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The awareness of disaster management

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Abstract
Disaster Management can be defined as the organization and management of resources and responsibilities for dealing with all humanitarian aspects of emergencies, in particular preparedness response and recovery in order to lessen the impact of disasters. Disaster management (or emergency management) is the creation of plan through which communities reduce vulnerability to hazards and cope with disasters. Disaster management does not avert or eliminate the threats: instead, it focuses on creating plans to decrease the effect of disasters. Failure to create a plan could lead to damage to assets, human mortality, and lost revenue. Currently in the United States 60 percent of businesses do of terrorism, industrial sabotage, fire, natural disasters (such as earthquakes, hurricanes, etc.), public disorder, industrial accidents, and communication failures. There are no standardized rules defining the different phases of the disaster management cycle. Different agencies use different cycles depending upon their objectives. However, while approaches vary, it is agreed that disaster management activities should be carried out in a cycle.

Keywords: Disaster Management, earthquakes, hurricanes, etc.

Introduction
Disaster is a sudden, calamitous event brining great damage, loss, destruction and devastation to life and property. The damage caused by disaster is immeasurable and varies with the geographical location, climate and the type of the earth surface. This influences the mental, socioeconomic, political and cultural state of the affected area. Generally, disaster has the following effects in the concerned areas,

1. It completely disrupts the normal day to day life
2. t negatively influences the emergency systems
3. Normal needs and processes like food, shelter, health, etc, are affected and deteriorate depending on the intensity and severity of the disaster.

It may also be termed as "a serious disruption of the functioning of society, causing widespread human, material or environmental losses which exceed the ability of the affected society to cope using its own resources".

Types of Disaster
Generally, disaster are of two types – Natural and Manmade. Based on the devastation, these are further classified into major/minor natural disaster and major/minor manmade disaster some of the disasters are listed below.

Major Natural Disaster:
- Flood
- Cyclone
- Drought
- Earthquake

Minor Natural Disasters:
- Cold wave
- Thunderstorms
- Heat waves
- Mud slides
- Storm

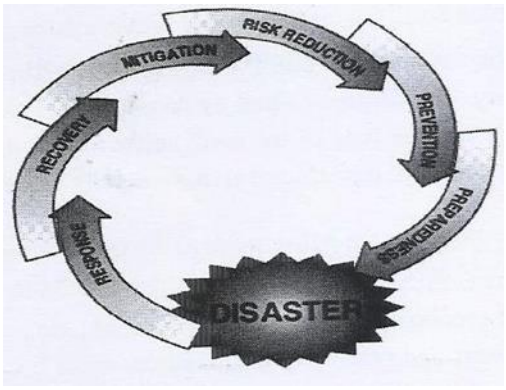
Major Manmade Disaster:

- Setting of firs
- Epidemic
- Deforestation
- Pollution due to prawn cultivation
- Chemical pollution
- Wars

Minor Manmade Disaster:

- Road / train accidents, riots
- Food poisoning
- Industrial disaster/ crisis
- Environmental pollution

Disaster Management



Disaster prevention, mitigation and preparedness

The first important steps towards reducing disaster impact are to correctly analyze the potential risk and identify measures that can prevent, mitigate or prepare for emergences. Information and Communication Technology can play a significant role in highlighting risk areas, vulnerabilities an potentially affected populations by producing geographically referenced analysis through, for example, a geographic information system (GIS). The importance of timely disaster warning in mitigating negative impacts can never be underestimated. A warning can be defined as the communication of information about a hazard or threat to a population at risk, in order for them to take appropriate actions to mitigate any potentially negative impacts on themselves, those in their care and their property.

The occurrence of a hazard not necessarily result in a disaster. While hazards cannot be avoided, their negative impacts can be mitigated. The goal of early public warning is to ensure to the greatest extent possible that the hazard does not become a disaster. Such warnings must be unambiguous, communicate the risks succinctly and provide necessary guidance.

The success of a warning can be measured by the actions by the actions that it causes people to take, such as evacuation or avoiding at – risk areas. In a disaster situation, there is no doubt that timely warnings allow people to take actions that saves lives, reduce damage to property and minimize human suffering. To facilitate an effective warning system, there is a major need for better coordination among the early warning providers as well as those handling logistics and raising awareness about disaster preparedness and management.

