DISASTER FOLLOWING NATURAL EVENTS-PREVENTION AND MANAGEMENT OF DISASTER

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ABSTRACT

Disaster following Natural Events-Prevention and Management of Disaster

Disaster means “crises situation causing widespread damage that far exceeds the ability to recover”. Disasters are not totally discrete events. There possibility of occurrence, time, place and severity of the strike can be reasonably and in some cases accurately predicted by technological and scientific advances. A manager needs to apply both modern management principles and a disaster control plan to handle the situation.

Disasters are broadly classified as natural disaster (acts of God) and accidental disaster (man made).

Disaster Management aims at reducing or avoiding the potential losses from hazards, assure prompt and appropriate assistance to victims of the disasters and achieve rapid and effective recovery. The disaster management cycle illustrate the on-going process by which the organizations and the government plans for and to reduce the impact of disaster, react during and immediately following a disaster and takes steps to recover after a disaster occurred.

Disaster management is an integral part of the overall loss control programme and is essential for any well-run organization. It is important for the effective management of an accident / incident to minimize the environmental impact and loss caused to both people and property in and around the installation.

The aim of Disaster Control Action Plan is to achieve a satisfactory level of readiness to respond to any emergency situation in the organisation. This plan strengthens the technical and managerial capacity of the organizations. A disaster control action plan includes emergencies, exercises/ training-warning systems, emergency-communication systems, evacuation plans and training, resource inventories, emergency personnel/contact list, mutual aid agreements and logistical readiness to deal with disasters. Major emergencies and disasters, natural or accidental have occurred across the globe and as the
population grows and resources become limited, communities and industries within them have become increasingly vulnerable to the hazards that causes disasters.

A disaster as mentioned before is an occurrence that causes damage, ecological disruption, loss of human life or deterioration of health and health services on a scale sufficient to warrant and extra ordinary response from outside the affected community or area.

Disaster management is the process of addressing an event that has the potential to help the society. Disaster management is similar to disaster mitigation. It implies a whole-of-government approach to using community resources to fight the effects of an event. So as to, the community will be self-sufficient for periods of time until the situation can be stabilized.

Through disaster management, we cannot completely counteract the damage but it is possible to minimize the risks through early warning, provide developmental plans for the disaster, generate communication and medical resources, and aid in rehabilitation and post-disaster reconstruction.

Key word: Natural Events, Disaster, Flood, Earthquake

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1. INTRODUCTION

1.1. DISASTER

Disasters, whether natural or man-made can strike at any time. In general, the general response to a disaster is in terms of relief and rescue operations - after the event. However, if we are adequately prepared, it’s possible to severely reduce the impact of a disaster. The impact can be reduced through a good understanding of preventive actions, as well as having the knowledge of certain life-saving tools and techniques, which when used at the time of the event of disaster can control the total damage to life and belongings. The biggest problem with the disasters is the suddenness and swiftness with which they arrive. Hence, in order to reduce the severity of a disaster the response also has to be equally swift.

Let’s first understand, what is a disaster? Dictionary meaning of "disaster" may be taken as: "a sudden accident or natural event that causes great damage or loss of life" - Oxford Dictionary. So, as can be seen, disaster by definition itself is "sudden" and causes immense damage to property and/or life.

Almost all of us can think of several disasters that have occurred in the recent past. Earthquakes, industrial accidents, oil-spills, forest-fires, terrorist activities etc. are some of the more commonly encountered disasters.

Disasters themselves are not limited to specific parts of world, though, certain areas might be more prone to certain specific type of disaster, e.g. area around Pacific Rim is more prone to earthquakes, some countries are more prone to terrorist activities, some coastal areas are more prone to cyclones, and, some areas are more prone to floods. However, the more advanced a nation is, typically, their level of preparedness is higher. This higher level of preparedness allows them to have a better control over the loss. Any disaster can interrupt essential services, such as the
provision of health care, electricity, water, sewage/garbage removal, transportation and communications. The interruption can seriously affect the health, social and economic networks of local communities and countries. Disasters have a major and long-lasting impact on people long after the immediate effect has been mitigated. Poorly planned relief activities can have a significant negative impact not only on the disaster victims but also on donors and relief agencies. So it is important that physical therapists join established programs rather than attempting individual efforts.

