

CHAPTER I

DISTRICT DISASTER RISK MANAGEMENT PLAN- AN INTRODUCTION

The intensity and frequency of disasters in our country has compelled the need for a comprehensive approach to the prevention and mitigation of hazards in which developmental gains made over the years through painstaking efforts and the precious lives and livelihoods of the vulnerable sections of society need to be protected. As such, the GOI, Ministry of Home Affairs signed an agreement with the United Nations Development programme in 2003, to initiate and implement the Disaster Risk Management Programme. Meghalaya is one of the twelve states in which the DRM programme has been implemented under which Ri Bhoi District falls under the programme..The goal of the programme is Sustainable reduction in Disaster Risks & Recovery in all the Blocks of Ri Bhoi District through active participation of Community and the government administration.

One of the chief components of the programme is the development of disaster management Planning at all levels involving resource inventorization, hazard risk mapping and the setting up of response mechanisms in case of emergencies awareness generation and capacity building for the same. The aim of the plan will be-fail proof communication, authentic and accurate database, documented and rehearsed to be activated in the shortest possible time with minimum simple orders and procedures ensuring active participation by Government, Community and volunteers at all levels, making optimal utilization of men, material and resources with no gaps or no overlaps to prevent loss to lives and minimize loss to property ensuring fastest restoration of the situation. A comprehensive DDRMP will strengthen the efforts of the District Administration.

OBJECTIVES:

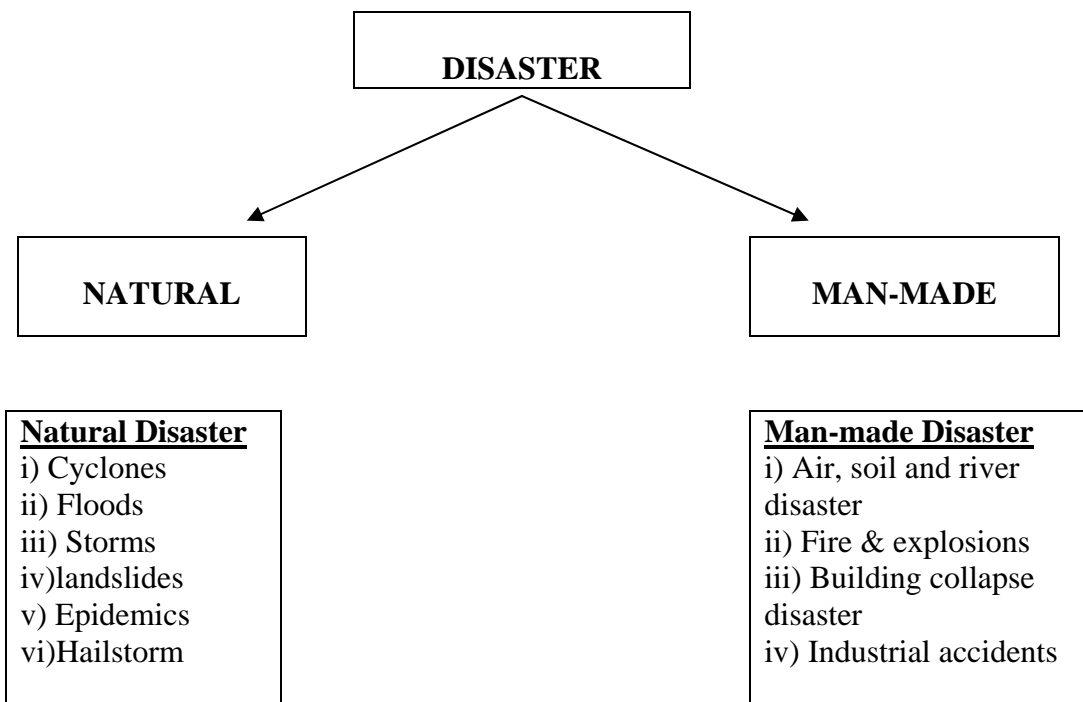
The main objectives of the District Disaster Risk Management Plan are as follows:

1. To prevent and minimise loss of human lives and property by gearing up preparedness, prevention & mitigation of disasters.
2. To develop convergence of action in addressing, preventing and mitigating disasters and to equip with maximum possible relief measures and to resort to pre-disaster, during and post-disaster steps.
3. .To assist the line depts., Block administration, community in developing coping skills for disaster management
4. To impart training and to create awareness, rehearsals, dissemination of knowledge, informations, rescue measures etc among all the citizens living in the district.
5. To identify the occurrence and nature of disasters by analyzing the periodicity, intensity and extent of damages.
6. To ensure fail proof communication and supply of manpower, materials, machinery, goods and other inputs and activate the same within the shortest possible time backed by minimum simple procedures, orders etc at different levels by making optimal utilization of the available resources without any gaps, duplications or overlapping.
7. To ensure fastest approach for rescue& evacuation, rehabilitation and recovery.
8. To avert further miseries of the calamity-stricken people.
9. To facilitate the mitigation process.
10. To facilitate convergence.