While disaster warnings are meant to be a public good, they are often most effectively delivered through privately – owned communication networks and devices. There are many new communication technologies that allow warning providers not only to reach the people at risk but also to personalize their warning message to a particular situation. Opportunities are available right now to significantly reduce loss of life and potential economic hardship if disaster warning systems can be improved.

Disaster Reduction

Disaster Reduction identifies several key parties that play major roles in the disaster management process, especially in disaster warning. Communities, particularly those most vulnerable, are vital to people – centered early warning systems.

Local Governments: Should have considerable knowledge of the hazards to which their communities are exposed.

National Governments: are responsible for policies and frameworks that facilitate early warning in addition to the technical systems necessary for the preparation and issuance of timely and effective hazard warnings for their respective countries.

Regional Institutions and Organizations: Should provide specialized knowledge and advice in support of national efforts to develop or sustain the operational capabilities of countries that share a common geographical environment.

International Bodies: Should provide support for national early warning activities and foster the exchange of data and knowledge between individual countries.

Non-governmental organizations (NGOs): Play a critical role in raising awareness among individuals and organizations involved in early warning and in the implementation of early warning systems, particularly at the community level. In addition, they play in important advocacy role to help ensure that early warning stays on the agenda of government policy makers.

The private sector: has a diverse role to play in early warning, including developing early warning capabilities in their own organizations. The private sector is also essential as they are usually better equipped to implement Information and Communication Technology – based solutions. The media plays an important role in improving the disaster consciousness of the general population and in disseminating early warnings.

The scientific Community: Has a critical role in providing specialized scientific and technical input to assist governments and communities in developing early warning systems.

Channels Used for Disaster Warning

- Radio and Television
- Telephone (Fixed and Mobile)
- Short Massage Service
- Satellite Radio
- Internet / Email
- Remote Sensing

Floods

A Floods is an expanse of water submerging land. A flood is caused by excess water in a location, usually due to rain from a storm or thunderstorm or the rapid melting of snow.

Causes of floods

1) When snow on a mountain melts or when a river or a lake of some sort overflows
2) Flooding from water displacement, such as in a landslide.
3) The failure of a dam
4) An earthquake induced tsunami
5) A huricne's storm surge or melt water from volcanic activity.
6) Flooding of coastal area by high tide or by tsunami waves cause by undersea earthquakes.
7) A flood that rises and falls rapidly with little or no advance warming is called a flash flood. Flash floods usually result from intense rainfall over a relatively small area.

Flood management

Flood management involves the following activities

1) **Mapping** of the flood prone area
2) **Land use control** – no major development should be permitted in the areas subjected to flooding.
3) **Construction of engineered structures** – strong structures to withstand flood forces. Moreover the buildings should be constructed on an elevated area and if necessary should be build on stits.
4) **Flood control** – it aims to reduce flood damage. It includes:
    a) **Flood reduction**
    b) **Flood diversion**
    c) **Flood proofing**

For example

London is protected from flooding by a huge mechanical barrier across the river Thames, which is raised when the water reaches a certain point.

Cyclone

The name cyclone was first coined by Captain Henry Piddington, Chairman of Marine Court, Calcutta in 1848. It is derived from Greek word means coil of a snake. Cyclone is an meteorological phenomena in which an area of low pressure characterized by inward spiraling winds that rotate counter clockwise in the northern hemisphere and clockwise in the southern hemisphere of the earth. Near the places of their origin they are only 80 km. They move at faster rate over the oceans than over the land because the irregularities of the land surface retard their speed. The six main types of cyclones are polar cyclone, polar low, extra tropical, subtropical, tropical and mesoscale.

The effects of cyclones can be mitigated through effective mitigation policies and strategies.

- Installation of Earth Warning
- Developing communication infrastructure
- Developing shelter belts
- Developing community cyclone shelters
- Construction of permanent houses
- Training and education
- Land use control and settlement planning

Earthquakes and Mitigation Measures

Earthquake is those movements of the earth crust which make the ground vibrate and shake backward and forward. The shaking of earth crust proceeds in the form of waves from the centre of disturbance. Longitudinal waves, transverse waves and surface waves are the 3 types of waves. Earthquake may be caused by two types o forces.

