Akshardhara Research Journal
Single Blind Peer-Reviewed & Refereed International Research Journal
E ISSN -3048-8095 / December 2024 / Special Issue 1 Volume I

35

Man-Made Disaster Causes and Solution

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Abstract

Main objective of this paper that how created disaster by man-made causes and their solution. Disaster are two types one is natural other is man-made. natural and man-made disasters significantly impact the environment and socio-economic structures. We control to man-made disaster, If fallow some precaution like public awareness, This paper completely study on secondary data.

Key words: Disaster, Natural disaster, Man-made disaster, Causes, solution.

Introduction

Disaster is an event or series of events, which gives rise to casualties and damage or loss of properties, infrastructures, environment, essential services or means of livelihood on such a scale which is beyond the normal capacity of the affected community to cope with. Disaster is also sometimes described as a "catastrophic situation in which the normal pattern of life or eco-system has been disrupted and extra-ordinary emergency interventions are required to save and preserve lives and or the environment".

The Disaster Management Act, 2005 defines disaster as "a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or man-made causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area".

A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts.

Natural disaster

A natural disaster is described as a major event caused by Earth's natural processes that result in significant environmental harm and loss of life. The term natural has consequently been disputed because the events simply are not hazards or disasters without human involvement. Different types of natural disasters can be:

Tsunamis, Earthquakes, Avalanches. Volcanoes, Landslides, Floods, Droughts, Forest fires.

Man-made disasters

Human-induced disasters are very dangerous catastrophes caused by humans. They are caused by human activity. The following are the examples:

Chemical spills, hazardous material spills, explosives, chemical or biological attacks, nuclear blasts, rail accidents, airline crashes, or groundwater poisoning are all instances of man-made disasters.

Natural and man-made disasters significantly impact the environment and socio-economic structures. It includes droughts, desertification, floods, landslides, wildfires, earthquakes, tsunamis or cyclones. The dispersion of radioactive gases in the atmosphere, or technological accidents - like oil plants or gas pipelines damaged by a natural hazard and releasing hazardous materials or gases - can also be accounted for.

All these have significant social, environmental and economic impacts which need to be measured to effectively support response strategies and mitigation and adaptation measures.

Man-made disasters in India are caused by human activities and can include:

Industrial accidents: Chemical spills, explosions, fires, and toxic gas releases from factories and refineries can cause massive destruction and loss of life.

Transportation accidents: Rail accidents and airline crashes are examples of man-made disasters.

Wars and terrorism: These are also causes of man-made disasters.

Some ways to prepare for man-made disasters include:

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Artificial causes of disaster
Chemical spills, hazardous material spills, explosives, chemical or biological attacks, nuclear blasts, rail accidents, airline crashes, or groundwater poisoning are all instances of man-made disasters. Human history is riddled with man-made disasters, from nuclear meltdowns and underwater oil spills to chemical explosions and mine collapses. We find out exactly what happened in some infamous cases – and how humanity played a pivotal role in these events.
Population growth and Industrialization• Poverty and unhygienic settlements• Urbanization• Depleting natural resources and rising population• Deforestation. However afforestation is not a cause of environmental pollution.
Man-made disasters have an element of human intent, negligence, or error involving a failure of a man-made system, as opposed to natural disasters resulting from natural hazards. Such man-made disasters are crime, arson, civil disorder, terrorism, war, biological/chemical threat, cyber-attacks, etc.
Here are some ways to reduce the risk of man-made disasters:
Prevention: Implement measures to prevent or reduce the severity of disasters, such as:
Land use: Plan land use and zoning practices
Building codes: Enforce building codes and implement disaster-resistant building practices
Public awareness: Educate the public about disaster preparedness and first aid
Risk assessment: Identify and assess risks, and monitor and evaluate them
Response and recovery: Prepare for response and recovery, and set up organizations to coordinate relief work
Early warning: Install efficient forecasting and warning systems
Communication: Strengthen the communication network
Insurance: Provide insurance programs
Nature-based solutions: Use nature to reduce the risk of disasters, such as using forests to stabilize slopes and wetlands to regulate floods
Solution/ Prevent disaster in the community
Types of Preventative Measures
Planning measures: Cities and locales can be planned and built in the safest way possible. Houses and workplaces should be built away from the areas that are most vulnerable to the effects of natural disasters. Infrastructure should be built with the risk of natural disaster in mind.
Present Structure for Disaster Management in India
The National Disaster Management Authority has been established at the center, and the SDMA at state and district authorities at district level are gradually being formalized. In addition to this, the National Crisis Management Committee, part of the earlier setup, also functions at the Centre.Two distinct features of the institutional structure for disaster management may be noticed. Firstly, the structure is hierarchical and functions at four levels – center, state, district and local. Each preceding level guides the activities and decision making at the next level in hierarchy. Secondly, it is a multi-stakeholder setup, i.e., the structure draws involvement of various relevant ministries, government departments and administrative bodies.
Measures taken for Prevention and Mitigation of Hazards
Risk of destruction and casualties associated with different disasters can substantially be reduced by introduction of prevention and mitigation measures. It categories i.e. structural and non-structural. Structural mitigation refers to any physical construction to reduce or avoid possible impacts of hazards, which include engineering measures and construction of hazard-resistant protective structures and infrastructure. Nonstructural mitigation refers to policies, awareness, knowledge development, public commitment, and methods and operating practices, including participatory mechanisms and the provision of information, which can reduce risk with related impacts.
Disaster Management Act, 2005
The Act provides for setting up of a National Disaster Management Authority (NDMA) under the Chairmanship of the Prime Minister, State Disaster Management Authorities (SDMAs) under the Chairmanship of the Chief Ministers, District Disaster Management Authorities (DDMAs) under

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the Chairmanship of Collectors/District Magistrates/Deputy Commissioners. Under its aegis, the National Institute of Disaster Management (NIDM) for capacity building and National Disaster Response Force (NDRF) for response purpose have been set up. The Act also provides specific roles to local bodies in disaster management. The DM Act, 2005 also envisages specific roles to be played by the local bodies in disaster management.

Prevention / Solution on man-made disaster

- ✓ **Develop policies:** Prioritize environmental protection and public health, and enforce environmental health laws.
- ✓ **Educate the public:** Raise awareness about potential hazards and disaster preparedness.
- ✓ Implement building codes: Enforce appropriate building codes and implement land use and zoning practices.
- ✓ **Prepare for response and recovery:** Have a plan for rapid, effective remedial action in the event of a disaster.
- ✓ **Prepare for emergencies:** Have an emergency reserve fund, food reserve, health facilities, and warning systems.
- ✓ **Train personnel**: Ensure that personnel working in hazardous industries are properly trained.
- ✓ **Maintain safety measures:** Ensure that safety measures are properly maintained and cared for.
- ✓ **Remove encroachments:** Remove human encroachments around hazardous industries.
- ✓ **Locate hazardous materials:** Locate hazardous sites and materials away from population centers.
- ✓ **Perform pilot studies:** Perform pilot studies and take independent environmental health advice.

Conclusion- Man-made disaster we can possible control on it. According to disaster act and community involve in disaster management and some rules follow by the public like that develop policies, locate hazardous materials, Maintain safety measures, Remove encroachments, Train personnel, Educate the public, Implement building codes, Prepare for response and recovery.

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