

DMI Programme Partners InWent - Qualified to Shape the Future



InWent - Capacity Building International, Germany, is a non-profit organisation with worldwide operations dedicated to human resource development, advanced training, and dialogue. Our capacity building programmes are directed at experts and executives from politics, administration, the business community, and civil society. We are commissioned by the German federal government to assist with the implementation of the Millennium Development Goals of the United Nations. In addition, we provide the German business sector with support for public private partnership projects. Through exchange programmes, InWent also offers young people from Germany the opportunity to gain professional experience abroad.

Detailed Information can be explored using our WEB sites:
www.inwent.org
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ASEM

The Advisory Services in Environmental Management Programme (ASEM), is a joint programme of the German Technical Cooperation (GTZ) and the Indian Ministry of Environment and Forests (MoEF). The German Federal Ministry for Economic Cooperation and Development (BMZ) supports several environment related projects in India through GTZ. ASEM focuses on seven major thrust areas - Sustainable Industrial Development, Sustainable Urban Development, Sustainable Consumption and Consumer Protection, Sustainable Environmental Governance and the cross cutting areas Climate Change and Human Resource Development. Public Private Partnership (PPP) projects with Indian and German companies contribute towards identified project activities.

Detailed Information can be explored using our WEB sites:
<http://www.asemindia.com/>
<http://www.hrdp-net.in/>



InWent - Internationale Weiterbildung und Entwicklung gGmbH
Capacity Building International, Germany
 Friedrich-Ebert-Allee 40
 53113 Bonn
 Phone +49 228 4460-0
 Fax +49 228 4460-1766
www.inwent.org <http://www.inwent.org>

India Office
GTZ- ASEM -- Indo-German Environment Programme
 GTZ- ASEM -- Indo-German Environment Programme
 A-33 Gulmohar Park
 New Delhi 110049
 Phone: +91 11 26528840
 Fax : +91 11 26537673
info@asemindia.com
<http://asemindia.com>

For further information
 Contact
DMI - Disaster Management Institute

Executive Director
 or
 Dr. Rakesh Dubey, Director,
 Prayavaran Parisar,
 E-5, Arera Colony, PB No. 563
 Bhopal-462016,
 MP (India),
 Tel: +91-755-2466715, 2461538, 2461348,
 293592,,
 Fax: +91-755-2466653
dmi_bpl@dataone.in,
<http://www.dmiopl.org/>



industrial DISASTER RISK MANAGEMENT (iDRM) paradigm shift from response to preparedness



Disaster Management Institute, Bhopal



From Response to Preparedness Zero Tolerance

Disasters occur but risks can be managed - prevention of an accident is the basic strategy for its management

The Bhopal Gas tragedy of 1984, the worst chemical disaster in history, clearly demonstrated the potential of industrial disasters to cause immediate and long-term damage. We know something is likely to happen but not what will happen where. The need is to build a culture of zero tolerance, to be prepared to anticipate and deal with risk at all times and in all situations, rather than responding to disaster only after it has struck.

The rapid growth of chemical industries in India has led to increased risk of accidents associated with hazardous chemicals. The scale of risk is large and widespread. There are more than 1700 major accident hazard (MAH) industries and thousands of small and medium enterprises spread all over the country using hazardous chemicals which may cause major accidents.

Industrial/chemical disasters can be caused by chemical, mechanical, civil, electrical or other process failures, or due to accident, negligence or by the incompetence of human operators.

Disasters in an industrial plant may spill over to areas outside the plant causing damage to life and property.

We can prevent disasters by industrial Disaster Risk Management quality audits and quantitative risk assessment tools which help to identify worse case scenario impacts and mitigation measures.

