close proximity to embankments. This would counter the perceived "it will never happen to me" mindset and hopefully overturn complacent attitudes to the flood risk. In improving villager's attitudes to flooding there will be better flood preparedness and a more proactive stance on the natural hazard. UNICEF reported that they faced a similar problem and held "realisation meetings" with the villagers in order to empower them. They initially had limited success, but may now be

yielding positive results. There should also be improved awareness of the issues surrounding artificial embankments—both the positives and negatives. Currently many people are not fully informed; this includes villagers, village leaders, district officials and NGO workers.

In terms of 'Recovery and Reconstruction Strategies' one aspect that is not currently proposed in the DDMP is to reduce the outward migration of both the skilled and unskilled from villages affected by floods. This reduces village cohesion, can lead to a reduction in labour for village projects and leave the most socially isolated and financially restricted behind to deal with the flood repercussions. Strategies could include alternative livelihood creation, MNREGA project employment and including local people in both the planning and implementation of reconstruction works in their villages.

The findings from this research will hopefully inform future policy on DDMPs and provide knowledge of artificial embankments for policymakers and NGOs. ■

– Steven Forrest,  
King's College London

# Resilience and the District Disaster Management Plan of West Champaran

*Exploring the potential for integration of resilience thinking and disaster risk management in a wider development context.*

This article presents findings from four-weeks research in the district of West Champaran, Bihar, India, investigating resilience in the context of DRR and development.

The state of Bihar is particularly vulnerable to flooding and suffers greatly due to its high population density and physical location. Between 2007 and 2008 flooding submerged nearly 40% of Bihar's districts, destroying 10,000,000 hectares of crops, 20,000 houses and badly damaging another 44,000 houses. The 2007 flood was described by the UN as the worst flooding in memory to hit Bihar.

In 2004, in an effort to reduce the vulnerability of many states to disasters, such as the flooding in Bihar, the National Institute of Disaster Management (NIDM) organised workshops with the Ministry of Home Affairs and the UNDP to decide on how best to implement disaster management activities. This led to the establishment of the 2005 Disaster Management Act (DMA). The DMA required each district to establish an organisational body, to be known as the District Disaster Management Authority (DDMA). The DDMA's were to be the leading bodies in each district, in charge of planning, coordinating and implementing District Disaster Management Plans (DDMP). The DDMPs aim to incorporate disaster prevention, preparedness and response / recovery strategies. This article explores the concept of resilience as a



Photo: Sumiko May (2012)

Infrastructure development should be disaster resilient.

possible means of up-scaling DRR and development and contributing to the DDMP.

Resilience is a concept that has emerged through the joining of multi-disciplinary traditions (Mitchell and Harris, 2012). It is a risk reduction approach which argues for decreased vulnerability through a flexible approach to capacity building. Many governments / officials are reluctant to address vulnerability due to the increasing uncertainty of disaster variability, frequency and intensity, particularly light of climate change. Therefore a resilience approach is being considered increasingly important as it is a flexible win-win approach to DRR.

Resilience encourages strategies that allow for increased uncertainties by supporting and encouraging innovative ideas that capitalise on

and diversify opportunities (Pelling and Mustafa, 2010).

How to identify and measure specific components of resilience and use them to examine the opportunities, constraints and impacts that resilience and mitigation can have on DRR and development, is the next step. Pelling and Mustafa (2010) have identified 10 components of resilience:

1. Diversity
2. Joined-up governance
3. Flexibility
4. Localism
5. Preparedness
6. Equity
7. Social capital
8. Non-linearity
9. Process learning
10. Co-responsibility

Many believe that the integration of resilience in DRR and development

is key to simultaneously increase adaptive capacity, poverty reduction, decrease hazard exposure, reduce vulnerability and encourage long-term environmentally sustainable solutions all in a context that is conducive to development.

This article recognises the need to contribute empirical data on the dissonance between resilience and development (growth) within the context of the proposed DDMP, in the specific context of flooding in Bihar. It aims to identify gaps and determine existing barriers to the integration of resilience thinking in existing DRR and development strategies and to determine the potential for better integration of DRR within the development paradigm in the hope of up-scaling existing methods of DRR, which can be used to influence the revised DDMP. This research contributes to the existing discussion on the role of resilience characteristics in development and DRR strategies, such as the aforementioned DDMP and whether resilience increases or decreases vulnerability. It also investigates whether the integration of DRR and development can positively reduce overall vulnerability not just for the short-term, but also the long-term. It investigates how resilience is currently positioned within existing DRR, development and DDMP policies in Bihar, in particular the district of West Champaran. It then explores what elements or characteristics of resilience can be identified and whether those characteristics were implemented intentionally as part of a resilience strategy or are simply components of a wider approach. Data analysis has determined how appropriate it is to enhance resilience components of the various policies. It discusses whether a more resilience-based approach will enhance the existing DRR and development strategies or by taking such an approach in fact distort or



Photo: AIDMI.

