UNIT 1 DISASTER: MEANING, FACTORS AND SIGNIFICANCE

Structure

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1.0 OBJECTIVES

After studying this unit, you should be able to:

• discuss the meaning, definitions and types of disasters,
• describe the nature of disasters,
• highlight the aggravating factors of disasters, and
• explain the significance and repercussions.

1.1 INTRODUCTION

A disaster is the result of an immediate situation or the result of a long set process which disrupts normal human life in its established social, traditional and economic system. This is due to the destruction of environment which is caused by extraordinary natural destructive phenomena or human-induced hazards resulting in human hardship and suffering beyond recovery unless external aid is brought in.

1.2 MEANING OF DISASTERS

The terms 'Disaster' owes its origin to the French word 'Desastre' which is the combination of the article - 'des' and 'astre' meaning 'star'. In earlier days a disaster was considered to be due to some unfavourable star. Nowadays, the term 'Disaster' is commonly used to denote any odd event, be natural or man made, which brings about immense misery to a region. So that it becomes difficult to cope with the situation through local resources.

1.2.1 Definitions

The dictionary meanings of Disaster are as follows:

1) Disaster is a sudden or great misfortune, calamity. (Concise Oxford Dictionary)
2) Disaster is a sudden calamitous event producing great material damage, loss and distress. (Webster's Dictionary)
Disaster is assessed on the basis of the following features:

1) Disruption to normal pattern of life. Such disruption is usually severe and may also be sudden, unexpected and widespread.

2) Human effects such as loss of life, livelihood and property, injury, hardship and adverse effects on health.

3) Effects on Social Structure such as destruction of or damage to infrastructure, buildings, communications and other essential services.

4) Community needs such as shelter, food, clothing, medical assistance and social care.

The severity of a disaster situation is usually reckoned in terms of loss of life or property or both.

A formal definition of disaster may be "an event, concentrated in time and space, which threatens a society or a relatively self-sufficient sub-division of a society with major unwanted consequences as a result of the collapse of precautions which had hitherto been culturally accepted as adequate" (Turner, 1997).

1.2.2 Distinction Between Hazard and Disaster

Hazard and disaster are closely related. A hazard is a natural event while the disaster is its consequence. A hazard is a perceived natural event which threatens both life and property. A disaster is the culmination of such hazard.

A hazard is a potential for a disaster. A hazard becomes a disaster when it hits an area affecting the normal life system. If a hazard like a cyclone hits an unpopulated area, say an unpopulated coast, it need not be considered as a disaster. However, it will be considered a disaster if life and property are seriously damaged. A hazard may be regarded as pre-disaster situation, in which some risk of disaster exists, because the human population has placed itself in a situation of risk.

Disasters are extreme events which cause great loss of life and/or property and create severe disruptions to human activities. They can be created by human actions, e.g., transport accidents and industrial explosions or natural processes like earthquakes. A hazard is when extreme events or process occur in an area of human settlement and could cause loss of life and damage to existing constructed resources or infrastructure.

1.2.3 Distinction Between Natural and Man Made Disasters

Disasters are classified under various groups when studied according to origin or from functional angle. Although both types of disasters (natural or man made) result in damage to life and property, their distinction can be identified by classifying into major groups:

1. Natural Disasters
   i) Wind related - Storm, Cyclone, Tornado, Storm surge, Tidal waves.
   iii) Earth related - Earthquake, Tsunamis, Avalanches, Landslides, Volcanic eruptions.
2. Man Made Disasters

i) Accidents: Road, Rail, Air, Sea, Building collapse.
ii) Industrial Mishaps: Gas leak, Explosion, Sabotage, Safety.
iii) Fire: Building, Coal, Oil.
iv) Forest Fire (In tropical counters, forest fires are often manmade)
vii) Terrorist activities.

1.3 NATURE OF DISASTERS

As disasters have profound and often long lasting effects on the people and their safety, it is essential to acquire fullest possible knowledge about their occurrence, impacts and precautions including remedial measures. However, study of Disasters has many facets. While their mechanism requires the study of the scientific aspects of their genesis and life cycle, this impacts on the environment and society also need a multi-disciplinary approach involving the social and medical services. Hence, scholars for studying disasters have adopted the following six approaches.

