

EMERGENCY & DISASTER MANAGEMENT SOLUTIONS

PERSPECTIVE OF EMERGENCY & DISASTER MANAGEMENT

There are many government programs which are focused on providing CCTS- Crime tracking systems, state transport buses and passenger information systems, municipal corporation programs, food distribution system

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India has been traditionally vulnerable to natural disasters on account of its unique geo-climatic conditions. Floods, droughts, cyclones, earthquakes and landslides have been recurrent 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 area is susceptible to drought. In the decade 1990-2000, an average of about 4344 people lost their lives and about 30 million people were affected by disasters every year. The loss in terms of private, community and public assets has been astronomical.

At the global level, there has been considerable concern over natural disasters. Even as substantial scientific and material progress is made, the loss of lives and property due to disasters has not decreased. In fact, the human toll and economic losses have mounted. It was in this background that the United Nations General Assembly, in 1989, declared the decade 1990-2000 as the International Decade for Natural Disaster Reduction with the objective to reduce loss of lives and property and restrict socio-economic damage through concerted international action, specially in developing countries.

These conditions underscored the need to adopt a multi-dimensional endeavor involving diverse scientific, engineering, financial and social processes; the need to adopt multi disciplinary and multi sectorial approach and incorporation of risk reduction in the developmental plans and strategies.

Over the past couple of years, the Government of India has brought about a paradigm shift in the approach to disaster management. The new approach proceeds from the conviction that development cannot be sustainable unless disaster mitigation is built into the development process. Another corner stone of the approach is that mitigation has to be multi-disciplinary spanning across all sectors of development. The new policy also emanates from the belief that investments in mitigation are much more cost effective than expenditure on relief and rehabilitation.

Disaster management occupies an important place in this country's policy framework, as it is the poor and the under-privileged who are worst affected on account of calamities/disasters.

The steps being taken by the Government emanate from the approach outlined above. The approach has been translated into a National Disaster Framework [a roadmap] covering institutional mechanisms, disaster prevention strategy, early warning system, disaster mitigation, preparedness and response and human resource development. The expected inputs, areas of intervention and agencies to be involved at the National, State and district levels have been identified and listed in the roadmap. There is, therefore, now a common strategy underpinning the action being taken by all the participating organizations/stakeholders

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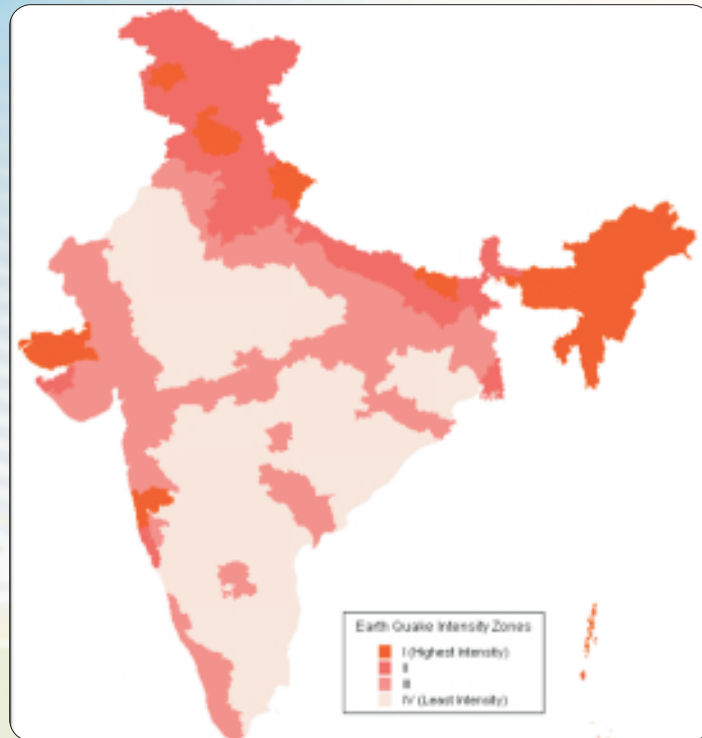
Mitigation