Shelters in flood-prone areas need to be resilient.

undermine wider development objective.

Data was collected in three phases over four-weeks during a series of semi-structured interviews.

**Phase 1.** Interview Panchayat community leaders and any individuals working as community project coordinators, involved in DRR and development programmes at a community level, in the communities of; Godhaiya, Pujaha and Badiya Tola.

**Phase 2.** Semi-structured interviews with individuals involved in the implementation of DRR or development policies.

**Phase 3.** A series of semi-structured interviews with policy makers (NGOs, stakeholders, government...) involved in any element of DRR, CCA and / or development, whether that be directly or indirectly

Findings showed that the ten components of resilience identified by Pelling and Mustafa (2010) were evident in many of the DRR and development policies. However, in the implementation process many of these components were lost and it was

difficult to identify them at the community level. The research does suggest however that a more resilience-based approach will help to increase adaptive capacity, reduce poverty, decrease hazard exposure, reduce vulnerability and encourage long-term environmentally sustainable solutions if implementation was effective. Research also found that the resilience components identified by Pelling and Mustafa (2010) were not conclusive.

To be truly resilient one must take into consideration the social and cultural norms of a community and the complicated realities of corruption and bribery as well as the trade-off between DRR and development. While in theory the ten components of resilience should work effectively, in reality the practical implementation of such components is more complex. Even if the concept of resilience is fully considered during the planning and policy making process, if it is not efficiently turned into actions and implemented at the village level then such concepts are of little consequence and do little to truly impact on DRR and development. ■

– Sumiko May,  
King's College London

## Hazards, Vulnerability and Capacity Building of West Champaran – Macro Analysis

Bihar lies mid-way between the humid West Bengal in the east and the sub humid Uttar Pradesh in the west. It is bounded by Nepal in the north and by Jharkhand in the south. The Bihar plain is divided into two unequal halves by the river Ganga that flows through the middle from west to east. West Champaran is northern part of the Bihar. Near to Nepal and Uttar Pradesh<sup>1</sup>.

Flood and other disasters occur frequently in the northern parts of Bihar in India. North Bihar is usually badly affected by flood due to heavy rain in the Nepali portions of river catchments. Food and drinking water become scarce, making people consume contaminated water which cause water borne diseases. Infrastructural and communications facilities also are disrupted and schools remain closed for at least

three months. Loss of agricultural livelihood leading to heavy migration, poor governance, and service delivery, compound the perils of the flood-affected community<sup>2</sup>. During the floods, people in West Champaran face many problems. There is a great loss of human life and livestock often affecting the poor in the rural population. Their houses have been destroyed and they have few livelihood options. All other livelihood activities also cease. During the floods, the average cattle loss is relatively higher in comparison to human loss.<sup>3</sup>

Communities in this area are extremely vulnerable economically, due to their lack of land ownership and reliance on the landowners, lack of savings, and lack of employment opportunities. Villagers earn only 30 rupees a day for their work in the

fields, and only have work for approximately 110 days of the year. Communities are dependent upon moneylenders, and often have to borrow at 10 per cent interest (monthly) to buy medicines, repair homes etc.<sup>4</sup> The floods in northern Bihar have led to massive displacement and destruction of life and property. It has affected over half a million children who are the most vulnerable victims of child mortality, malnutrition, disease, trafficking, and being orphaned.

A combination of all the strengths and resources available within a community, society, or organisation that can reduce the level of risk and the effects of a disaster.<sup>5</sup> Education is a tool that can play a vital role in improving the socio-economic condition of the nation. It empowers citizens with analytical abilities, leads to better confidence levels and fortifies one with will power and goal-setting competencies<sup>6</sup>.

West Champaran will be highlighted as the model district in the context of making District Disaster Management Plan (DDMP) Pro-Poor. The process of making DDMP in West Champaran is led by Caritas India. The process will focus on streamlining the government's major flagship programs like MNREGA, Total Sanitation Campaign, Indira Awas Yojna, Swarn Jayanti Rozgar Yojna etc for building communities resilient to hazards. ■

– Arpan Abinash



Photo: AIDMI.

Most of affected communities do not know the evacuation route during floods.

