

India



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Germany

Human resource development programme in disaster risk management in India – HRDP DRM

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Photo by Dr. Rakesh Dubey

Abstract

Considering the natural, economic and social diversity of India, as well as its large population and differentiated structure, creating a national capacity building programme for Disaster Risk Management in India is a huge challenge. The project is slated to last for three years (2007-2010) and covers industrial as well as natural disasters. Most of India is a highly disaster prone region with natural disasters ranging from earthquakes, landslides, flooding and cyclones to droughts. A total of around 1,700 Major Accident Hazard (MAH) units define the dimensions of the capacity building tasks. Capacity building is the basis for a proactive strategy that requires a collaborative effort when it comes to both on-site and off-site emergency plans for civil society, regulators, planners and local civil administrators. The first phase of the ongoing project laid the groundwork for the establishment of a capacity building system. The necessary tools and platforms have been decided for an operation plan focussed primarily on professional skills training for management involving training providers, awareness-raising campaigns, and field testing through mock drills. Plans are made to upgrade the project in the coming years to cover all of the states and relevant districts in India. The Disaster Management Institute (Bhopal) is a nodal training provider working in co-operation with InWEnt Capacity Building International and the GTZ-ASEM under the Indo-German Bilateral Cooperation programme.

Goals and Objectives

The main objective of the project is the development and implementation of a system for human resource development that provides tools for training needs-analysis, a customer-tailored training standard, awareness-building capacities, quality control systems combined with accreditation procedures for training providers, training impact evaluation, and mock drills. An internet-based documentation and dissemination system is also vital. Train-the-trainers programmes have to be developed to cope with the need to upscale and reach the whole country.

The National Disaster Response Force with its network of training providers is the partner. The project is implemented in close cooperation and under the guidance of the Indian government's National Disaster Management Authority.

The Initiative

The scale of the problem posed by Industrial Disaster Risk Management (IDRM) in India represents a major challenge. There are approximately 1,700 Major Accident Hazard (MAH) units in the country, as well as a large number of small and medium enterprises. The challenge is to address business parts and general areas where India is still weak in enforcing provisions laid out in the Environment Protection Act and Disaster Management Act for effective on-site as well as off-site emergency management planning for both industry and local/regional governments. Disaster risk in the transportation of hazardous substances, operational issues of compliance, and the enforcement of existing rules are areas that require immediate attention. One of the most important initial steps is capacity building of all involved stakeholders through establishing and improving demand-oriented training capabilities of training providers and training facilities in industries as well as in institutions active in prevention and response.

At first, the project concentrates its human resource development activities in the areas of off-site plans, on-site plans and mock drills. The MAH industries have to prepare and implement on-site emergency plans and participate in the preparation of off-site emergency plans set up by district administrations in line with regulatory provisions. They also have to participate in mock drills to test the operation for the worst case scenario. The exercises that are implemented for industrial and natural disasters provide data for improving existing plans. Along with other duties, the state, district and local crisis groups involved in the project have the following cumulative responsibilities: reviewing all district off-site emergency plans; assisting the state government in planning and preparing for chemical accidents; natural hazards and their mitigation and management; continuously monitoring the post-accident situation; and conducting frequent full-scale mock drills.

The project began in December 2007. It is still in its initial phase, and is slated to end in December 2010. It is likely, however, that it will be extended so that the other pilot activities take place in all of India's states and use the experiences for an increased focus on natural Disaster Risk Management. The project is implemented in its first phase by the DMI (Bhopal - Madhya Pradesh) as India's nodal training institution for industrial disaster risk management, which is becoming an autonomous "Centre of Excellence" sponsored by InWent – Capacity Building International and by the "Advisory Service for Environmental Management" programme set up by GTZ-ASEM. It is also supported by the Indian government's National Disaster Management Authority (NDMA). The first initiatives are in Andhra Pradesh and other priority states like Gujarat, Rajasthan, Maharashtra, Tamil Nadu and Assam. In the beginning, they will cover oil refineries and various types of chemical industries identified as MAH industries according to Indian laws. As the project develops further, other states and industries are going to be covered.