OVERVIEW OF DISASTERS:

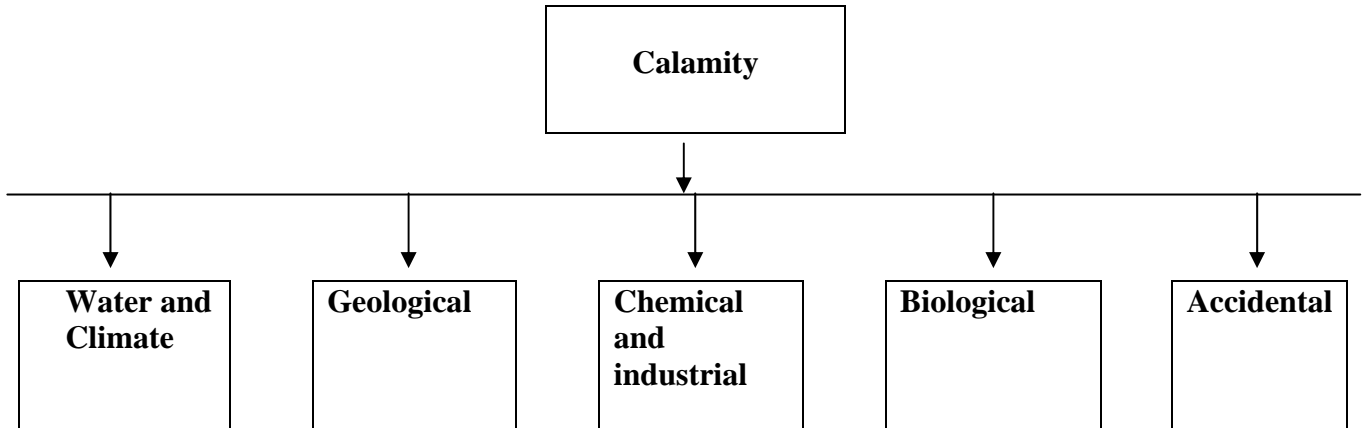
Definition:- Disaster may be defined as a catastrophe, calamity or mishap, a grave occurrence, which causes loss of life, human suffering, damage to and destruction of property and/or degradation of environment and/or which disrupts the normal functioning of societies, Government and/or communities and/or adversely affects individuals and families with severity. On the other hand, disaster may be defined as an event or a series of events which give rise to casualties and /or damage or loss of property, infrastructure, essential services or means of livelihood on a scale that is beyond the normal capacity of the affected communities to cope with unaided.

Since disasters are the combined results of hazards and vulnerabilities as such based on the experiences in the past, the data recorded so far and speculations for the future, the district possesses the following types of disasters:-



Natural Calamity:

A natural calamity is a type of calamity caused/ brought about by nature.



* Water and Climate related disaster- draught, flood, cyclone, heavy rains, gale wind, whirl wind, tornado, hail storms,etc.

*Geological disaster-earthquake and volcano eruptions.

* Chemical, industrial and nuclear disasters.

* Biological disaster.

*Accident related disaster

Definition of different calamities:

1. **Floods:** Floods occur when the water flows or rises beyond its normal place or course. The danger it causes to people and infrastructure is called “ flood hazard”. In Ri Bhoi District certain pockets in Byrnihat, Umling and Umsning Blocks experience flash floods during the monsoon season..
2. **Cyclone:** The term cyclone is derived from the greek word meaning the coil of a snake. A tropical cyclone, when fully developed is a vast violent whirl, 150 – 180 Kms across, 10 – 17 Kms. High spiraling around a center and progresses along the surface of the sea at a rate of 300 km a day or more.
Depression – 32 – 50 km/hr wind speed.
Deep depression – 51 –61 km/hr wind speed.
Cyclonic storm – 62 – 68 km/hr wind speed.
Severe cyclonic storm – 89 – 117 + km/hr wind speed.
Severe cyclonic storm /horizon – 117 + km/hr wind speed.
Typhoon – Where the wind speed as above 200 kms/hr.