1 <http://www.biharonline.in>

2 <http://reliefweb.int/node/>

3 [www.cambridgeforecast.org](http://www.cambridgeforecast.org)

4 <http://tilz.tearfund.org>

5 <http://www.tezu.ernet.in/cdm>

6 <http://bepwchamparan.org>

# Disaster Management – A District Level Approach Perspective

India has been traditionally susceptible to natural calamities on account of its distinctive geo-climatic conditions. Floods, droughts, cyclones, earthquakes and landslides have been recurring phenomena. About 60% of the landmass is prone to earthquakes of various intensities; over 40 million hectares is prone to floods; about 8% of the total area is prone to cyclones and 68% of the region is vulnerable to drought.<sup>1</sup>

The approach to the District Disaster Management Plan emphasises on preparedness, prevention, response and mitigation. The procedures mentioned in the plan intend to sustain developmental gains, minimise loss of lives and conserve natural resources. Especially in the context of India, being a country which is and will be highly affected by climate change impacts, the conservation of nature plays a crucial role.

A healthy and functioning ecosystem such as coastal areas, wetlands and forests reduce human vulnerability to hazards by acting as a protective shield for supporting livelihood and reducing the impact of disastrous natural events. Ecological measures that support a sustainable ecosystem, such as promoting integrated water resources management and good water governance help in conserving nature - and hence need to be given utmost priority.<sup>2</sup>

The State of Gujarat for example is vulnerable to many disasters like



Afforestation in Gujarat.

earthquake, drought, flood, cyclones etc.<sup>3</sup> We at GIZ IS India are striving hard to improve the quality and extent of forests in the State of Gujarat: Currently we are implementing the "Gujarat Forestry Development Project" in which we mainly focus on afforestation, which can in the long-run facilitate in decreasing disasters. The rehabilitation and protection of the forests help prevent soil erosion, the impacts of heavy storms and avoid floods by stabilising the ground, to avert surface run off. The key results of this project so far have aided in significant biomass accumulation, increased soil fertility, greater water retention capacities and establishment of locally adapted

forests. Furthermore models of sustainable forest management practices and institutional arrangements for wider replication (beyond Gujarat) are provided.

Rising out of natural disasters, however, there certainly is a pressing need for improvement and for strengthening existing institutional arrangements with the support of trained expertise to make the initial response to the District Disaster Management Plan more effective. ■

– **Hans-Herrmann Dube**,  
Director, GIZ International Services,  
Regional Office South Asia,  
New Delhi

1 National Disaster Management Division, Ministry of Home Affairs, <http://www.ndmindia.nic.in/EQProjects/Disaster%20Management%20in%20India%20-%20A%20Status%20Report%20-%20August%202004.pdf>.

2 IUCN International Union for Conservation of Nature, [http://www.iucn.org/about/work/programmes/ecosystem\\_management/disaster/solutions/](http://www.iucn.org/about/work/programmes/ecosystem_management/disaster/solutions/).

3 Gujarat State Disaster Management Authority, <http://www.gsdma.org/>.

## Migration and DDMPs

District Disaster Management Plans (DDMPs) are a local and sustainable ways to prepare for disaster risk. But often these DDMPs leave out the fact of "in migration" and "out migration" during, after, and between two disasters. The following very rough list shows the key issues found from the field related to migration and DDMPs.

- We know little about the exact nature of positive contribution of "in migration" after a disaster. The experience is not recorded for policy use.
- Limited experience is available in policy making on protection of Human Rights and dignity of migrant (in and out) victims to shape the DDMP features.
- There are examples where migration (in and out) has caused local crisis or an "event" and DDMPs hardly not account for ways to deal with such "events".
- In India migration around the disaster event is "mixed migration flow" where the migrant group is large and diverse and dispersed. DDMPs have no ways to deal with "mixed migration flow".
- Current DDMPs do not spell out or indicate what legal framework exists to create a district level legal protection mechanism for the migrants as vulnerable communities or migrants as victims.
- Returning home is assumed to be the "good" thing in most DDMP processes. But what is the real experience of the migrating victims? We know little.
- The DDMPs, as they are, do not deal with reintegration programme for the returnee migrants though the number of migrants and frequency of the need for reintegration are often large.
- DDMPs deal with public "local hosting" of migrants but in India issues of "private local hosting" is more common and DDMPs need to pay more attention on this.
- DDMPs in the border districts deal with, on routine basis, transnational migrations after a disaster (less on Western border) and there is no provision to address this in most DDMPs. ■

– Mihir R. Bhatt,

All India Disaster Mitigation Institute

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**ALL INDIA DISASTER MITIGATION INSTITUTE**

411 Sakar Five, Near Natraj Cinema, Ashram Road, Ahmedabad-380 009 India

Tele/Fax: +91-79-2658 2962

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