There are certain types of disasters, where, the loss during the actual event is not necessarily as high, but, the losses become very high due to inability to manage the situation in a timely manner. More often than not, it happens due to confusion and chaos in the context of too much loss, and, inefficient utilization of resources, which are already strained. Another thing which causes a lot of loss during certain kind of disasters is the inability to properly manage and secure the utilities, like: electricity, gas, water etc. On one side, each of these utilities are very important, and, on the other side, due to leakages/ruptures, some of these might come in contact with each other, when they should not causing further damage.

Thus, the main motivation behind disaster management is to minimize the losses at the time of a disaster as well as ensure most efficient utilization of resources - which are already scarce. There is no country that is immune from disaster, though vulnerability to disaster varies. There are four main types of disaster,

- **Natural disasters**: These disasters include floods, hurricanes, earthquakes and volcano eruptions that can have immediate impacts on human health, as well as secondary impacts causing further death and suffering from floods causing landslides, earthquakes resulting in fires, tsunamis causing widespread flooding and typhoons sinking ferries
- **Environmental disasters**: These emergencies include technological or industrial accidents, usually involving hazardous material, and occur where these materials are produced, used or transported. Large forest fires are generally included in this definition because they tend to be caused by humans.
- **Complex disasters**: These emergencies involve a breakdown of authority, looting and attacks on strategic installations. Complex emergencies include conflict situations and war.
- **Pandemic disasters**: These emergencies involve a sudden onset of a contagious disease that affects health but also disrupts services and businesses, bringing economic and social costs.

Natural and Manmade Disaster based on the devastation, these are further classified into major/minor natural disaster and major/minor manmade disasters. Some of the disasters are listed below,

<table>
<thead>
<tr>
<th>Major natural disasters:</th>
<th>Minor natural disasters:</th>
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<tr>
<td>Flood</td>
<td>Cold wave</td>
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<td>Cyclone</td>
<td>Thunderstorms</td>
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<td>Drought</td>
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<td>Storm</td>
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Major manmade disaster:
- Setting of fires
- 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 also includes following components, like risk, vulnerability, and hazards. As and when we conquer these components, naturally the after effects it can be controlled.

Risk: Risk is a measure of the expected losses due to a hazardous event of a particular magnitude occurring in a given area over a specific time period. Risk is a function of the probability of particular occurrences and the losses each would cause. The level of risk depends on, a) Nature of the Hazard b) Vulnerability of the elements which are affected c) Economic value of those elements.

Vulnerability: It is defined as the extent to which a community, structure, service, and/or geographic area is likely to be damaged or disrupted by the impact of particular hazard, on account of their nature, construction and proximity to hazardous terrain or a disaster prone area.

Hazards: Hazards are defined as phenomena that pose a threat to people, structures, or economic assets and which may cause a disaster. They could be either manmade or naturally occurring in our environment. The extent of damage in a disaster depends on the impact, intensity and characteristics of the phenomenon and how people, environment and infrastructures are affected by that phenomenon.

This relationship can be written as an equation: Hazard + Vulnerability =Disaster Risk

As stated above disaster is a sudden, calamitous event bringing great damage, loss, and destruction and devastation to life and property. The damage caused by disasters is immeasurable and varies with the geographical location, climate and the type of the earth surface/degree of vulnerability. This influences the mental, socio-economic, political and cultural state of the affected area. Generally, disaster has the following effects in the concerned areas, like it completely disrupts the normal day to day life, it negatively influences the emergency systems and normal needs and processes like food, shelter, and 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.
Thus, a disaster may have the following main features

![Features of Disaster](image)

**Figure 1** Features of Disaster

We need to be aware of likely hazards and potential hazards, how, when and where they are likely to occur and the problems which may result from an event. With 60% of the land mass susceptible to seismic hazards damage, 8% of land mass prone to floods, 8000 km. long coastline with two cyclone seasons, 685 of the total area vulnerable to drought, hilly regions vulnerable to avalanches, landslides, hailstorms, cloudburst, other human caused hazards it is important most of all, we should be aware of how to cope up with their effects. During the time of a disaster there will be delay before outside help arrives. So self-help is essential and it depends on a prepared community which has an alert, informed and actively aware population, a preparedness and response plan, an active and involve local government, agreed and co-ordinated arrangements for response and mitigation measures.