Partners in the implementation process are the MAH industries (private) and industrial estate authorities (public) who engage in both finance, design and the implementation of on-site and off-site emergency plans. The second phase, starting in 2009, will expand the project to natural disaster risk management with the focus on the National Disaster Response Force and their training infrastructure and cooperating training institutions.

Outcomes and Activities

For the first time in India, a national workshop (April 2008) has discussed the strategy for a pilot phase “Capacity Development for Disaster Risk Management (DRM)”. The workshop brought together the Indian apex body for disaster management - the National Disaster Management Authority - with industrial associations, officers in charge of disaster risk management of major MAH industries, district collectors, the administrative heads of districts, chief inspectors of factories and boilers, the responsible authority for IDRM in each state, state industrial development corporations, state pollution control boards, the Central Labour Institute, emergency response centres, training providers for industrial managers, and the National Civil Defence College. An advisory board has also been constituted to follow the process, and is responsible for mitigating emerging discrepancies between public and private stakeholders. The detailed action plan is reflected in the decision to outline an operation plan for the next 3 years, and the basics of this operation plan were approved during the workshop. The discussions revealed the urgent need for a communication platform and facilitation of the possibility for frequent talks.

The specific target institutions/persons are:

- Authorities: those concerned with the District Disaster Plan under the Environment Protection Act and Disaster Management Act, as well as policymakers from the relevant ministries (both federal and state); district administration; state and district crisis groups;
- Emergency and rescue teams and emergency response agencies: police, fire stations, medical services, civil defence, the armed forces, Coast Guard, Home Guard, the transport agency from district administration;
- Industries: management and employees, both small and large scale;
- Public: including mutual aid response groups, NGOs and educational institutions; and
- Training providers: offering human resource development services for the targeted groups.

The Good Practice

Considering the natural, economic and social diversity of India, as well as its large population and differentiated structure, creating a national capacity building programme for Disaster Risk Management in India is a huge challenge. Disaster Risk Management is viewed as a continuum that can be divided into two major phases: (i) the proactive or pre-disaster phase (prevention, mitigation and preparedness), and (ii) the recovery or post-disaster phase (response, rehabilitation and reconstruction).

Capacity building provides the basis for a proactive strategy that starts with the creation of awareness about risk assessment, risk reduction, and risk prevention, while also examining potential threats or dangers and their mitigation. The appropriate expertise of key figures in education, health, science, administration, the corporate sector and civil society to respond to and deal with man-made disasters is also a focus. It will take a joint effort to overcome the lack of awareness that currently marks industries, state and district authorities, including the respective crisis groups, managers and planners of industrial estates, the population, and its civil organisations. The first step is to streamline mutual planning and implementation of human capacity building between all of these stakeholders on a refunding scheme, which is to be combined with a certification process. In the planning phase, the collective effort will lead to a new form of co-operation that is based on trust and consolidated learning processes.



Photo by Dr. Rakesh Dubey

The programme connects training institutions and public and private stakeholders. Nodal training institutions and those offering general and specialised training at different levels for different target groups are to become part of a national internet-based HRDP-IDRM platform. This will take the form of an “Authoring System” for strengthening information flow and knowledge management, and link various databases and information resources at both national and international levels.

- 1) Training-of-trainers programmes for the creation of a cadre of specialist trainers recruited from the private sector, the administrative sector, and a roster of resource persons in DRM.
- 2) The provision of a set of standardised and mutually-approved tools for capacity building management, total quality control, impact assessments and tested certification procedures.
- 3) A cluster of training programmes – basic level training programmes followed by intermediate training programmes and advanced training programmes (for improved knowledge, skills and attitudes).
- 4) The standardisation of training courses, especially for risk assessment, on-site and off-site emergency management plans, and curriculum development for the different target groups.
- 5) Modular skills training courses designed for different levels/specialisations in industries and administrations.
- 6) Awareness programmes designed for decision-makers in industry, public administration, and regulatory bodies for civil society and its organisations, including schools and colleges.
- 7) Guidelines for mock drills, including their mechanisms, to learn from deficits and optimise plans.
- 8) Distance education, e.g. development of e-learning packages for facilitating self-learning with the IDRM web platform.
- 9) Initiating the establishment of an independent organisation of accident investigation and documentation for learning from deficiencies.

