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- What is the meaning of sea level rising?



sea level is a measure of the average height of the ocean's surface, so sea level rising means the increasing of the water average in oceans and seas surfaces.



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Man made Disaster



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Man made Disaster

Disasters can be man made where the cause is intentional or unintentional . All kinds of man made disasters lead to human suffering , loss of life and long term damage to a nations economy.

Man made hazards are threats having an element of human intent ,negligence, error or involving a failure of a system.



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TYPES OF MAN MADE DISASTERS

1. Nuclear disasters
2. Biological disasters
3. Chemical disasters
4. Fire accidents
5. Road accidents
6. Terrorism
7. Pollution
8. Accident



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What is nuclear disaster????

It is a type of explosion deriving its force from nuclear reactions of fission and fusion .

It is of two types fission and fusion .
Egs. Of fission are atomic bombs , A-bombs , fission bombs . Egs. Of fusion bombs are hydrogen bombs , H-bombs , fusion bombs etc.

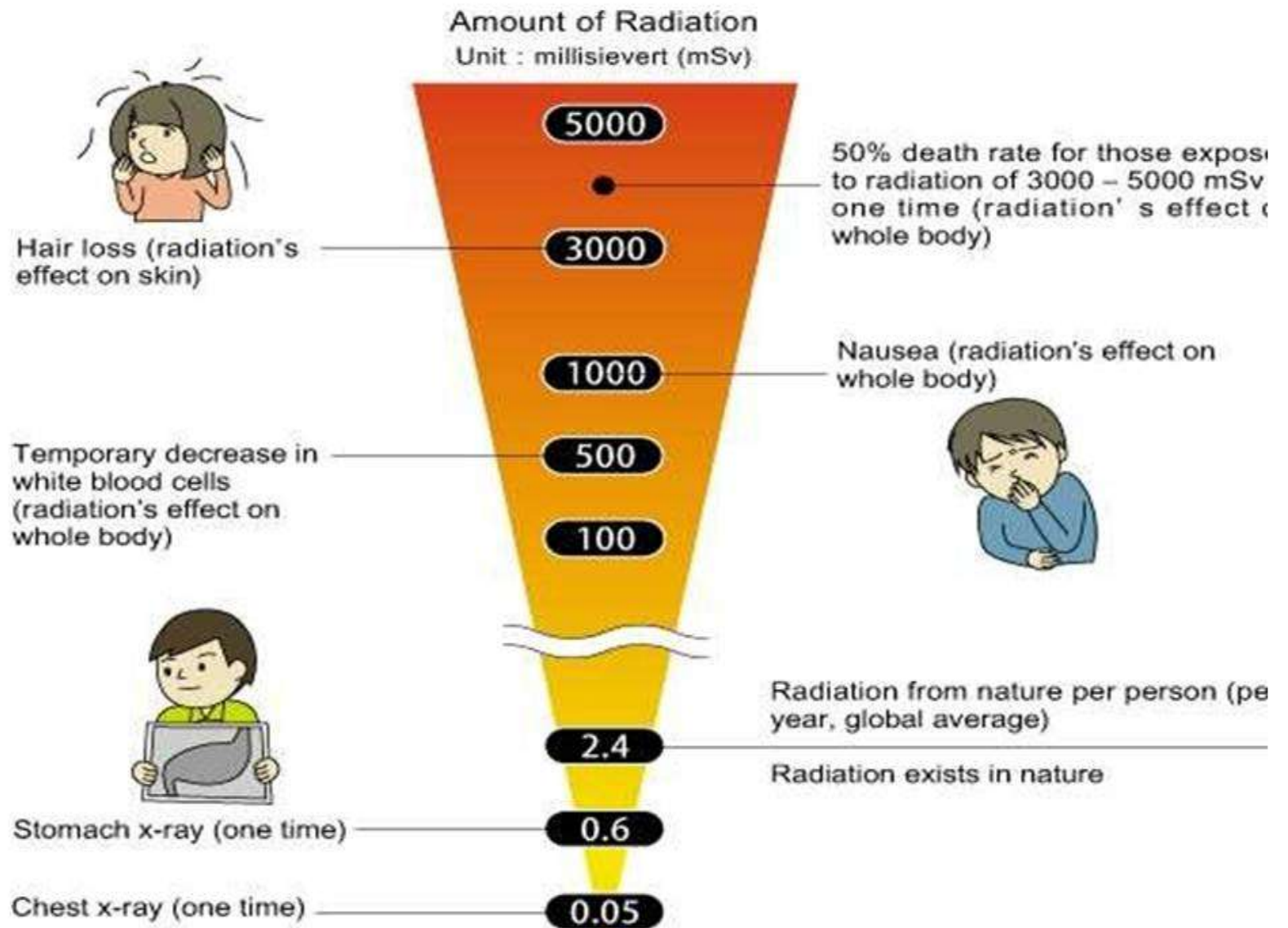




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Radiation effects:



Source: UN Scientific Committee report, other



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EFFECTS OF DISASTERS

- Deaths
- Disability
- Increase in communicable disease
- Psychological problems
- Food shortage
- Socioeconomic losses
- Shortage of drugs and medical supplies.
- Environmental disruption



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Chemical disasters

- Chemical disasters caused by industrial accidents, irresponsible handling of hazardous chemicals, or their deliberate use for destruction
- Poisonous chemicals can cause wide spread devastation because of their nature they spread easily.
- Effects large areas.

