NGOs and Stakeholders

7.1 INTRODUCTION

In the last chapter, we discussed the disaster management cycle. Each one of the phases of the disaster management cycle is critical to reduce the risk associated with, and to cope with, disasters. Disaster management is a stupendous task. Many agencies have to be involved in this process at different stages. We have to look at the role of each of these agencies and how to coordinate the actions among them. Some developments in technology have provided us with tools that immensely facilitate our actions before, during and after a disaster.

In this chapter we discuss some of these related issues in disaster management.

7.2 STAKEHOLDERS

There is a general consensus that coping with disasters requires a community-based approach. People should be well informed and must act at the local level for risk management. The first responders in disasters are volunteers from the local community themselves. Outsiders may come to know of the calamity later and may take time to reach the site. Many times, it may take hours before any government initiatives are put in place. In such a scenario, the local people must be equipped to handle the situation as first responders and take the first steps to cope with the calamity.

The stakeholders in disaster management are:

1. The Government— Central, State and local administration
2. Individuals and the community
3. Non-government Organisations (NGOs)
4. International agencies
5. Healthcare professionals
6. Experts in different fields
7. Disaster managers
8. Trainers
9. Religious groups, communities and charitable organisations
10. Donors

The stakeholders and their roles can be identified as follows (Fig. 7.1).

Figure 7.1 Stakeholders in disaster management

1. Governments

The governments, at the central and state levels, have the primary responsibility in disaster management. The government at the central level may not involve itself with disaster management which will be responsibility of the state government or the local administration. However, on the request of the state government, the central government may provide resources to deal with disasters.

As an example, if there is a fire in a building, it is dealt with locally by the fire department. If the fire spreads across streets and becomes too huge to handle, then special teams of disaster response may be called.

This is essentially as per the Hyogo framework which has made many recommendations in this regard. [See next chapter for a detailed discussion on Hyogo Framework.]

(i) Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.

(ii) Identify, assess and monitor disaster risks and enhance early warning systems.

(iii) Use knowledge, innovation and education to build a culture of safety and resilience at all levels.

(iv) Reduce the underlying risk factors.

(v) Strengthen disaster preparedness for effective response at all levels.

(vi) Implement measures for swift recovery and rehabilitation of the affected population and the area.

The actions required to achieve these are:

(a) Support the creation and strengthening of national integrated disaster risk reduction mechanisms, such as multi-sectoral national platforms, with designated responsibilities at the national through to the local levels to facilitate coordination across sectors.

National platforms should also facilitate coordination across sectors, including by maintaining a broad-based dialogue at national and regional levels for promoting awareness among the relevant sectors.

(b) Integrate risk reduction, as appropriate, into development policies and planning at all levels of government, including in poverty reduction strategies and sectors and multi-sector policies and plans.

(c) Adopt, or modify where necessary, legislation to support disaster risk reduction, including regulations and mechanisms that encourage compliance and that promote incentives for undertaking risk reduction and mitigation activities.

(d) Recognise the importance and specificity of local risk patterns and trends, decentralise responsibilities and resources for disaster risk reduction to relevant sub-national or local authorities, as appropriate.

(e) Assess existing human resource capacities for disaster risk reduction at all levels and develop capacity-building plans and programmes for meeting ongoing and future requirements.

(f) Allocate resources for the development and the implementation of disaster risk management policies, programmes, laws and regulations on disaster risk reduction in all relevant sectors and authorities at all levels of administrative and budgets on the basis of clearly prioritised actions.

(g) Governments should demonstrate the strong political determination required to promote and integrate disaster risk reduction into development programming.

Accordingly, governments should take necessary actions like:

(i) Develop a policy for disaster management and give it a legal framework.

(ii) Set up an organisational structure for disaster management. This will include agencies at central and state levels to frame plans of action and coordinate with many other agencies.

(iii) Provide funds, by budgetary allocation, for disaster management plans.

(iv) Involve experts from various relevant fields for making plans.

(v) Provide for training of personnel involved in disaster management.

All signatories to the Hyogo Framework have taken action in this regard. In India, we have the National Disaster Management Authority (NDMA), National Disaster Response Force (NDRF), and National Institute of Disaster Management (NIDM) for training which have been established recently. Details of this framework are discussed in Chapter 9.