1) Geographical Approach

In this, social science methods are widely used and emphasis is given to the spatio-temporal distribution of hazard, impacts and vulnerability. Geographers have also given particular thought to the question of how choices are made between different types of adjustment to natural hazards.

2) Anthropological Approach

This approach has focused on the role of disasters in guiding the socio-economic evolution of populations in dispersing them and in causing the destruction of civilizations. A strong concern has led anthropologists to search for the threshold points beyond which local communities can no longer provide the basic requirements for survival of their members.

3) Sociological Approach

In this approach, vulnerability and impacts are considered in terms of patterns of human behaviour and the effects of disasters on community. In addition, psychologists have studied disaster in relation to factors such as a psychologically determined defensive reaction pattern.

4) Developmental Studies Approach

It considers problems of providing aid and relief, migration management, health care and the avoidance of starvation. Over 80 per cent of disasters occur in developing countries, and it is clear that the prevailing poverty increases human vulnerability to natural hazards.

5) Disaster Medicine and Epidemiology

It focuses on the management of mass casualties, the treatment of severe physical trauma and the epidemiological surveillance of communicable diseases whose incidence rates may increase during the disruption of public health measures following a disaster.
6) Technical Approach

The natural and physical scientists emphasise upon this approach. Emphasis is given to geological, geomorphological and geophysical approaches to disasters.

Check Your Progress 1

Note: i) Use the space given below for your answers.
ii) Check your answers with those given at the end of the unit.

1) What do you mean by hazard and disaster?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
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2) Discuss briefly the major types of the natural disasters.

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3) Briefly describe any four approaches regarding nature of disasters.

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1.4 AGGRAVATING FACTORS OF DISASTERS

The severity of the impacts of each disaster is reckoned in terms of deaths, damage, or costs which are dependent on the existing socio-economic conditions of the affected community. In fact, the misery of the affected people is usually increased by the following aggravating factors.

Poverty

All disaster studies show that the wealthy among the population are less affected and are able to recover quickly. However, poverty generally makes people more
vulnerable to all the impacts of disasters. It is only due to poverty that poor people are forced to live in more vulnerable areas such as the flood plains of rivers. Usually droughts claim poor peasant farmers as victims and rarely the wealthy; and famines are the result of a lack of purchasing power to buy food rather than an absence of food. Many people are forced to move from their homes to other parts of their countries or even across borders to survive. Such crisis induced migration poses considerable challenge both in terms of immediate assistance and long term planning for development.

Population Growth

There is an obvious link between the increase in losses from a disaster and increase in population density. If there are more people and structures where a disaster strikes, there will be more impact. Increasing number of people will compete for limited resources (e.g., employment opportunities) which can lead to conflict. This conflict may result in crisis-induced migration. This type of growth occurs predominantly in developing countries, which may aggravate the to disasters.

Rapid Urbanisation

Rapid population growth and migration are closely related to the major phenomenon of rapid urbanization. It is characterized by rural poor or people in disadvantaged areas moving to urban and metropolitan areas in search of economic opportunities and security. These people find fewer options for availability of safe and desirable places to build their houses. Here again, competition for scarce resources can lead to social conflicts.

Many of the landslides or flood disasters are closely linked to rapid and unchecked urbanisation which forces low-income families to settle on the slopes of steep hillsides or banks of rivers.

Transitions in Cultural Practices

Many of the inevitable changes that occur in all societies lead to an increase in their vulnerability to disasters. Obviously, all societies are constantly changing and are in a continual state of transition. These transitions are often disruptive and uneven, leaving gaps in social coping mechanisms and available technology. These transitions include nomadic population that become sedentary, rural people who move to urban areas, and both rural and urban people who move from one economic level to another. More broadly, these examples are typical of a shift from non-industrialized to industrialized societies.

Environmental Degradation

Many disasters are either caused or aggravated by environmental degradation. Deforestation leads to rapid rain run off, which contributes to soil erosion and flooding. The destruction of mangrove swamps decreases the resistance of the coastline to withstand strong winds and storm surges.