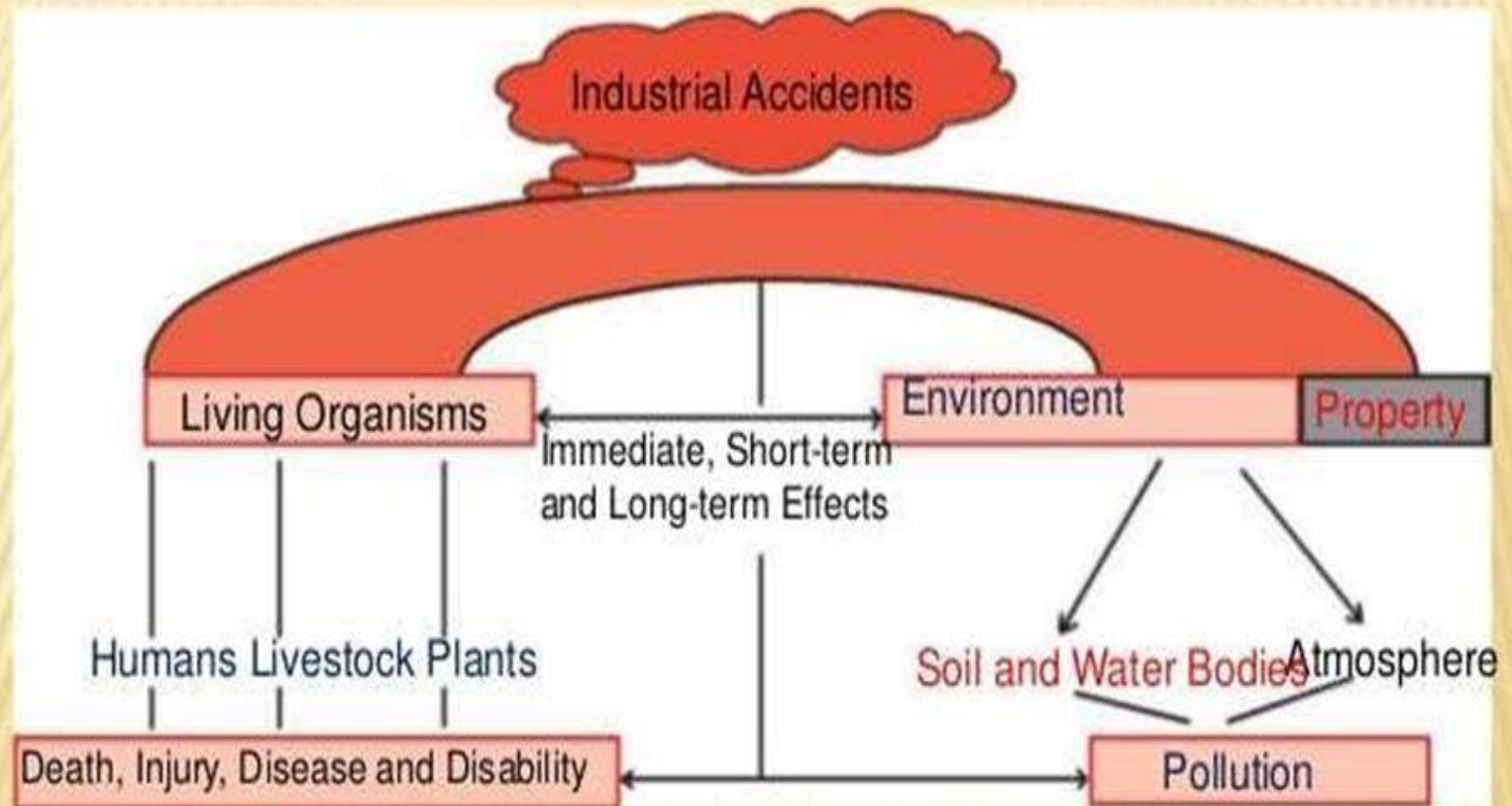




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Impact of Industrial Accidents













1.2 Major Consequences:

- Loss of life / injuries
- Impact on livestock
- **Damage to Flora/fauna**
- Environmental Impact (air, soil, water)
- Financial losses to industry.



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Physical hazards				
				
Explosive	Flammable	Oxidizer	Corrosive for metals	Compressed, liquefied gas
Health hazards				Environmental hazards
Highly acute hazards	Chronic or medium acute hazards		Highly chronic hazards	
				
Toxic	Skin or eye corrosive	Irritating, sensibilizing	i) CMR, ii) STOT hazard if swallowed	Aquatic toxicity



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DEFINATION-

- Biological disasters are scenarios involving **disease, disability or death on a large scale** among humans, animals and plants due to toxins or disease caused by live organisms or their products.

Such disasters may be ***natural*** in the form of epidemics by the intentional use of disease causing agents in Biological Warfare (BW) operations or incidents of Bioterrorism (BT).

- Anthrax - spore dispersal in the air
- Small pox - aerosols
- Typhus & plague - lice, fleas, rodents, etc.



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DO'S AND DON'T'S IN A BIOLOGICAL ATTACK

Before:

Children and older adults are particularly vulnerable to biological agents. Ensure from a doctor/the nearest hospital that all the required or suggested immunizations are up to date.





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DURING:

- In the event of a biological attack, Close the doors and windows when a biological attack is imminent.
- Watch television, listen to radio, or check the Internet for official news and information ,you should seek medical attention if you become ill.
- The first evidence of an attack may be when you notice symptoms of the disease caused by exposure to an agent.