2. Non-Government Organisations (NGOs)

NGOs are a vital group in disaster management. There are many NGOs that have a worldwide presence like the International Red Cross Society. While some NGOs work in multiple areas, some major ones specialise in the domain they are in.

Multiple areas

- CARE
- Oxfam

Role of NGOs in Various Phases of Disaster Management

During Mitigation Phase

(a) Advocating at the appropriate forums including legislative and policy levels for disaster mitigation to be institutionalised in policy, legislative and institutional frameworks

(b) Disaster mitigation awareness and capacity-building activities-promoting inclusive disaster management approaches

(c) Developing operational sustainable livelihoods models

(d) Strengthening disaster preparedness measures

(e) Assisting in risk assessments and action planning

(f) Constructing shelters, public buildings and other critical infrastructure safe from disasters.

(g) Improving water and sanitation systems

During Preparedness Phase

(a) NGOs can act as powerful advocacy institutions and collaborate with the government in reviewing various sectoral policies to ensure that disaster preparedness concerns are addressed, develop advocacy plans envisaging the opportunities for investing in preparedness activities, and coordinate with many agencies to bring resources for disaster preparedness interventions.

(b) NGOs can contribute in the assessment of disaster risk processes at the community level to assess the vulnerabilities and risks to various hazards in their respective areas

c) NGOs can build the capacities to the community

d) Awareness

e) Dialogues with government counterparts – coordination mechanism

f) Preparedness exercises

g) state and district levels – coordination platforms

h) establishment of modalities with Panchayat Raj Institution (PRI) – beneficiary list – especially disaster frequently occurring

i) Joint consultations with district administration personalities

j) Facilitate the formation of disaster management teams – community members - assist them in linking with the PRI as well as district administration.

k) organize the mock drill – remove the phobia or fear among the community – disasters – strengthen the understanding of the disaster management

l) standard operating procedures (SOPs) – community level

3. during the Response Phase

a) NGOs – work closely with the communities – help – evacuation and precautions in a emerging situation

b) Search and rescue activities – local authorities – registration, data collection and documentation – people evacuated

c) help for deploying teams for immediate, sector-specific – periodic in-depth assessments

d) relief assistance

e) committed plant of action for the relief

f) WASH – Water Sanitation and Hygienic promotion, food and nutrition security, shelter and settlements, health services, psychosocial support, education, livestock, economic recovery…… so

g) design their assistance – retrieve the children and women

4. During the Recovery phase

a) Identification of beneficiaries and their specific needs

b) Monitoring of health-care efforts

c) Collection of progress of the recovery status

d) Just and equitable distribution and compensation and material relief

5. Disaster Managers

Disaster management has not fully developed as a discipline yet. People learn through experience and by training. Government officials at district level are presently managing disasters, and, with experience and commitment, they have been able to do a good job.

People in charge of disaster management at national and district levels have to be trained. People managing disasters

- should make efforts to understand well the region under their control
- know the hazards, vulnerability and capacity of the area
- Be in constant touch with community leaders
- Know the NGOs working in the area and their strengths
- Be familiar with the infrastructure for transportation and communication
- Be thorough with the disaster management plan
- Be familiar with technological tools

Disaster managers are key personnel who coordinate and direct the actions at ground zero during all phases of disaster management. Their skill sets have already been outlined in Chapter 5.

6. Trainers

Many activities in disaster management require special skills and equipment. Dedicated teams have to be developed to perform such tasks. They have to be trained to inculcate the necessary skills and to operate different equipment used during disaster management.

All personnel from disaster managers to people at community level have to be trained. The objectives and content for courses for different people will obviously be different. As discussed earlier, an informed community is better prepared to cope with disasters.

Trainers have the responsibility of organising training programmes from awareness level to high level of skill development. These have to be organised at different locations including district headquarters, and even at national level. A number of experts from different fields will need to be involved in these training programmes.

Such training will help in all phases of disaster management.

7. Community/Religious/Charitable Organisations

Many local organisations are active in some form of charity and can help in disaster response and relief. They have dedicated volunteers who have good knowledge of the area and the community. These may be social, religious or any other kind of charitable organisations.

It is necessary that such organisations and their members are registered with their local administrations for disaster management activities. This is to avoid unwanted elements working at cross purposes with the administration. The members of these organisations can be trained and kept informed of the need for volunteers and other resources during disaster. They can provide dedicated, well-informed local people who can be of great help during disaster operations. They have also the resources to collect and supply relief materials and help in the equitable distribution of such materials.