The HRD-IDRM programme has the necessary modular structure to be upscaled across the nation, allowing it to reach not only key figures in administration, but also regional-level key stakeholders from affected peri-industrial areas. The system it develops and the modular design of its training programmes will allow disaster management mitigation and preparedness strategies to be incorporated into capacity building initiatives taken by other sectors: transport, health, public works, railways, infrastructure, water supply, education, and so forth. It will finally enable outreach programmes and skill upgrades in a large number of target groups at the local community level. The practical field is integrated into mock drill scenarios that bring together local and district administrations, local populations, first responders, planners, industries, and industrial area management.

The lessons learned from mock drills to date are:

- Disaster Management Plans of Industries and Districts are not according to guidelines. Plans of industries and districts are isolated. Revisits and reviews by professional disaster managers are of prime importance.
- There is a shortage of protective equipment among first responders.
- Senior managers are not conscious of safety issues.
- There are severe gaps in medical response – a shortage of stretchers, establishment of first aid posts, triage, and ambiguous findings concerning load carriers and hospital preparedness (surge capacity).
- There are no local supply and rescue teams.
- Fire-fighting equipment is inadequate and obsolete.
- An Incident Command System is a weak concept, and its functioning needs to be developed in respect to DRM.
- District administration response is modest.
- Communications are frequently duplicated.
- ‘On-site’ plans are practised only as a drill -- not for learning purposes -- and ‘off-site’ plans are not practised regularly.
- There is a lack of intensity when it comes to spreading general awareness in the neighbourhood community and adopting villages.
- Industry is very apprehensive to interacting with the media; transparent media management is necessary.



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Lesson(s) Learned

Some general lessons learned can be summarised for ongoing projects:

General:

- Raising awareness in the public and the use of mass media has to be linked with Corporate Social Responsibility (CSR) in order to build partnerships with the private sector.
- A communication and information platform for both the public and the private sectors is vital to the discussion that has to take place to create trust and confidence between “regulators” of industries, training providers and public organisations and institutions.
- The web-based platform needs professional management and moderation.
- An ongoing dialogue between the private and public sector breaks down preconceptions, and allows people to concentrate on solving existing and emerging problems.
- Joint capacity building systems in DRM and training providers work as a catalyst in the discussion process, and can reduce emotional communication through managerial and professional skills training as well as through raising awareness.

Specific for the first phase on industrial DRM:

Proper guidelines are necessary in the following areas to reduce the risk of disaster:

- Identification of hazardous chemicals, processes and operations
- Release scenario -- consequences in terms of heat radiation, extreme pressure and toxicity
- Preparation of plot and site plans incorporating the contours of the damage
- Identification of vulnerable zones
- Classification of units that have the potential to create an off-site emergency
- Identification of important receptors (both environmental and physical) in the vulnerable zone
- Recording, investigation and publication of major cases
- Requirements of various departments for coping with emergency situations

In the absence of a spatial analysis of various outputs and information, the civil administrations, development authorities and response agencies are not in a position to take appropriate steps in disaster risk reduction strategies. This is due to poor awareness about the regulatory provisions and weaknesses in computing hazards and risk assessment. These shortcomings have resulted in incorrect consequence analyses, and these wrong analyses may lead to inadequate planning decisions by civil authorities and by industries.

Potential of Replication

The tools and instruments of the ‘Capacity Management Cycle’ and the train-the-trainers programmes in DRM are to a great extent not dependent on cultural factors, and can be used for the establishment of other large-scale capacity building systems that target private industries and their associations, government administrations, public and private training providers and local civil society.



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