

Toe the line for behavioural change: a capacity development system for disaster risk management

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On 23–24 April 2008, a key planning workshop on ‘Capacity Building for (industrial) Disaster Risk Management’ (iDRM) was held in the city of Bhopal, the site of a terrible accident in 1984 at the Union Carbide pesticide plant – a deadly event that released approximately 40 metric tonnes of methyl isocyanate (MIC) into the atmosphere.

This incident sparked serious debate both in India and abroad on the issues of chemical safety, and helped focus attention on protecting people and the environment from ‘high consequence/low frequency events’ by providing regulatory provisions to industries as well as civil administrations. General consciousness about the topic of risk rose. India enacted the 1986 Environment (Protection) Act, which contained several regulations aimed at preventing any future chemical accidents.¹

However, although India has created rules and regulations regarding chemical safety, there is still a lack of proper monitoring and implementation guidelines. Apart from adapting and detailing rules

and norms, what will matter in the long run is behavioural change in the corporate sector, among the regulating authorities and first responders, and in political and civil society. A tragedy like the Bhopal accident only provides momentum. It acts as a trigger to jump-start change. As long as disaster preparedness is not integrated into everyday traditions for ‘doing/not doing’ things, a repeat of the catastrophe remains a possible scenario. The willingness and conviction to develop new perspectives in prevention and preparedness have to go hand in hand with changes in technical and management capacities.

The last few years have been marked by a paradigm shift in perceptions and discourse, and a corresponding but slow change towards action.

Being proactive — a paradigm shift

The move from a reactive and relief-centred approach to a more holistic and integrated approach will mean nothing less than a sea change in how people think. It places emphasis on the proactive phase of disaster risk management. The primary goal becomes conserving developmental gains and minimizing the loss of life, livelihood and property.

Capacity development is the basis for a proactive strategy that starts with building awareness about risks and prevention; disseminating knowledge about threats, potential dangers and their mitigation, and fostering appropriate skills and expertise of key persons in education, health, science, administration, the corporate sector and civil society to plan, implement, respond to and deal with disasters. Capacity development is a contribution that has a long-term effect, and it has become one aspect of policy concepts. India’s ‘National Disaster Management Guidelines — Chemical Disasters’ from April 2007 state that ‘there is a need to strengthen the existing training institutions and set up additional training institutes in fire, risk assessment, certification, safety audit and emergency planning.’

Translated into more practical terms, this policy setting has consequences for the core elements of capacity development: building awareness, strengthening cooperation and integration among actors/institutions, building up knowledge and skills to perform, reinforcing the technical



Image: F. Bemmerlein-Lux

Acceptance: awareness campaign together with a community-based organization

The challenges of a capacity development system for disaster risk management in India