8. Individuals/Community Leaders

Disaster management activities really start with individuals. When individuals are made aware of the hazards and risks, they tend to prepare themselves for it. Of course, this should be done without creating panic.

Every community or habitat has local leaders who are also opinion makers. In India, going to Panchayat level, which is the lowest administrative unit, is necessary. They must be trained at appropriate levels to prepare the community to face disasters.

When awareness develops and action starts at community level, the resilience and capacity of the community increases. They will be well prepared to face disasters. These people must be kept in the loop all the time and encouraged to prepare the community.

9. Donors

When disaster strikes, many people and communities like students, salaried employees, religious/spiritual groups, corporate houses, charitable organisations, contribute according to their capacity. Donations normally come as money and materials like blankets, tents, medical supplies, grains, water etc.

One of their concerns will be to ensure that help is given to the needy and there is equitable distribution of their donations. They would like to ensure that their hard-earned money is not misused.

It is, therefore, necessary that disaster managers keep track of all donations, ensure that they are spent for relief of the suffering humanity and keep impeccable and transparent accounting practices. Money should preferably be received through bank accounts and any cash received must be given due receipt immediately. Major donors' contributions should be personally acknowledged.

Without the help of such donations, governments may find it difficult to fund the relief and recovery operations.

Exhibit 7.1 illustrates our apathy to fire hazards.

Exhibit 7.1: Fire-related Deaths

Accidental fire is one of the major causes of casualties in the country. This has been highlighted in many case studies presented in this book as well.

The major causes for fire accidents and consequent loss of lives are:

(i) Lax implementation of *Fire Prevention and Safety Measures Act*

(ii) Inadequate fire extinguishing equipment and insufficient number of trained personnel

(iii) Callous negligence by authorities in inspecting buildings, manufacturing units and so on

(iv) Lack of awareness amongst the public and personnel supervising the fire safety and prevention measures

(v) Apathy towards creating awareness by mock drills etc.

The following statistics from the National Crime Bureau Report speak volumes about fire related incidents in the country.

Year	No. of Casualties
2009	23268
2010	24414
2011	24576
2012	23281
2013	22177

The major reasons for the fire have been recorded as given in the table. The table shows the number of casualties for different reasons, year-wise.

Year	*Fireworks*	*Short Circuit*	*Cylinder Blast*	*Others*
2009	547	1328	4127	17266
2010	276	1312	4820	18006
2011	237	1523	4005	18811
2012	505	1439	3746	17591
2013	462	1890	3395	16630

(Source: Newspaper report, 27/5/2015)

The total number of deaths due to different fire-related incidents during the five-year period was 1,17,716. It is high time we looked into this as fire is definitely an avoidable disaster.

7.3 ROLE OF THE MEDIA

Media plays a vital role in disaster management. We start with the classification of media as shown in Fig. 7.2.

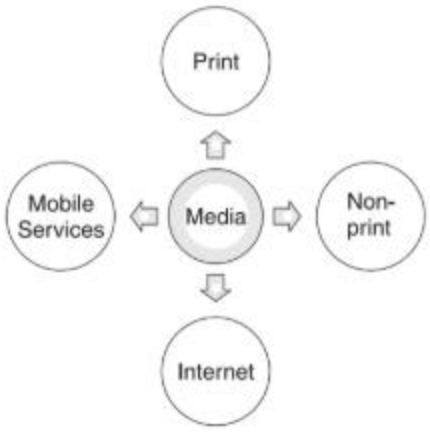

Figure 7.2 Classification of media

Print Media	*Non-Print Media - e-Versions and Others*	*Internet*	*Mobile Services*
Books	e-Books	Websites of individuals, organizations	Voice and messaging services
Journals	e-Journals	Search engines	Video call services
Magazines	e-Magazines	Social media	Internet-on-mobile
Newspapers	e-newspapers	Communication services (email)	Media – music, video, TV, news
Handouts	Audio and video tapes and discs		Other services on mobile platform
	Photographs, digital images		
	Radio and television broadcasts		
	Films		
	Satellite transmissions		

The reach of the media is so great today that information flow is greatly facilitated by media organisations. Media can play a role in all the phases of disaster management - before, during and after the disaster event.