Drought conditions may be intensified by deforestation, overgrazing, the stripping of topsoil, poor conservation techniques, depletion of both the surface and subsurface water supply and to an extent, unchecked population.
Lack of Awareness and Information

Lack of awareness and proper information usually converts a hazard into a Disaster. This ignorance may not necessarily be due to poverty, but due to a lack of awareness of what measures can be taken to build safe structures on safe locations. Perhaps some people did not know about safe evacuation routes and procedures. Other population may not know where to turn for assistance in times of acute distress. In most disaster prone societies, although there is a traditional wealth of understanding about disaster threats and responses, yet, they may not know what specific steps they should take immediately to escape the crisis.

War and Civil Strife

War and civil strife are regarded as hazards, that is, extreme events that produce disasters. The causal factors of war and civil strife include competition for scarce resources, religious to ethnic intolerance and ideological differences.

1.5 SIGNIFICANCE AND REPERCUSSIONS

Disaster has significance and repercussions in global, national and local terms. It retards the development process not only in the affected area/region but extends to the neighbouring regions or countries as well.

In global terms, disasters have serious repercussions for the future. The world is already facing a range of environmental and subsistence crises. The political, economic and social stability of the world depends on bridging the socioeconomic gap between developing and developed nations.

In national terms, the impact of disasters usually results in major setbacks to the economy and the developmental process. It produce the direct loss of existing national assets in various forms. Also, it diverts national resources and effort, away from ongoing subsistence and development activities, in order to achieve satisfactory recovery.

In local terms, the requirements of the community need realistic assessment taking into consideration the expected occurrence of the types of vulnerability. Enabling resources to strengthen the local coping mechanisms have to be made available.

Check Your Progress 2

Note: i) Use the space given below for your answers.
   ii) Check your answers with those given at the end of the unit.

1) Discuss briefly the aggravating factors of disasters.
2) How poverty is contributing to increasing the disaster problems?

3) Discuss some important areas of the significance and repercussion of disaster.

1.6 LET US SUM UP

In this Unit, we discussed the meaning and types of the disasters and the distinction between natural and man-made disasters. The nature of disasters and the difference approaches adopted to study Disasters have been explained. The Unit also highlighted the aggravating factors of disasters. The significance and repercussions of Disasters at global, national and local levels have been indicated.

1.7 KEY WORDS

**Anthropological:** Related to study of human beings with regard to the evolution of human society, customs and rituals.

**Avalanche:** Rapid and sudden sliding of large mass of a mixture of snow and ice with rock material.

**Biodiversity:** The existence of a wide variety of plants and animals.

**Cyclone:** A severe storm originating on the high sea and moving to the coastal areas, characterized by very strong winds, torrential rain and floods.

**Damage assessment:** Post disaster estimation of physical damage.

**Disaster assistance:** Provision of measures to prevent and reduce the impact of, and reverse, the effects of disasters; phase include relief, rehabilitation, reconstruction and preparedness, and prevention and mitigation.

**Epidemiology:** Science of epidemics

**Landslide:** Rapid movement of soil and rock downhill.

**Trauma:** Psychological shock of a disastrous event.

**Vulnerability:**Extent to which a country, area, community or structure is likely to be damaged by a Disaster.
1.8 REFERENCES AND FURTHER READINGS


1.9 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) Your answer should include the following points:
   - A hazard is a natural event while the disaster is its consequence.
   - A hazard becomes a disaster when it hits an area affecting the normal life system and the community needs external assistance to cope with the situation.

2) Your answer should include the following points:
   - Wind related disasters.
   - Water related disasters.
   - Earth related disasters.

3) Your answer should include the following points:
   - The Geographical approach
   - The Anthropological approach
   - The Sociological approach
   - The Developmental approach

Check Your Progress 2

1) Your answer should include the following points:
   - Poverty
   - Population growth
   - Rapid urbanisation
   - Transition in cultural practices
   - Environmental degradation
   - Lack of awareness and information
   - War and civil strife
2) Your answer should include the following points:
   - Wealthy population is able to recover quickly from a disaster situation.
   - Due to poverty people are forced to live in areas that are prone to disasters.
   - Famines are the result of a lack of purchasing power to buy food.
   - Migration.

3) Your answer should include the following points:
   - In global terms, disasters lead to the widening of the socioeconomic gap between developed and developing nations.
   - On the national level, disasters result in major setbacks to the national economy and the developmental process.
   - On the local level, the requirements of the community need realistic assessment and provision on the basis of the expected disasters and the local vulnerability.