

Hazards

A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

The classification of hazards presented here is based on categories used globally by the main hazard-related databases.

Climatological hazards

Drought: A long-lasting event triggered by a lack of precipitation. A drought is an extended period of time characterized by a deficiency in a region's water supply that is the result of constantly below average precipitation. A drought can lead to losses in agriculture, affect inland navigation and hydropower plants, and cause a lack of drinking water and food. (Source: Centre for Research on the Epidemiology of Disasters (CRED) EM-DAT)

Extreme heat/heat wave: A period during which the daily maximum temperature exceeds for more than five consecutive days the maximum normal temperature by 9 degrees Fahrenheit, i.e. 5 degrees Celsius, the normal period being defined as 1961–1990. Because of global warming, the frequency, duration, and severity of heat waves are predicted to increase in most parts of the world. The impacts on human health, regional economies, and ecosystems may be significant. (Source: World Meteorological Organization (WMO))

Extreme cold/cold wave: Marked cooling of the air, or the invasion of very cold air, over a large area; it usually lasts from a few days to a few weeks. This is a drop of average temperature well above the averages of a region, with effects on human populations, crops, properties and services.

Biological hazards

Biological emergency: A biological emergency can occur when there is a major epidemic outbreak of diseases such as avian Influenza, severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS) etc., plant or animal contagion, insect or other animal plagues and infestations.

Contamination can occur through natural exposure to the agent, accidental release of microorganisms from for example a research facility or by deliberate acts. (Source: International Federation of Red Cross and Red Crescent Societies (IFRC))

Major epidemic and potential pandemic diseases: This includes viral, bacterial, fungal and prion diseases, yellow fever, cholera, zika virus, ebola virus, malaria and all other epidemics, including all zoonotics-based and pandemic diseases.

Either an unusual increase in the number of cases of an infectious disease that already exists in the region or population concerned, or the appearance of an infection disease previously absent from a region. (Source: CRED EM-DAT)

Geophysical hazards

Earthquakes: A term used to describe both sudden slip on a fault, and the resulting ground shaking and radiated seismic energy caused by the slip, or by volcanic or magmatic activity, or other sudden stress changes in the earth. (Source: United States Geological Survey (USGS))

Landslide/debris flows: Movement of surface material down a slope. (Source: USGS)

Tsunami: A tsunami is a sea wave of local or distant origin that results from large-scale seafloor displacements associated with strong earthquakes, major submarine slides, or exploding volcanic islands. (Source: USGS)

Volcanic eruption: The discharge (aerially explosive) of fragmentary ejecta, lava and gases from a volcanic vent. (Source: USGS)

All volcanic activity like rock fall, ash fall, lava streams, gases etc. Volcanic activity describes both the transport of magma and/or gases to the earth's surface, which can be accompanied by tremors and eruptions, and the interaction of magma and water (e.g. groundwater, crater lakes) underneath the earth's surface, which can result in phreatic eruptions. Depending on the composition of the magma eruptions can be explosive and effusive and result in variations of rock fall, ash fall, lava streams, pyroclastic flows, emission of gases etc. (Source: CRED EM-DAT)

Meteorological hazards

Tropical cyclones: An atmospheric closed low pressure circulation system rotating counter-clockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere (includes: cyclone, extra-tropical cyclone, tropical cyclone, hurricane, typhoon). (Source: National Hurricane Centre, National Oceanic and Atmospheric Administration (NOAA))

Hydrological hazards

Floods: The overflowing of the normal confines of a stream or other body of water, or the accumulation of water over areas that are not normally submerged. This includes: river/fluvial floods. (Source: Intergovernmental Panel on Climate Change (IPCC))

Storm surge (specific hazard messages under tsunami and storm surge): The temporary increase, at a particular locality, in the height of the sea due to extreme meteorological conditions (low atmospheric pressure and/or strong winds). The storm surge is defined as being the excess above the level expected from the tidal variation alone at that time and place. (Source: IPCC)

Hailstorms: Hail is a form of solid rain consisting of balls or irregular lumps of ice, measuring between 5 millimetres and 15 centimetres in diameter. Hail formation requires strong, upward motion of air freezing temperatures at lower heights. Storms that produce hail that reaches the ground are known as hailstorms. Hailstorms normally last from a few minutes up to 15 minutes. Hail in the tropics occurs mainly at higher elevations. It may be accompanied by other severe weather events, such as cyclones and tornadoes.

Technological and man-made hazards

Man-made hazards: Hazards that are “induced entirely or predominantly by human activities and choices” (i.e. anthropogenic, or human-induced). This term does not include the occurrence or risk of armed conflicts and other situations of social instability or tension that are subject to international humanitarian law and national legislation.

Nuclear emergency: Nuclear emergencies (includes nuclear hazards) involve or emerge from nuclear chain reactions. Such chain reactions take place under controlled circumstances for instance in nuclear power plants and research reactors. Nuclear chain reactions also occur in an uncontrolled manner in nuclear weapons, creating the enormous blast and heat effects associated with nuclear detonations. (Source: United Nations International Strategy for Disaster Reduction (UNISDR)/IFRC)

Radiological emergency: Radiological emergencies (includes radiological hazards) can involve all other sources of radiation, such as radiography machines, radioactive material for use in industry, lost sources and more. Radiological accidents are usually not mass casualty events, as they commonly occur when people are irradiated by misplaced or misused radioactive equipment. They can however cause widespread fear among large parts of the population. (Source: UNISDR/IFRC)

Chemical emergency: Chemical emergencies (includes chemical hazards) are defined as any unplanned event involving hazardous substances that causes or is liable to cause harm to health, the environment or property, such as loss of containment of hazardous substances and fires. (Source: Organisation for Economic Co-operation and Development (OECD))

Non-technological and man-made hazards

Wildfires: This includes all types of fire events, wildfires and forest fires. It is the process of combustion of inflammable materials producing heat, flames and (often) smoke. (Source: International Federation of Red Cross and Red Crescent Societies (IFRC))

Source: Definitions where sources are not indicated have been adapted from UNISDR’s terminology of disaster risk reduction.