Toolkit for addressing iDRM

A toolkit helps us to interpret early detection and rapid response strategies to contain disasters on spot. The main components of industrial Disaster Risk Management (iDRM) strategies include:

- Hazard Identification & Risk Assessment (HIRA)
- On-site Emergency Management Plans for Major Accident Hazard (MAH) Industries
- Spatial Planning for iDRM
- Off-site Emergency Management Plans for District and State authorities
- Environmental and Safety Audits Hazard and Operability Study (HAZOP), Failure Mode Effects Analysis, etc
- Mock drills
- Community awareness programmes, and exposure through Media

Selected Legislation on Industrial Safety

Environment Protection like

- The Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 and amendments
- The Chemical Accidents (Emergency, Planning, Preparedness & Response) Rules, 1996
- The Environment Impact Assessment Notification, 2006

Industrial Safety like

- The Factories Act, 1948, & States' Factories Rules
- The Petroleum Act, 1934

Indian Safety Standards like

- BIS Standard 'Code of Practice on Occupational Safety & Health Audit' (IS-14489:1998)
- OISD (Oil Industries Safety Directorate) Standards

Guidelines like the

- National Disaster Management Guidelines: Chemical Disaster; NDMA, Govt. of India, 2007
- A Guide to CA(EPPR) Rules and On-Site and Off-Site Emergency Plan, 2001
- Guidelines for Transportation of Hazardous Wastes issued by CPCB, 2004

Disaster Management Institute (DMI) Bhopal

DMI philosophy – 'prevention of an accident is the basic strategy for its management'

The Disaster Management Institute (DMI) was set up in 1987 by the Government of Madhya Pradesh (GoMP) as an autonomous organization in the aftermath of the industrial disaster in Bhopal.

Since inception, DMI has built vast experience in preparation of both On-site and Off-site Emergency Management Plans, Safety Audit, Risk Analysis and Risk Assessment, Hazard and Operability Studies (HAZOP), etc.

The National Disaster Management Authority (NDMA) constituted under the chairmanship of the Prime Minister selected DMI as a member of the Core Group for preparation of the National Disaster Management Guidelines- Chemical Disaster. It is a matter of pride that NDMA has selected DMI for conducting Mock Exercises on chemical (industrial) Disaster Management at key industrial locations in the country.

The Ministry of Environment and Forests, Central Pollution Control Board, InWent and GTZ-ASEM Germany have recognized DMI as a Nodal Training Institute for capacity building in industrial Disaster Risk Management

Capacity building needs of industries, first responders, administration and people

India needs to build capacities among people from all walks of society, government, industry, community groups, specialists and first responders. Capacity development is the basis for a proactive strategy starting with awareness about risks and prevention, knowledge about threats, potential dangers and their mitigation and appropriate expertise of key persons to respond to and deal with disasters. The challenge is therefore to build capacities to effectively deal with location specific industrial disaster risk issues.

Improved capacities will assist in:

- (1) Preparation and implementation of Disaster Risk Management (DRM) multi sector technology driven plans to enable prevention, mitigation and preparedness;
- (2) Establishing systems and procedures for coordination between administration, industry, other associated institutions (hospitals, police, fire fighters, water supply,



etc) and civil society for ensuring efficient response and relief measures.

Services offered by DMI

DMI offers consultancy and organized training and awareness programmes the following subjects on the request of industries, administration and regulators:

- Development and Evaluation of Disaster Management Plans (covering components of on-site and off-site emergency management plans)
- Hazard Identification and Risk Assessment (HIRA) including the application of spatial concepts
- Safety Audits & Reports
- Organization and facilitation of Mock-drills
- Risk Analysis and assessment by using HAZOP, FEMA, FTA, ETA, etc. techniques
- Accident Investigation and Root Cause Analysis
- Community Awareness Programme
- Detailing of Risk Assessment in EIA Studies

Clients of DMI from Government

The major clients are from:

- Ministry of Environment and Forests
- Central and State Pollution Control Boards
- Chief Inspectorate of Factories
- Controller of Explosives
- District Administration
- District Transport Officers
- State Industrial Development Corporations

Clients from MAH industries

DMI provides consultancy services to distinguished industrial clients such as:

- NTPC
- ONGC-IPSHEM
- HPCL
- IOCL
- NALCO
- Grasim Industries, Nagda and TATA Industries
- Chloralkalies Plants, etc

Human Resource Development Programme in iDRM'

International Cooperation for Capacity Building in iDRM

DMI is implementing the 'Human Resource Development Programme in industrial Disaster Risk Management – HRDP iDRM' in partnership with InWent and GTZ under the umbrella Indo-German Cooperation on Advisory Services for Environmental Management (ASEM).