Mitigation efforts are attempts to prevent hazards from developing into disasters altogether or to reduce the effects of disasters. Mitigation is the effort to reduce loss of life and property by lessening the impact of disasters. This is achieved through risk analysis, which results in information that provides a foundation for mitigation activities that reduce risk, and flood insurance that protects financial investment, The mitigation phase differs from the other phases in that it focuses on long-term measures for reducing or eliminating risk. The implementation of mitigation strategies is a part of the recovery process if applied after a disaster occurs.

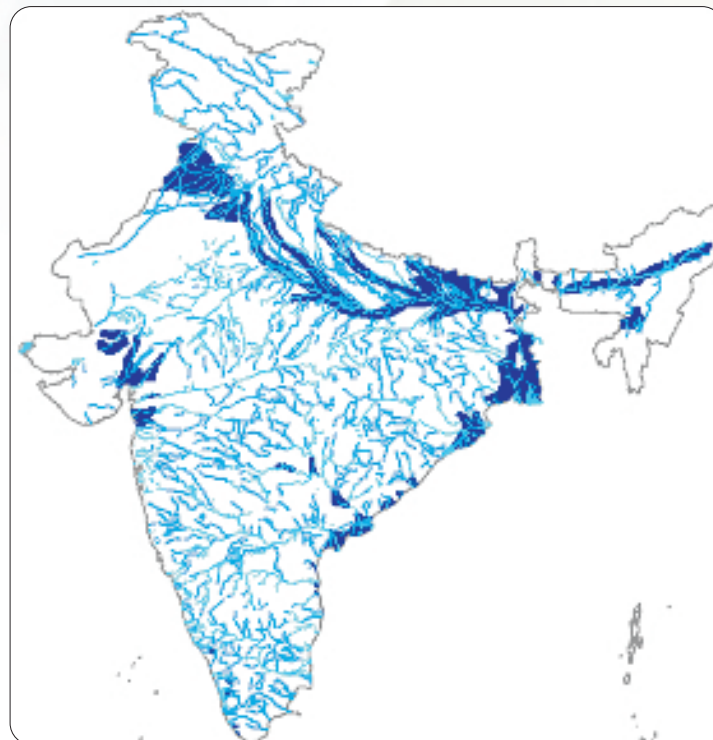
GIS can play a very important role here. For example, Seismic zones can be overlaid on rich GIS data and damage prone areas can be predicted before hand and concerned agencies can be put on semi-alert for training, information and reaction to these calamities.

MapmyIndia Disaster Management:

- Up to date and thorough GIS Map Data Sets
- Open system thus having interoperability with existing systems and map data
- Categorized Data
- Analysis capability