2. DISASTER MANAGEMENT

Disaster management is the process of defining goals and implementing activities by the efficient use of human, material and capital resources. The process is a set of interdependent activities used to do the functions of management like planning (strategic- long range and tactical- short range), organizing, staffing (human resources management), leading and controlling. These functions of management collectively constitute the management process, because they are concurrently and continuously being performed in managing an organization. Management also requires decision making. Sound decision making requires creativity and confidence. The purpose of disaster management is to assure the survival of people, assets and business operations by controlling costs by meeting extremely imposed obligations and fulfill perceived social responsibilities.

Disaster management can also be defined as the body of policy and administrative decisions and operational activities which pertain to the various stages of a disaster at all levels. Broadly disaster management can be divided into pre-disaster and post-disaster. There are three key stages of activity that are taken up within disaster management like:

- Before a disaster strikes (pre-disaster) - Activity taken to reduce human and property losses caused by the hazards and ensures that these losses are also minimized when the disaster strikes. Risk reduction activities are taken under this stage and they are termed as mitigation and preparedness activities. These activities are designed to minimize loss of life and damage – for example by removing people and property
from a threatened location and by facilitating timely and effective rescue, relief and rehabilitation. Preparedness is the main way of reducing the impact of disasters. Community-based preparedness and management should be a high priority in physical therapy practice management.

- During a disaster (disaster occurrence) – Activities taken to ensure that the needs and provisions of victims are met and suffering is minimized. Activities taken under this stage are called as emergency response activities.

- After a disaster (post-disaster) – Activities taken to achieve early recovery and does not expose the earlier vulnerable conditions. Activities taken under this stage are called as response and recovery activities. Once emergency needs have been met and the initial crisis is over, the people affected and the communities that support them are still vulnerable.

3. PRINCIPLES OF DISASTER MANAGEMENT

1. Comprehensive – emergency managers consider and take into account all hazards, all phases, all stakeholders and all impacts relevant to disasters.
2. Progressive – emergency managers anticipate future disasters and take preventive and preparatory measures to build disaster-resistant and disaster-resilient communities.
3. Risk-driven – emergency managers use sound risk management principles (hazard identification, risk analysis, and impact analysis) in assigning priorities and resources.
4. Integrated – emergency managers ensure unity of effort among all levels of government and all elements of a community.
5. Collaborative – emergency managers create and sustain broad and sincere relationships among individuals and organizations to encourage trust, advocate a team atmosphere, build consensus, and facilitate communication.
6. Coordinated – emergency managers synchronize the activities of all relevant stakeholders to achieve a common purpose.
7. Flexible – emergency managers use creative and innovative approaches in solving disaster challenges.
8. Professional – emergency managers value a science and knowledge-based approach; based on education, training, experience, ethical practice, public stewardship and continuous improvement.

Disaster management is linked with sustainable development, particularly in relation to helpless people such as those with disabilities, elderly people, children and other disregarded groups. Disaster Management organizations provide detailed information on type of disasters, how to prepare for disasters, and how to respond to disasters. ‘Disaster management is the ‘organization and management of resources and responsibilities for dealing with all human aspects of emergencies, in preparedness, response and recovery in order to reduce the impact of disasters.’
4. DISASTER MANAGEMENT CYCLE

![Disaster Management Cycle Diagram]

**Figure 2** Disaster management cycle

5. PHASES OF DISASTER FOR PROFESSIONAL ACTIVITIES AND FOR PERSONAL ACTIVITIES

Assets are categorized as either living things, non-living things, cultural or economic. Disasters are categorized by their cause, either natural or man-made. The entire strategic management process is divided into four fields to aid in identification of the processes. The four fields normally deal with risk reduction, preparing resources to respond to the disaster, responding to the actual damage caused by the disaster and limiting further damage, and returning as close as possible to the state before the disaster incident.
Disaster Management is a strategic process, and not a tactical process, thus it usually resides at the executive level in an organization. It normally has no direct power, but serves as an advisory or coordinating function to ensure that all parts of an organization are focused on the common goal. Effective Disaster Management relies on a thorough integration of emergency plans at all levels of the organization, and an understanding that the lowest levels of the organization are responsible for managing the emergency and getting additional resources and assistance from the upper levels.

The nature of management depends on local economic conditions and social conditions. The cycle of Disaster Management must include long-term work on infrastructure, public awareness, and even human justice issues. In both the cases i.e. for professional activities and personal activities, the process of Disaster Management involves four phases: mitigation, preparedness, response, and recovery.