The contribution of the media in disaster management can be listed as follows:

- Spread information to a large number of people through a variety of modes like radio, television, newspapers, internet, wireless phones etc.

- Help in wide dissemination of early warning of disaster
- Reach the global community through the network of media
- Facilitate international help for disaster victims
- Draw the attention of authorities to the areas where help is needed
- Point out shortcoming in rescue and relief effort
- Ensure equitable distribution of relief and aid
- Bring out with the help of experts, shortcomings in mitigation and preparedness
- Monitor and report the progress of relief and reconstruction
- Recognise donations and inspire people, corporate houses to donate for relief work
- Facilitate international assistance for disaster victims

You can see that media can and does play a vital role in disaster management.

The new media also plays a role in communication as the disaster may damage conventional media modes like radio and even television.

(a) Radio is one of the cheapest communication medium and is available everywhere. There are 24×7 FM channels across the country. They can be a good medium for communicating information to large groups of people. If the radio infrastructure fails, one can use satellite radio for similar functions. These radios work with the help of satellites and uses special receivers for signals. These must be available as a part of disaster management communication equipment.

Ham radio – Ham radio uses a combined transmitter and receiver unit, called transceiver, and is operated by radio enthusiasts. They can be of immense help during emergency situations when the conventional communications network breaks down. There are many groups of ham radio operators. Ham radio facilitates two-way communication. According to newspaper reports, some state governments have taken the initiative to even fund ham radio operators who can render help in a crisis situation. Newspapers have also reported that during the recent Nepal earthquake, a group of Mumbai-based ham radio operators played a crucial role in bridging the communication gap between government agencies and people affected and stranded in remote areas.

(b) Television channels: There are hundreds of 24×7 television channels which include news channels. Reporters of these channels reach the site of disaster much before many others and bring ground information to the outside world. They do yeomen service by bringing to the public and the disaster management authority information from ground zero. They broadcast in real time and become a valuable source of information to all stakeholders.

(c) Newspapers are another inexpensive medium which help in informing public about various aspects of the disaster. Other print media, like magazines, create greater awareness about disasters and their management.

Exhibit 7.2 talks about air pollution as a major disaster which we do not seem to have recognised. (Source: Newspaper reports)

Exhibit 7.2: Air Pollution Causes Eight Million Deaths

A World Health Organization (WHO) assessment says that during the past decade, deaths due to air pollution have shown a four-fold increase. A report by the WHO secretariat says – "Air pollution is one of the main avoidable causes of disease and death globally. About 4.3 million deaths each year, mostly in developing countries are due to exposure to house hold (indoor) air pollution. A further 3.7 million deaths a year are attributed to ambient (outdoor) air pollution."

This latest assessment indicates that China and India are the countries worst affected by air pollution. China accounts for nearly 1.5 million deaths and India accounts for 1.3 million deaths annually due to indoor air pollution (burning of solid fuels).

Due to outdoor air pollution there were 94 lakh deaths in India and 1.7 million deaths in China annually. The two global giants in terms of population accounted for nearly two-thirds of the total global casualties.

Air pollution is causing increasing disease burden due to polluted air at homes and in the ambient atmosphere. WHO's 2005 update on air quality says that "more than two million premature deaths each year can be attributed to the effects of urban outdoor air pollution and indoor air pollution."

The latest report indicates that exposure to air pollution is a leading risk factor for non-communicable diseases like ischaemia, myocardial infraction, stroke, chronic pulmonary disease and cancer.

According to the latest report, lung cancer deaths are also on the increase due to air pollution. About 30% of all lung cancer deaths are attributable to air pollution both indoor and outdoor.

While we talk about disasters, we normally think of earthquake, cyclone etc. Air pollution does not cross our mind as a disaster. But it is definitely one though it does not seem come within the four-stage cycle of disaster management. We become complacent because there does not seem to be a crisis phase. It is high time we recognise it as a disaster and take all precautions to avoid more people falling prey to it. We need to undertake the required mitigation measures urgently.

Social Media: Any discussion on media is incomplete without a mention of the social media. Social media, in common parlance, refers to internet-based applications that enable people to interact with one another and share information in many forms. Social media platforms are many and the number of users of the social media is in millions. Social media became more popular attracting millions of users with the availability of mobile platforms like smart phones. This enabled people to access, create and share information wherever they are, instantly.