Earthquake Zones



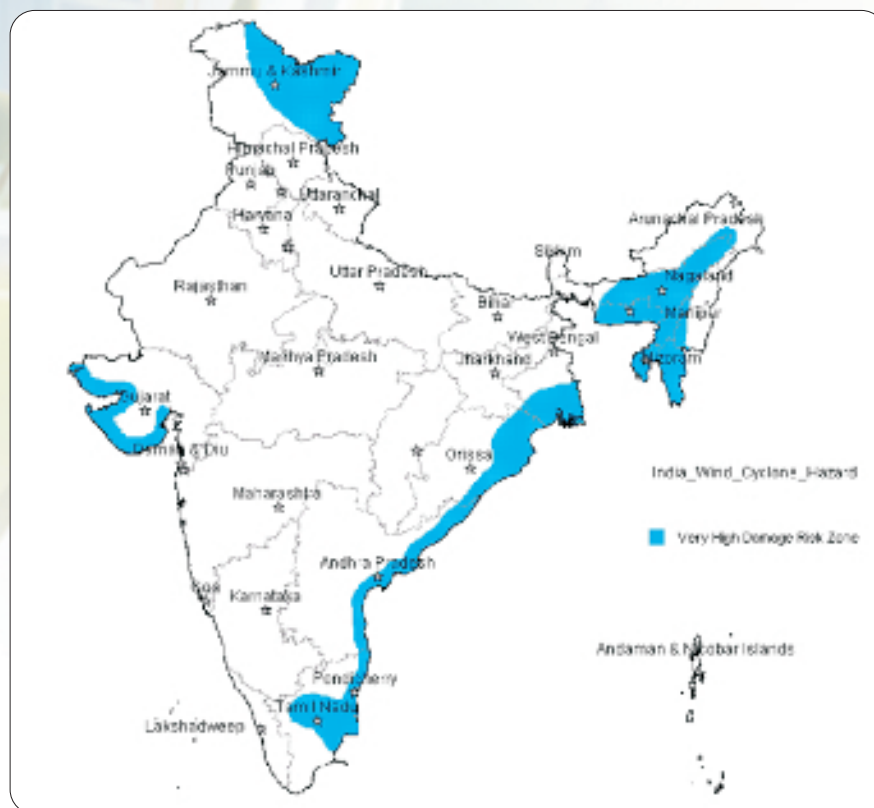
Flood Prone Area

Preparedness

Preparedness is how we change behavior to limit the impact of disaster events on people. Preparedness is a continuous cycle of planning, managing, organizing, training, equipping, exercising, creating, evaluating, monitoring and improving activities to ensure effective coordination and the enhancement of capabilities of concerned organizations to prevent, protect against, respond to, recover from, create resources and mitigate the effects of natural disasters, acts of terrorism, and other man-made disasters.

MapmyIndia Disaster Management

- Interoperability between different departments/ organizations
- Helps in effective communication of the information amongst all stakeholders
- Live data feeds and geo processing helps in quick decision making
- Quick decision making and situational awareness thru above helps in Rapid Deployment of the different teams



Cyclone Risk Areas

Response

The response phase includes the mobilization of the necessary emergency services and first responders in the disaster area. This is likely to include a first wave of core emergency services, such as firefighters, police and ambulance crews.

A well rehearsed emergency plan developed as part of the preparedness phase enables efficient coordination of rescue. Where required, search and rescue efforts commence at an early stage. Depending on injuries sustained by the victim, outside temperature, and victim access to air and water, the vast majority of those affected by a disaster will die within 72 hours after impact and thus time to reaction is the key here.

MapmyIndia Disaster Management

- Incident Reporting
- Incidence damage reporting
- Analytics and Live Data feeds helps in issuing Public Warnings
- Live feeds of dispatched teams from the incidence areas

- Providing upto date information on incidence for Notification to the Public and Senior Stake Holders



Recovery

The aim of the recovery phase is to restore the affected area to its previous state. It differs from the response phase in its focus; recovery efforts are concerned with issues and decisions that must be made after immediate needs are addressed. Recovery efforts are primarily concerned with actions that involve rebuilding destroyed property, re-employment, and the repair of other essential infrastructure.

Efforts should be made to "build back better", aiming to reduce the pre-disaster risks inherent in the community and infrastructure. An important aspect of effective recovery efforts is taking advantage of a 'window of opportunity' for the implementation of mitigative measures that might otherwise be unpopular. Citizens of the affected area are more likely to accept more mitigative changes when a recent disaster is in fresh memory.

MapmyIndia Disaster Management

- Collection of live data from the field of incidence
- Impact assesment using this data and analytics
- Determining assistance sites to attend to the disaster hit areas
- Chart out approach routes to these areas and find out alternate routes
- Live feeds from on ground personnel help in monitoring the assistance efforts
- Create Status Update using maps and assistance efforts for Stake Holders



Field Data Collection & Assistance