5.1. Mitigation
Mitigation efforts are attempts to prevent disaster from developing 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. The implementation of mitigation strategies is a part of the recovery process if applied after a disaster occurs. A sign to mitigation is the identification of risks.

Mitigation measures can be structural or non-structural. Structural measures like, technological solutions for flood levels controls and building retrofitting for earthquakes. Non-structural measures include legislation, insurance and land-use planning (e.g. the designation of non-essential land like parks to be used as flood zones).

Mitigation is the most cost-efficient method for reducing the effect of disaster. It includes providing regulations regarding evacuation, sanctions, and communication of risks to the public. Personal mitigation is mainly about knowing and avoiding unnecessary risks. This includes an assessment of possible risks to personal/family health and to personal property.

A team of specialists can be hired to conduct risk identification and assessment surveys. Purchase of insurance policies covering the most prominent identified risks is a common measure.

5.2. 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.

In this phase, emergency managers develop plans of action carefully to manage and counter their risks and take action to build the necessary capabilities needed to implement such plans. Common preparedness measures include: communication plans with easily understandable methods, proper maintenance and training to human resource for emergency services, development and exercise of emergency public warning, develop organizations of trained volunteers among civilians, and so on. Personal preparedness focuses on preparing equipment and procedures for use when a disaster occurs. Preparedness measures can take many forms including the
construction of shelters, installation of warning devices, creation of back-up life-line services (e.g., power, water, sewage), and rehearsing evacuation plans.

5.3. Response
This phase includes the mobilization of the necessary emergency services and first responders in the disaster area. This is likely to include core emergency services, such as firefighters, police and ambulance services. They may be supported by a number of secondary emergency services, such as specialist rescue teams and other. A well-practiced emergency plan developed as part of the preparedness which enables efficient coordination of rescue. Organizational response to any significant disaster, natural or man-made, is based on existing emergency management organizational systems and processes.

There is a need for both discipline (structure, doctrine, process) and agility (creativity, improvisation, adaptability) in responding to a disaster. There is also the need to onboard and build an effective leadership team quickly to coordinate and manage efforts as they grow beyond first responders.

On a personal level the response can take the shape either of a shelter in place or an evacuation. In a shelter-in-place scenario, a family would be prepared to fend for themselves in their home for many days without any form of outside support. In an evacuation, a family leaves the area by automobile or other mode of transportation, taking with them the maximum amount of supplies they can carry, possibly including a tent for shelter.

5.4. Recovery
The aim 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.

Practitioners in emergency management come from an increasing variety of backgrounds as the field matures. Professionals from memory institutions i.e. museums, historical societies, libraries, and archives are dedicated to preserving cultural heritage--objects and records contained in their collections. To increase the opportunity for a successful recovery of valuable records, a well-established and thoroughly tested plan must be developed. This plan must be flexible, and emphasize simplicity in order to aid in response and recovery.

On a personal level, recovery will take place inside the home. Planners for these events usually buy bulk foods and appropriate storage and preparation equipment, and eat the food as part of normal life.

6. SAFETY TIPS TO CONTROL DISASTER

6.1. Earthquakes
Earthquakes usually give no warning at all. So we all have to prepare for it at any point of time. Prepare our society and your family before the earthquake. Earthquakes give no warning at all. Sometimes, a loud rumbling sound might signal its arrival a few seconds ahead of time. Those few seconds could give you a chance to move to a safer location. Now is the time to formulate a disaster control action plan for safety for you and your family. If you wait until the earth starts to shake, it may be too late.

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6.2. Consider the following safety measures

Always keep the following in a designated place: bottled drinking water, non-perishable food, first-aid kit, torchlight and battery-operated radio with extra batteries.

1. Take cover. Be prepared to move if your cover moves.
2. If no sturdy cover is nearby, kneel or sit close to the floor next to a structurally sound interior wall. Place your hands on the floor for balance.
3. Do not stand in doorways. Violent motion could cause doors to slam and cause serious injuries.
4. Consider retrofitting and reinforcing of your house with earthquake-safety measures.
5. If your home is badly damaged, you will have to leave with water, food, medicine and documents.
6. Avoid places where there are loose electrical wires hanging.
7. Do not re-enter damaged buildings.
8. Help injured or trapped persons. Give first aid where appropriate.
9. Check for sewage and water lines damage. If water pipes are damaged, avoid using water from the tap.
10. In case family members are separated from one another during an earthquake, develop a plan for reuniting after the disaster.

