

# Information Resources and Systems for Disaster Management

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## Introduction

Disaster is a catastrophic disruption of life in a society caused by nature or a man made situation. Disasters can be of the type where the onset is slow like famines or of the type where the onset is rapid, like earthquake, floods etc. Disaster management encompasses activities directed towards meeting such situations. India is prone to various types of disasters due to its geological dimensions.

## Role of information

“Information is what information does”. Utility of any information is its timely dissemination to the right persons. Information plays an important role in empowering the personnel involved in disaster management at various levels. Relevant proactive information can go a long way in handling such situations and in preparing to meet the same. Information need takes different dimensions in different situations.

The personnel who need information on disaster management range from health sector managers, epidemiologists, primary health care physicians, nurses, sanitary engineers, academicians, researchers, disaster mitigation personnel, social service organisations, to the common man.

## Need for a Disaster Management Database

A very important step in effective management of disasters is bridging the information gap. Libraries play a very important role in achieving this by harnessing and disseminating information resources. Developing an efficient disaster management information system is an important stage in planning for disaster preparedness.

### *Proactive information*

Following the dictum prevention is better than cure, people should be empowered with information at the pre-disaster level for disaster preparedness.

- identification of zones which are prone to earthquakes, floods etc., within which safer location for hospitals etc.
- awareness regarding use of non- eco friendly materials (use of plastic bags in Mumbai)
- need for preservation of ecological balance (prevention of the destruction of mangrove stretches)

### *During a disaster*

- messaging
- warning / alerting systems
- help lines to contact
- alert regarding health hazards

### *Post Disaster*

- information on various rehabilitation activities
- documentation of the details of the incident and the mitigation undertaken
- drawing future plans for prevention of disaster

## **Kinds of resources**

At each of the three stages mentioned above, the concerned personnel need different levels of information. It is necessary to make the relevant information resources accessible to them at the appropriate time. Information resources should be harnessed and packaged to suit the needs of professionals working in various areas of disaster mitigation. The information is generated in various formats and it is necessary to mobilize them systematically to fulfill the information requirements.

### *Categories of resources*

- Textbooks / Monographs
- Journal articles
- Educational aids/training materials
- Public interest promotional literature
- Audio-visual resources
- Research / Survey reports

## **Existing Information / Educational infrastructure in India**

### *Select Institutes of Disaster Management*

- National Disaster Management Institute, New Delhi, an apex institute set up by the Indian Institute of Public Administration and the Center for Disaster Management
- Disaster Management Institute, Bhopal, setup after the Bhopal tragedy, 1984
- National Information Center of Earthquake Engineering (NICEE) - IIT Kanpur, with an exclusive focus on information related to earthquakes

- All India Disaster Mitigation Institute (AIDMI), Ahmedabad

### *Resources / Databases*

- The database of book collection of the NICEE, Kanpur is available at <http://nicee.org/NICEE/acquisitions.html>
- A web resource giving detailed information on 10 disaster prone states of India. <http://managedisasters.org/>
- A web portal on disaster management <http://www.sristi.org/dmis.html>
- A knowledge network on disaster management created by the Ministry of Home Affairs, Government of India. Can be accessed only by users authorized by Government of India <http://www.idrn.gov.in/>

## **Clearing house for information on Disaster Management**

Information is available in fragments at various isolated locations. The major hurdle for information seekers in such a situation is the lack of awareness of what is available, where is it available and ultimately how to get access to this information. There is a pressing need to coordinate the disjointed efforts at a central point and make information accessible to everybody concerned.

A clearing house for information on disaster management should be established at the national level. This clearing house must be identified as the legal deposit center for all published resources on disaster management thus ensuring a continuous flow of information resources into the center.

The clearinghouse will undertake the responsibility of acquiring relevant data and creating a packaged centralized database of the different types of resources with an integrated efficient information retrieval system. The system should be designed to take care of the varied information needs of varied disaster management personnel. The components of the system will be-

#### *Database of Print literature*

- Bibliographic database of books/monographs
- Digitized full text databases of published documents wherever possible with due copyright compliance
- Articles from scholarly journals
- Newspaper clippings
- Promotional /Awareness material
- Research / Survey reports
- Government reports
- Case studies
- Training materials
- Grey literature (unpublished research literature to be obtained through coordination with research organizations, NGOs)

#### *Audio visual materials*

- Cartographic resources (showing locations of different types of hazard zones, safe zones)
- Video tapes (visuals of the incidents, rescue operations; videos for training)
- CD ROMs
- Database of emergency services (fire stations, ambulance services)

#### *Other Support Databases*

- Experts/consultants/volunteers in disaster management

- Organisations working for disaster mitigation
- Education/training centers

Tasks ahead for the clearing house to achieve the objectives can be analyzed as under:

#### *Infrastructure*

Provision of state of the art hardware, software, communication technology.

#### *Databases*

Compulsive efforts to be undertaken to coordinate and acquire comprehensive data on disaster management in varied formats. the various databases. The data acquired has to be organized into a proper structure to facilitate efficient search/retrieval. The center should formulate common standards for creation of data, which will facilitate exchange of data between various organizations. Creation of full text databases should take care of copyright law compliance.

It is further necessary to have secure backup of the various databases to meet any emergency situations, in the form of CDs, parallel servers / mirror sites etc.

#### *Dissemination of data*

Appropriate, reliable, communication channels should be planned and established to disseminate the information during disaster. The emphasis should be on research and documentation on the quickest method of access to information in times of disaster.

#### **Human resources**

For a successful functioning of such a central organization, the requirement of

manpower will always be a combination of various skills. It would be a team comprising personnel having Library & Information Management skills, Health and Allied professionals, Information Technologists, qualified Disaster Management personnel, Academicians / Researchers in the field, Expert Consultants/Advisors and Management /Administration personnel.

### **Challenges ahead**

The hurdles to be overcome on the road to success can be varied.

- Financial constraints – a situation faced by any such non-profit effort
- Setting deadlines and achieving them – difficulties in acquiring information resources
- Technological divide – lack of facilities especially when it comes to reaching out to the remote areas
- Regulatory/Administrative issues
- Trained personnel
- Accountability

The challenges involved should not be in any way a deterrent to taking the initiative in such projects. With the multitude of resources available in a country like India, what it requires is some amount of willingness on part of the authorities to understand and act on the need for this type of service, combined with a little motivation from the professionals at different levels.

### Select readings

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