Under the programme DMI will

- Host the iDRM web platform as a tool for distance education through e-learning packages
- Network with other training institutions to offer general and specialized training in iDRM at different levels for different target groups
- Network a cadre of specialist trainers and resource persons in iDRM through development of Training of Trainers programmes
- Develop a cluster of training programmes – foundation, intermediate and advanced for improved knowledge, skills and attitudes
- Provide standardization in curriculum development especially for risk assessment, and on-site / off-site emergency management plans
- Offer modular training courses designed for different levels/specializations as well as tailored for different stakeholders



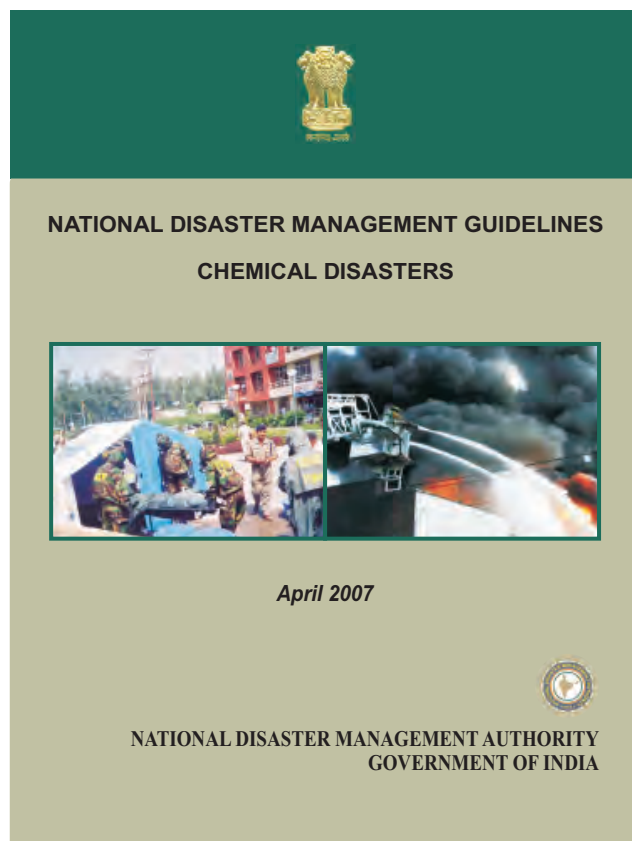
For overall emergency planning, DMI believes that iDRM should strictly follow the steps given in the diagram above :

- Safety analysis
- Quantitative Risk Assessment
- Probabilistic Safety Analysis

Partners in dealing with risks

DMI has established partnerships with the following for dealing with iDRM.

- National Disaster Management Authority (NDMA)
- Ministry of Environment and Forests (MoEF)
- Central / State Pollution Control Board (CPCB / SPCB)
- Directorate General of Factory Advise Services and Labour Institute (DGFASLI)
- National Institute of Disaster Management (NIDM)
- Chief Inspectorates of Factories and Boilers (CIF)
- Federation of Chambers of Commerce and Industry (FICCI)



iDRM Management Platform for Human Resource Development (HRD)

The internet based platform facilitates information sharing, presentation and documentation of training events, workshops, seminars and capacity building programmes. International standard requirements for mid-sized up to large scale human resource development programmes, e.g. when funded by World Bank, are accomplished.

The platform allows process oriented and efficient training management and the documentation of crucial information such as comprehensive collections of rules and regulations, guidelines and key concepts on industrial Disaster Risk Management (iDRM).

It is a networking tool for all stakeholders involved in iDRM - industry, industrial estates / parks, administrations and relevant development / training organizations. Thus, governmental and industry organisations improve quality when building and managing efficiently Human Resource Development Programmes.