- Be suspicious of any symptoms you notice, but do not assume that any illness is a result of the attack.
- Use common sense and practice good hygiene.





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AFTER:

- Pay close attention to all official warnings and instructions on how to proceed.
- The delivery of medical services for a biological event may be handled differently to respond to increased demand.
- The basic public health procedures and medical protocols for handling exposure to biological agents are the same as for any infectious disease.
- It is important for you to pay attention to official instructions via radio, television, and emergency alert systems.



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Man made disasters-coal fire





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Introduction

- The term "Coal fire" refers to a burning coal, coal storage pile or coal waste pile.
- Two major causes have been identified for coal fires:
- **Natural causes:**
 - coal seam or dust can be exposed by the erosion or a subsidence event, strike by lightning or ignite by a wildfire.
- **Human causes:**
 - friction, electricity or oxygen can ignite coal peat dust during regular extraction, illegal mining, transportation.



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Impact on soil environment

- ❑ Coal fires change the physico-chemical properties of soil.

Yellow burned soil is in coal fire areas

- ❑ Soil becomes fragile and prone to crumbling, with very low organic matter content and only small numbers of microorganisms



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CAUSES OF FOREST FIRE

- Causes of forest fires can be divided into two broad categories: *environmental* (which are beyond control) and *human related*

- **ENVIRONMENTAL**
 - Many forest fires start from natural causes such as lightning which set trees on fire.