Challenges	Needs and requirements
1: Diversity of potential disasters: The diversity of ecosystems and economic activities requires prevention /mitigation and preparedness for a large variety of potential threats.	<p>Relevant areas: floods, cyclones, tsunamis, erosion and drought, earthquakes, landslides and avalanches, forest fires, chemical production / industrial safety, mines, nuclear assets, biological areas, environmental degradation, cyber-security</p> <ul style="list-style-type: none"> • Reach the different sectors according to their priority in the regions through decentralized capacity development activities • Provide technical and managerial skills to implement, plan, design rules, teach, etc. • Create awareness about threats, dangers, prevention • Spread knowledge about how to prevent and mitigate
2: Large-scale problem: In order to be effective/ have an impact, a very large number of people from different cultures, backgrounds, institutions and organizations have to be reached.	<ul style="list-style-type: none"> • Cascade system of decentralised training providers with their own networks of affiliated training institutions/ facilities drawn from government departments and the private sector • Enforcement and monitoring of disaster related regulations at national, regional and local levels
3: Diversity of areas and subject matter responsibilities	<p>Disaster Risk Management is a cross-sector task involving target groups/organizations from: Emergency and preparedness planning, administration and regulatory bodies, the geosciences, chemistry and physics, engineering, land use planning, architecture, industrial management, medicine and public health, security, education and training, insurance, etc.</p> <ul style="list-style-type: none"> • A common communication and information platform • Central and localized coordination, workshops and events • Coordination rules and paths, including notified reporting systems
4: Diversity of target groups and their requirements: Not all targeted groups need the same capacity development and awareness.	<ul style="list-style-type: none"> • Adequate definition of target organization and groups • Customer-tailored types and contents of measures organized in programmes of different levels (awareness campaigns: basic, intermediate and advanced programmes) especially at the school level • The offer of the capacity development measures, which depends on the vulnerability of the area (what type of adaptation is necessary to what disaster)
5: Differentiated needs of awareness raising: A large number of vulnerable people with a low level of awareness; preparedness with a diverse cultural and economic background.	<ul style="list-style-type: none"> • Adapted awareness programmes for raising consciousness about disasters (Awareness-cum-Tools approach) • Specialized local training providers with adapted information, communication and behavioural change methods
6: Lack of practical testing, learning and coordination processes: Mock drills for practical testing, feedback for improvement and motivation of stakeholder coordination.	<ul style="list-style-type: none"> • Increasing the frequency of mock drills in disaster prone areas for industrial as well as natural Disaster Risk Management; proper documentation and dissemination to all target groups for learning purposes • Standardization of mock drills for different risk scenarios • Raising public awareness and the use of mass media linked with Corporate Social Responsibility to build partnerships with the private sector
7: Multiple but weakly-coordinated activities in the area of capacity development: Many different agencies exist, but approaches are uncoordinated; initiative from government, private sector and civil society in terms of rules, regulations, training and preparatory activities	<ul style="list-style-type: none"> • Standardization of capacity development programmes; streamlining programmes into a comprehensive offer • Involving all training providers (including educational institutions, management institutions, and human resource development activities of line departments) into one framework system of capacity development
8: Major differences in qualification of training providers: The quality and the comprehensiveness of existing training and educational programmes can be improved and streamlined considerably.	<ul style="list-style-type: none"> • Need for recognized (accredited) specialists/masters at each level • Train-the-Trainers programme • Accreditation system at different levels for training providers
9: Unclear, undefined, underdeveloped or lacking responsibilities	<ul style="list-style-type: none"> • Improvement of regulations/requirements of persons responsible for Disaster Risk Management in all the different sectors/institutions • Focus on enforcement of regulations • Certification system within the capacity development programmes
10: Lacking or weak integration in existing curricula of education and/or training: Train the key persons for all risk sectors and develop concepts of transfer and integration with appropriate resource and demonstration material.	<ul style="list-style-type: none"> • Integration of Disaster Risk Management into curricula of relevant subjects (i.e. engineering, architecture, land-use planning, basic education)
11: Weak networking among training providers: Weak coordination, internal competition for funds and recognition, communication instruments such as web pages not up-to-date.	<ul style="list-style-type: none"> • Strong institutional networking of training providers, regulating authorities, administration, private and public sector institutions • Communication and management platform of the capacity development system linked with Internet-based subject-matter information sites
12: Gaps and deficiencies in DRM infrastructure: Major problems exist at various levels in terms of equipment, regulatory frameworks, enforcement and practical alternatives of reactions for the affected people.	<ul style="list-style-type: none"> • Feedback system and sharing experiences to streamline and harmonize approaches and detect infrastructure problems • Integrated 'Infrastructure Needs Assessments' in the capacity development process

and managerial capabilities of institutions and organizations, enhancing the regulative and integrative frameworks, and providing the institutional infrastructure.

Consider the Indian subcontinent, where there are about 1,700 Major Accident Hazard (MAH) units in place and a large number of small and medium enter-

prises. With both man-made and natural disasters (earthquakes, cyclones or floods), capacity development requires a major endeavour to reach the right people in the corporate sector, administration, and civil society who are able to cope with cultural diversity and needs. The situation requires a decentralized capacity development system that works under a central framework of standards and quality parameters.

A comprehensive capacity development system would assist the National Disaster Management Authority and the Indian Government when it comes to mainstreaming disaster management concerns. It would boost the development and planning process within each Indian state for 'promoting a culture of prevention and preparedness...by centre-staging disaster management as an overriding priority at all levels and at all times'. It would assist stakeholders in:

- The preparation and implementation of state (industrial) disaster management multi-sector and technology-driven strategies and plans to enable prevention, mitigation and preparedness
- The establishment of systems and procedures for coordination between administration, disaster management organizations, other stakeholder institutions, and civil society for ensuring efficient response and relief measures.

The consequences for a national capacity development system

To pass on the needed technical and managerial skills and knowledge, increase awareness and stimulate change in attitudes among people in industry, administration, professional organizations and civil society, you must first have a defined structure and mechanisms, as well as a strong management system. This is the only way to ensure you will reach a large number of people.

The system will be based on common capacity development standards that allow decentralized awareness building and training offers adapted to local conditions. It will focus on a 'cascade system' of train-

ing providers. National key trainers and nodal training institutions will have their own networks of affiliated training institutions drawn from government departments, industrial training institutions, universities and technical colleges for management, engineering, architecture and medical subjects, as well as non-governmental organizations (NGOs) that have been selected for their regional/international reputation. The following characteristics are defined:

A National Coordination Centre (DRM-TMC) — under the National Disaster Management Authority with various units at different institutes/organizations at various places in the country (based on capacity).