6.3. Cyclone

Keep watch on weather and listen to radio or TV. Keep alert about the community warning systems – loudspeakers, bells, conches, drums or any traditional warning system. Get to know the nearest cyclone shelter / safe houses and the safest route to reach these shelters.

1. Prepare an emergency kit containing: a portable radio, torch and spare batteries, stocks dry food, matches, fuel lamp, portable stove, cooking utensils, waterproof bags, a first aid kit, manual, pliers, small saw, axe and plastic rope etc.
2. Check the roof and walls, pillars, doors and windows to see if they are secure. If not, repair those at the earliest.
3. Clear your property of loose materials that could blow about and cause injury or damage during extreme winds.
4. Keep important documents, passbook, etc. in a tight plastic bag and take it along with your emergency kits if you are evacuating.
5. Identify the spot where you can dig holes to store food grains
6. Keep a list of emergency addresses and phone numbers on display.
7. Do not venture into the sea for fishing
8. Beware of the calm eye, and wait for the official call “all clear”.

6.4. Floods

1. All your family members should know the safe route to nearest shelter.
2. Prepare to take bullock carts, other agricultural equipment, and domestic animals to safer places or to higher locations.
3. Plan which indoor items you will raise or empty if water threatens to enter your house
4. Keep your food covered, don’t take heavy meals. Drink boiled water.
5. Help the officials/volunteers distributing relief materials.
6. Firstly pack warm clothing, essential medication, valuables, personal papers, etc. in waterproof bags, to be taken with your emergency kit.
7. Raise furniture, clothing and valuables onto beds, tables and to the top of the roof.
8. Whether you leave or stay, put sandbags in the toilet bowl and over all laundry / bathroom drain-holes to prevent sewage back-flow. Use bleaching powder and lime to disinfect the surrounding.
9. Stay tuned to battery operated radio for updated advice.
10. Do not use electrical appliances, which have been in floodwater until checked for safety.
11. Boil tap water (in cities) until supplies have been declared safe and do not eat food, which has been in floodwaters.
12. Be careful of snakes, snakebites are common during floods, use an umbrella and bamboo stick (to protect from snake).

6.5. Fire Accidents

1. Do keep the phone number of the Fire Service near the telephone and ensure that everyone in the family knows the number.
2. Do keep matches and lighters away from children.
3. Do sleep with your bedroom closed to prevent the spread of fire.
4. Do you know that you should never run if your clothes are on fire and that you should- “STOP – DROP – ROLL”

6.6. Landslide

1. Learn about landslide risk in your area by contacting local officials.
2. Landslides occur where they have before, so detailed site analysis of your property can be made, and corrective measures you can take.
3. Stay alert and awake. Listen to a weather Radio or portable, battery-powered radio for warnings of intense rainfall.
4. Listen for any unusual sounds that might indicate moving debris.
5. If you are near a stream or channel, be alert for any sudden increase or decrease in water flow and for a change from clear to muddy water. Such changes may indicate landslide activity upstream, so be prepared to move quickly.
6. Be alert especially when driving. Watch the road for collapsed pavement, mud, fallen rocks, and other indications of possible debris flows.
7. Localize the information by including the phone numbers of local emergency services offices, the Red Cross, and hospitals and Support your local government in efforts to develop and enforce land-use and building ordinances that regulate construction in areas susceptible to landslides and debris flows.
8. Check for injured and trapped persons near the slide, without entering the direct slide area.
9. Help a neighbor who may require special assistance - infants, elderly people, and people with disabilities.
10. Replant damaged ground as soon as possible since erosion caused by loss of ground cover can lead to flash flooding.
11. Discuss landslides and debris flow with your family. Everyone should know what to do in case all family members are not together. Discussing disaster ahead of time
helps reduce fear and lets everyone know how to respond during a landslide or debris flow.

When earthquake hit Gujarat on 26 January 2001 and more than 20000 people died, we thought as a society we would learn to cope with disaster better. It seems that 20000 lives were not enough of a price to pay for shaking the bureaucracy and civil society to learn to cope with disasters with greater efficiency.