1) Techtonic occurrence: techtonic occurrence like faulting, breaking of rocks, raising or sinking of layers of the earth, folding of the strata or vapour seeking to escape from the earth.
2) Volcanic activity: Violent eruptions and intrusion of igneous magma from below the earth.

Types of earthquake: Volcanic Earthquake: are associated with the flow of hot magma interrupting volcanoes. These happen to be localized and seldom cause any extensive damage

Mitigation Measures

- Damage to structure can be avoided by prohibiting restriction on such earthquake prone zones.
- Power lines and pipelines can be built with extra slack where they cross such earthquake prone zones.
- New buildings should be constructed with proper earthquake resistant measures. They require secure anchoring and tight bonding of foundations, frame, outer and inner walls, floors and roofs.
- Vulnerable older building located in high risk areas might be rebuilt to withstand anticipated earth quake.

Land Slides and Mitigation measures

In the recent years, intensive construction activity and the destabilizing forces of nature have aggravate the land Slide problem. Landslides refer to the downward sliding of huge quantities of land masses. Sliding occurs along steep slopes of hills of mountains. The rate of movement of such a mass is never constant. Landslides occur as a result of changes on a slope, sudden or gradual, either in its composition, structure, hydrology or vegetation. The changes can be due to geology, climate, weathering, changing land use and earthquakes.

Effect of landslides:

Landslides are not only destructive to the ma but also to the structures. One of the most disastrous landslides occurred in Switzerland in 1806, when great masses of loose rock and soil suddenly slide down into the valley form the mountainside. It resulted in killing of 800 persons. Initially the Vajont Dam, was the highest arch failed due to landslide on October 9, 1963, when a rock mass of about 600 million tons slide down into the lake.

- A significant reduction in hazards caused by landslides can be achieved by prevention of the exposure of population and facilitates by physically controlling the landslides.
- Development programs that involve modification of the topography, exploitation of natural resources and change in the balance load on the ground should not be permitted.
- Some critical measures that could be undertaken to prevent further landslides are drainage measures, erosion control measures such bamboo check-dams, terracing jute and coir netting and rock control

measures such as grass plantation, vegetated dry masonry walls, retaining walls and, most importantly, preventing deforestation and improving afforestation.

- Disasters cannot be totally prevented. However, early warming systems, careful planning and preparedness on part of the vulnerable community would help in minimizing the loss of life and property due to these disasters.

Suggestions to improve disaster management

1. Know how to do more with less. The simple act of tent camping in the outdoors with a family will teach you more in a weekend about what is required to live simply and be happy than reading survival books in the comfort of your living room.
2. Keep it simple. Fancy preparedness plans and survival gear fail under the pressures of a real – life scenario. The less moving parts the better.
3. Prepare for whatever disaster is likely to effect your area. Not every place on the planet has the same needs.
4. Along with your home-based supplies, create a "bug-out" kit(s) for your family, containing mobile emergency supplies should you be forced to evacuate.
5. Act: Physically prepare and act upon your preparedness plan. Talk is cheap. Practice, practice, and practice your preparedness plan; and don't be afraid to modify it as your needs change.
6. Do the neighborhood thing. Once your family is prepared, get your neighbors on the same page, similar to a neighborhood block watch.
7. When your preparation work is done, rotate certain survival – kit items such as food and medications as they expire, but live your life. Preparedness training that breeds fear and paranoia is counterproductive and the enemy of true, long – term self – reliance.

Conclusion

Disaster management aims to reduce, or avoid, the potential losses from hazards, assure prompt and appropriate assistance to victims of disaster, and achieve rapid and effective recovery. The Disaster management cycle illustrates the ongoing process by which governments, businesses, and civil society plan for and reduce the impact of disasters, react during and immediately following a disaster, and take steps to recover after a disaster has occurred. Appropriate actions at all points in the cycle land to greater preparedness, better warnings, reduced vulnerability or the prevention of disasters during the next iteration of the cycle. The complete disaster management cycle includes the shaping of public policies and plans that either modify the causes of disasters or mitigate their effects on people, property, and infrastructure.

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