Involvement of 'Nodal Training Providers' — distributed all over the country and — where possible — working on a public-private partnership scheme.

Train-the-Trainers programme — for key trainers and resource persons at various levels.

Awareness-raising programmes — at national, state and local levels for the media, civil society and schools. The awareness programmes work with a sequence that increases in intensity. This can be expressed as a series:

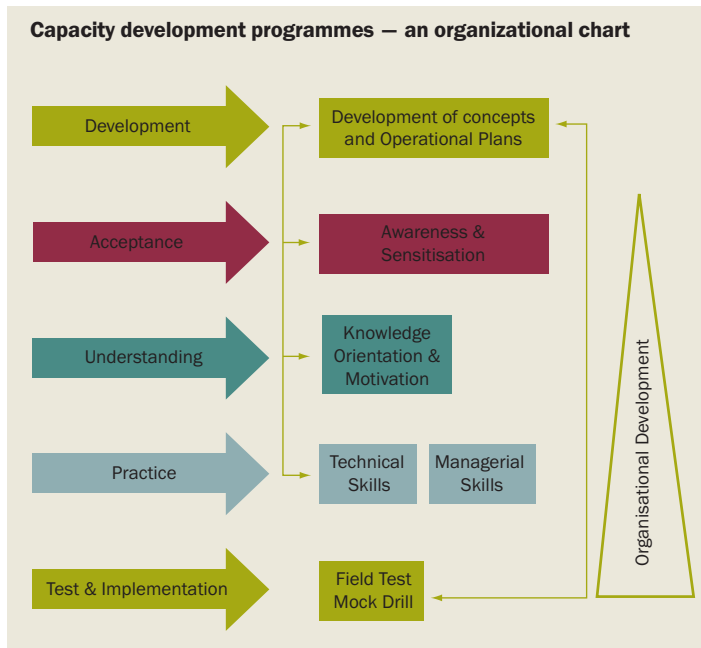
- Presence of messages — about risks, first response, prevention measures etc.
- Sensitization — to explain the consequences of risks, and to make avoidance and preparedness interesting, acceptable and positive
- Orientation — to give direction and goals, and show ways to prevent disasters or how to react when a disaster occurs
- Motivation — to be willing to change and to promote change, and show the feasibility of prevention and implementation of measures



Practice: decontamination of chemical disaster victims — demonstration by a response agency in a mock chemical disaster drill in India



Implementation: field testing the knowledge and skills of fire fighters during a drill at an industrial site



Source: F. Bemmerlein-Lux

- Mobilization — to join in implementation and begin with your own activities
- Education — to include measures in the education process in schools, and pass on a standard tradition.

Capacity development programmes — to be placed at the basic, middle and advanced level for different subjects and different target groups (with a certification system). Each programme should be oriented along the series of steps shown in the included organization chart.

Mechanisms and standards — to guarantee recognition, adequate qualifications and integrated quality assurance of training providers



Development of strategies for disaster risk management for an industrial estate — planners at work



Understanding: orientation and motivation of planners of an industrial estate

and trainers with admission/acceptance and removal criteria.

Mechanisms with commitments — from the training providers to spread the capacity development efforts down the line (considering awareness building/teaching/training methods adapted to the absorption capacity of different target groups).

Discussion among key participants: an important first step

The planning workshop in April 2008 brought together the Indian National Disaster Management Authority, industrial associations, officers in charge of disaster risk management of Major Accident Hazard industries, district collectors (the administrative heads of districts), chief inspectors of factories and boilers (the responsible authority for industrial Disaster Risk Management in each State), the responsible authority for industrial Disaster Risk Management in each State, State Industrial Development Corporations, State Pollution Control Boards, Central Labour Institute, emergency response centres, training providers for industrial managers, and the National Civil Defence College.

The phenomenon of intense, energetic discussions and long hours spent in a planning workshop — a process that can easily get bogged down in technicalities — can be summarized in the words of one participant: “All of us are at different points in the line of potential disasters. We are not contributing to the direct productivity of our industries, we are not increasing agricultural productivity, and we are not building nice houses — we are like Cassandra, and it is not the most pleasant thing to communicate with her. We had the chance here in Bhopal to talk to each other — and we talk about making changes in our system and industry more likely, in order to be better prepared. But we also talked about ourselves, to be taken more seriously.”

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