 - High atmospheric temperatures and dryness



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➤ conditions of temperature, wind speed and direction, level of moisture in soil and atmosphere

➤ Friction of bamboos

○ HUMAN RELATED

Fire is caused when a source of fire like naked flame, cigarette, electric spark or any source of ignition comes into contact with inflammable material.



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EFFECT OF FOREST FIRE

- loss of valuable timber resources
- degradation of catchment areas
- loss of biodiversity and extinction of plants and animals
- loss of wildlife habitat and depletion of wildlife
- loss of natural regeneration and reduction in forest cover
- global warming
- increase in percentage of CO₂ in atmosphere
- change in the microclimate of the area with unhealthy living conditions



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THE NEEDS OF THE FIRE MANAGEMENT

- The major cause of this failure is the piecemeal approach to the problem.
- Both the national focus and the technical resources required for sustaining a systematic forest fire management.



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- Forest fire management strategy for the country.
- The Ministry of Environment and Forests, Government of India, has prepared a National Master Plan for Forest Fire Control.
- Prevention of human-caused fires through education and environmental modification.



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Nodal Ministry for Management / Mitigation of Different Disasters

	Disaster	Nodal Ministry/ Department
1.	Biological	Min. of Health and Family Welfare (MoHFW)
2.	Chemical and Industrial	Min. of Environment, Forest sand Climate Change
3.	Civil Aviation Accidents	Min. of Civil Aviation
4.	Cyclone/Tornado	Min. of Earth Sciences (MoES)
5.	Tsunami	Min. of Earth Sciences (MoES)
6.	Drought/Hailstorm/Cold Wave and Frost/Pest Attack	Min. of Agriculture and Farmers Welfare
7.	Earthquake	Min. of Earth Sciences (MoES)
8.	Flood	Min. of Water Resources (MoWR)
9.	Forest Fire	Min. of Environment, Forests, and Climate Change
10.	Landslides	Min. of Mines (MoM)
11.	Avalanche	Min. of Defence (MoD)
12.	Nuclear and Radiological Emergencies	Dept. of Atomic Energy (DAE)
13.	Rail Accidents	Min. of Railways (MoR)
14.	Road Accidents	Min. of Road Transport and Highways (MoRTH)
15.	Urban Floods	Min. of Urban Development (MoUD)



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National Disaster Management Authority

The Government of India established the NDMA in 2005, headed by the Prime Minister. Under the DM Act 2005, the NDMA, as the apex body for disaster management, shall have the responsibility for laying down the policies, plans, and guidelines for disaster management for ensuring timely and effective response to disaster. The guidelines of NDMA will assist the Central Ministries, Departments, and States to formulate their respective DM plans. It will approve the National Disaster Management Plans and DM plans of the Central Ministries / Departments. It will take such other measures, as it may consider necessary, for the prevention of disasters, or mitigation, or preparedness and capacity building, for dealing with a threatening disaster situation or disaster. Central Ministries / Departments and State Governments will extend necessary cooperation and assistance to NDMA for carrying out its mandate. It will oversee the provision and application of funds for mitigation and preparedness measures.



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National Institute of Disaster Management

The vision of NIDM is to create a Disaster Resilient India by building the capacity at all levels for disaster prevention and preparedness.

NIDM has been assigned nodal responsibilities for human resource development, capacity building, training, research, documentation, and policy advocacy in the field of disaster management.

The NIDM has built strategic partnerships with various ministries and departments of the central, state, and local governments, academic, research and technical organizations in India and abroad and other bilateral and multi-lateral international agencies.

It provides technical support to the state governments through the Disaster Management Centres (DMCs) in the Administrative Training Institutes (ATIs) of the States and Union Territories. Presently it is supporting as many as 30 such centres. Six of them are being developed as Centres of Excellence in the specialised areas of risk management – flood, earthquake, cyclone, drought, landslides, and industrial disasters



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