Most disasters after the first 24 hours assume more or less typical characteristics in which the problems can be anticipated and response system can be put in place. We had developed a year later a Disaster Management Information System. The idea was that civil society volunteers will provide information about what kind of support they can extend (material, professional, financial, technological, infrastructural, etc.), within what range of distance from their residence, and whether they will like their details to be put on the website. For instance, about 118 ham radio operators in Gujarat had agreed to put their information through their associations in the database. They can be directly contacted and their services requested for the purpose.

Similarly, transporters, crane owners, hardware operators, who have concrete cutters or other devices to clear the debris, medical professionals, mobile x-ray machines, mobile clinics, etc., are well known equipment and services needed in the hour of emergency. We know that water bodies often get affected adversely and fresh water becomes a necessity. In some cases, the water storage structures were damaged. When electricity was resumed, the tube-wells would work but where would one store the water. To overcome such disasters the individual and also the enterprise both should have their disaster control plan.

7. DISASTER CONTROL PLAN

Disaster control planning process is based on the various considerations. Most businesses depend heavily on technology and automated systems, and their disruption for even a few days could cause severe financial loss and threaten survival. The continued operations of an organization depend on management’s awareness of potential disasters, their ability to develop a plan to minimize disruptions of critical functions and the capability to recovery operations expenditure and successful returns.

A disaster recovery plan is a comprehensive and a consistent action to be taken before, during and after a disaster. The plan should be documented and tested to ensure the continuity of operations and availability of critical resources in the event of a disaster. Primary objective of disaster recovery planning is to protect the organization and minimize the disruption of operations and ensure some level of organizational stability.
Secondary objectives of disaster recovery planning are:

1. Obtain Top Management Commitment: Support, responsibility and involvement of management in the development and coordinating of the disaster recovery planning process for its effectiveness.
2. Establish a planning committee: A scope of the plan should define by planning committee, including representatives from all functional areas of the organization.
3. Perform a risk assessment: The planning committee should prepare a risk analysis and business impact analysis that includes a range of possible disasters, including natural, technical and human threats.
4. Establish priorities for processing and operations: The critical needs of each department within the organization should be carefully evaluated with documentation, policies and procedures, and processing systems. Critical needs like necessary procedures and equipment required to continue operations, computer center etc.
5. Determine Recovery Strategies: The most practical alternatives for processing in case of a disaster should be researched and evaluated.
6. Perform Data Collection: Recommended data gathering materials and documentation will be done. It is extremely helpful to develop pre-formatted forms to facilitate the data gathering process.
7. Organize and document a written plan: An outline of the plan’s contents should be prepared to guide the development of the detailed procedures. Top management should review and approve the proposed plan, which will help to organize the detailed procedures, identifies old work procedures, and provides a road map for developing the procedures.
8. Develop testing criteria and procedures: It is essential that the plan be thoroughly tested and evaluated on a regular basis. Procedures to test the plan should be documented. The tests will provide the organization with the assurance that all necessary steps are included in the plan.
9. Test the Plan: After testing procedures have been completed, an initial test of the plan should be performed by conducting a structured walk-through test. The test will provide additional information regarding any further steps that may need to be included, changes in procedures that are not effective, and other appropriate adjustments.

Figure 3 Secondary objectives

The following points illustrate the disaster control planning process. The methodology that will provide us, how a disaster control plan should be.

- Providing a sense of security
- Minimizing risk of delays
- Guaranteeing the reliability of standby systems
- Providing a standard for testing the plan.
10. Approve the plan: Once the disaster recovery plan has been written and tested, the plan should be approved by top management. It is top management’s ultimate responsibility that the organization has a documented and tested plan. Management responsibility covers, establishing policies, procedures and responsibilities for comprehensive contingency planning, reviewing and approving the contingency plan annually, evaluate the adequacy of contingency plans for its service bureau, ensure that its contingency plan is compatible with its service bureau’s plan.

8. CONCLUSION
A disaster is an event that makes the continuation of normal functions impossible, a disaster recovery plan consists of the precautions taken so that the effects of a disaster will be minimized and the organization will be able to either maintain or quickly resume mission-critical functions. Disaster recovery planning involves storage or backup processing. The probability of a disaster occurring in an organization is highly uncertain. Disaster recovery is becoming an increasingly important aspect of enterprise. Despite the number of public disasters since 9/11, still 50 percent of companies having a disaster control plan but have never tested their plan.

REFERENCES