The internet technology of social media is called web 2.0. The earlier internet form of web 1.0 allowed people to access information in many forms. Web 2.0, on the other hand, allowed user-created information to be uploaded and shared instantly with many users.

Defining social media is difficult because of the many ways in which they work and the number and forms of social media sites. The term 'social' refers to the interactions between individuals, groups or communities and 'media' refers to the communication channel which, in this case, is the internet. Social media is thus the internet-based platforms where individuals, groups or communities can access, create, upload and share information in many forms.

(i) The **internet** and social media have proved to be very valuable tools facilitating many aspects of disaster management.

(ii) Many media houses themselves start relief funds and help the victims of the disaster.

(iii) Media help the relief agencies prioritise the actions to help the needy.

Media attention to disaster management has both positive and negative aspects.

Positive Aspects of Media Attention

(i) Media, in general, are the first outsiders to come into the disaster area and provide the initial information to the outside world.

(ii) Media provides valuable information to the public about the incident in the absence of normal modes of communication.

(iii) Media reports from ground zero provide valuable information to the kin of those missing or injured or dead.

(iv) Media enjoys the trust of the public and helps boost their morale.

The negative aspects that may arise from media coverage could be

(i) Exaggerated reporting of incidents for sensationalism

(ii) Highlighting stray incidents that may look like normal practice rather than exceptions

(iii) Biased reporting to help those in power or to criticise them

(iv) With the number of media channels and variety of media (worldwide) increasing exponentially, the number of media personnel landing in disaster sites can create problems in rescue work.

Social media like Twitter and Facebook are very popular for social networking. They can also be useful in disaster management:

(i) To inform people about a developing situation

(ii) To get information about stranded people or people needing help

(iii) To inform people about the status of affected ones

(iv) To provide frequent updates of the disaster situation which go to many people

(v) To seek donations and help for disaster operations

Social media, based on internet technology, is a very useful tool to communicate with and inform a very large number of people by taking help from many of its users. It can play a vital role in disaster situations.

Social media users also should be cautioned about spreading rumours and causing panic. The information should be verified from authorised sources before spreading it through the social network.

7.4 TECHNOLOGICAL TOOLS

There are many technological tools that facilitate disaster management. Let us look at these technological developments and their role during a disaster.

Communication tools, remote sensing, Global Positioning Systems (GPS) and Geographical Information Systems (GIS) are the major technological tools useful for disaster management agencies. There are depicted in Fig. 7.3.

Most of these technological tools make use of some component of the electromagnetic spectrum. We briefly discuss the electromagnetic spectrum to facilitate understanding the technological tools better.

The Electromagnetic Spectrum

The technological tools helpful in disaster management that will be discussed in the next sections (including the communication systems described above) use electromagnetic waves. This is a brief description to help us understand this.

Figure 7.3 Technological Tools

Electromagnetic spectrum is the name given to a cluster of radiations carrying energy. Electromagnetic waves travel with the speed of light and consist of electrical and magnetic fields at right angles but moving in the same direction as shown in Fig. 7.4.

Three physical quantities define the electromagnetic waves forming the spectrum: frequency (f), wave length (λ) and (photon) energy (E). Waves of the spectrum travel with the speed of light. Frequency is inversely proportional to wave length. When these are considered as waves, frequency and wave length are characteristic features. Considered as photons, or quanta, carrying energy, the electromagnetic spectrum is viewed under the quantum theory. Both these considerations help us understand the behavior of electromagnetic waves.

At one of the spectrum are gamma rays of short wave length (λ) and high frequency (f) and at the other end are radio waves of long wave length and low frequency. We have $f = c/\lambda$; $f = E/h$; $E = h\ c/\lambda$. The electromagnetic spectrum is shown in Fig. 7.4.

In the above equations,

c is the speed of light and h = Planck's constant = 6.626×10^{-34} Js.

Photon energy is directly proportional to the frequency. Thus, gamma rays carry much more photon energy than visible light or radio waves.

Components of the Electromagnetic spectrum and of visible light are shown in Tables 7.1 (a) and (b).

Waves of the electromagnetic spectrum find use in many areas. Some of these can be identified as

(i) Gamma rays are used in medical equipment to see inside the body by gamma ray imaging.