Cyclones can cause extensive damage to property and turn debris into dangerous missiles. Cyclones can also bring flooding rains , which cause further damage to property, and increase the risk of drowning .Most deaths from Cyclones occur as a result

of drowning , collapsed buildings, or flying debris which becomes lethal in high winds. Certain areas in Umsning , Jirang and Umling Blocks are cyclone prone.

3. **Landslides:** Landslides usually involve the movement of large amounts of either earth, rock, sand or mud or any combination of these. Landslides can be caused by earthquakes, volcanoes, soil saturation from rainfall or seepage or by human activity(eg. Vegetation removal , construction on steep terrain. the rate of movement of a landslide can vary from exceptionally slow – centimeters per year, to a sudden and total collapse – such as an avalanche of perhaps millions of debris. The distance travelled by landslide debris can also vary greatly, from a few centimeters in ground slumps, to many kilometers when large mud flows follow river valleys. There are frequent occurrences of landslides particularly along the National Highway during the monsoon season,
4. **Earthquake:** Earthquakes are a shaking or trembling of the earth's crust caused by the release of huge stresses due to underground volcanic forces, the breaking of rock between the surface , or by a sudden movement along an existing fault line. Earthquakes strike suddenly without warning, and are unpredictable. Therefore preventive measures for ensuring safety of buildings, structures, communication facilities, water supply lines, electricity and life are utmost importance. Earthquakes are caused natural tectonic interactions. As the entire northeast comes under zone V, of the earthquake zone, the entire Ri Bhoi District is vulnerable to earthquakes.
5. **Tornado:** Means thunder storm. Tornados are local storms of short duration formed of winds rotating at a very high speed. These storms are visible as revolving whirlpools with a tail coming down to earth. As the storm moves along the ground this outer ring of rotating winds becomes dark with dust and debris. The average speed of tornado is about 150 ms /hr and maximum 400 kms/hr. It causes large scale damage and casualties leaving practically nothing in its path. Gale winds and whirl winds are like tornados by nature but very small in impact and kind.
6. **Hailstorm:** Hailstorms form in a thunderstorm when raindrops freeze at high levels and then recycled through up and down draughts, growing all the time .Although hailstorms rarely involve physical injury their economic impact can be severe. The damage appears to be a function of the intensity and duration of storms and the size of the hailstones which these produce. The damage itself is often produced not only by the impact of falling hailstones, but also by high winds and torrential rains that is part of the hailstorm. Ri Bhoi does experience occasional bouts of hailstorm particularly in Umsning and Umling Block.
7. **Lightening and thunder:** Lightening is the discharge produced when differences in ground and atmospheric electrical charges are large enough (several hundred- million

volts) to overcome the insulating effect of air. An average thunderstorm can release several hundred megawatts of electrical power.

8. **Fire accident:** Fire generally is an accidental calamity but can lead to loss of life and property, injury to animals and livestock, destruction to crops and forest. Fire accidents are more prone to thatched houses and houses made of wood. Forest fire has an impact on the vegetation cover, flora and fauna, air quality and leads to the loss of timber in the forest.
9. **Epidemics:** Epidemics comes from the word “Epi” meaning upon and “Demos” meaning people. Therefore epidemics means an outbreak of disease in a community in excess of normal expectation. Epidemics occur when a community or area is affected by a disease which spreads to a large scale and can cause losses of life to a large scale. Epidemics can lead to illness and death and are caused by the spread of bacteria, virus, fungus, protozoa etc. It is generally termed as biological disaster. The common epidemics include malaria, Diarrhoea, Plague, Dengue, dysentery, Tuberculosis etc.
10. **Car accident :** Car accidents fall under what is termed as “Man –Made Disaster”. Taking into account the national Highway which is the main link between Ri- Bhoi District and other areas outside the district car accidents take place on an everyday basis.
11. **Chemical and Industrial Disaster:** At the time of a chemical and industrial disaster leakage of certain gases like carbon dioxide, carbon monoxide, inflammable gases, steam of ammonia are common. Leakage of gas is usually accidental and occurs in industrial plants, Mines, Mills and Workshops. However incomplete combustion of heating fuels: gas, coal, oil, wood, clogged chimney in heated building, lit charcoal fire moved indoors also could produce certain gases like Carbon monoxide which is harmful to people. In such cases a person inhaling such gases feels dizzy, tightening of the chest and often it leads to respiratory failure. Ri-Bhoi district is highly prone to chemical and industrial disaster taking into consideration the presence of the Industrial Estate in the District.