

# Natural disaster



Introduction A natural disaster is a major adverse event resulting from natural processes of the Earth; examples include floods, volcanic eruptions, earthquakes, tsunamis, and other geologic processes. A natural disaster can cause loss of life or property damage, and typically leaves some economic damage in its wake, the severity of which depends on the affected population's resilience, or ability to recover. An adverse event will not rise to the level of a disaster if it occurs in an area without vulnerable population. In a vulnerable area, however, such as San Francisco, an earthquake can have disastrous consequences and leave lasting damage, requiring years to repair.

In 2012, there were 905 natural catastrophes worldwide, 93% of which were weather-related disasters. Overall costs were US\$170 billion and insured losses \$70 billion. 2012 was a moderate year. 45% were meteorological (storms), 36% were hydrological (floods), 12% were climatologically (heat waves, cold waves, droughts, wildfires) and 7 % were geophysical events (earthquakes and volcanic eruptions). Between 1980 and 2011 geophysical events accounted for 14% of all natural catastrophes.

### Effects of Natural Disaster

Millions of people are affected by natural disasters every year, and the impact can be calamitous. From the destruction of buildings to the spread of disease, natural disasters can devastate entire countries overnight. Tsunamis, earthquakes and typhoons do not just wreak havoc on land; they also disrupt people's lives, especially for those living in remote regions.

### Displaced Populations

One of the most immediate effects of natural disasters is population displacement. When countries are ravaged by earthquakes and other powerful forces of nature, many people have to abandon their homes and seek shelter in other regions. A large influx of refugees can disrupt everything from accessibility of health care and education to food supplies and basic hygiene. Large-scale evacuations are common in light of the power of tsunamis and other natural disasters, and those fortunate enough to survive face a range of challenges following widespread destruction.

### Health Risks

Aside from the obvious danger that natural disasters present, the secondary effects can be just as damaging. Typhoons, hurricanes and tsunamis often cause severe flooding, which can result in the spread of waterborne bacteria and malaria. As a result, health complications can be prevalent among survivors of natural disasters, and without the help of international relief organizations, death tolls can rise even after the immediate danger has passed.

### Food Scarcity

After natural disasters, food can become scarce. Thousands of people around the world go hungry as a result of destroyed crops and a loss of agricultural supplies. The impacts of hunger following an earthquake, typhoon or hurricane can be tremendous, but fortunately, there are ways you can help. Child Fund's Child Alert Emergency Fund provides people affected by natural disasters with the food and nutritional support they need.

### Types OF Natural Disasters

## Earthquake

An earthquake is the result of a sudden release of energy in the Earth's crust that creates seismic. The seismicity or seismic activity of an area refers to the frequency, type and size of earthquakes experienced over a period of time. Earthquakes are measured using observations from seismometers. The moment magnitude is the most common scale on which earthquakes larger than approximately 5 are reported for the entire globe.

## Tsunami

A tsunami is a series of water waves caused by the displacement of a large volume of a body of water, generally an ocean or a large lake. Earthquakes, volcanic eruptions and other underwater explosions (including detonations of underwater nuclear devices), landslides, glacier calving, meteorite impacts and other disturbances above or below water all have the potential to generate a tsunami. Tsunami waves do not resemble normal sea waves, because their wavelength is far longer. Rather than appearing as a breaking wave, a tsunami may instead initially resemble a rapidly rising tide, and for this reason they are often referred to as tidal waves.

## Cyclone

A cyclone is a large wind system that moves around an area of low atmospheric pressure. It can spread over 500 miles (800 kilometers) in diameter. Low pressure usually develops in large land areas where the air tends to rise. Surrounding air moves toward the low-pressure area and starts to circulate, either clockwise or counterclockwise, depending on whether the

cyclone is in the Northern or Southern hemisphere. Cyclones can produce cloudy weather and broad areas of rain and even snow.

### Land Slide

A landslide is a disaster involving elements of the ground, including rocks, trees, parts of houses, and anything else which may happen to be swept up. Landslides can be caused by an earthquake, volcanic eruptions, or general instability in the surrounding land. Mudslides or mudflows are a special case of landslides, in which heavy rainfall causes loose soil on steep terrain to collapse and slide downwards.

### Avalanche

An avalanche is a geophysical hazard involving a slide of a large snow or rock mass down a mountainside, caused when a buildup of material is released down a slope, it is one of the major dangers faced in the mountains in winter. As avalanches move down the slope they may entrain snow from the snowpack and grow in size. The snow may also mix with the air and form a powder cloud. An avalanche with a powder cloud is known as a powder snow avalanche. The powder cloud is a turbulent suspension of snow particles that flows as gravity current.

### Drought

A drought is an extended period of months or years when a region suffers a severe deficiency in its water supply. Generally, this occurs when a region receives consistently below average rainfall. It can have a substantial impact on the ecosystem and agriculture of the affected region. Although droughts

can persist for several years, even a short, intense drought can cause significant damage and harm the local economy.

### Wildfire

Wildfires, or forest fires, are uncontrolled fires burning in wild land areas. Common causes include lightning, volcano eruption, and pyroclastic cloud from active volcano. They can be a threat to those in rural areas and also to wildlife. Wildfires can also produce ember attacks, where floating embers set fire to buildings at a distance from the fire itself.

### Flood

A flood is an overflow of an expanse of water that submerges land, a deluge. It is usually due to the volume of water within a body of water, such as a river or lake, exceeding the total capacity of the body, and as a result some of the water flows or sits outside of the normal perimeter of the body. It can also occur in rivers, when the strength of the river is so high it flows right out of the river channel, usually at corners or meanders.

### Volcanic eruption

A volcanic eruption is the point in which a volcano is active and releases lava and poisonous gasses into the air. They range from daily small eruptions to extremely infrequent super volcano eruptions (where the volcano expels at least 1, 000 cubic kilometers of material.) Some eruptions form pyroclastic flows, which are high-temperature clouds of ash and steam that can travel down mountainsides at speeds exceeding that of an airliner.

### Tornado

Tornadoes are violent, rotating columns of air which can blow at speeds between 50 and 300 mph, and possibly higher. Tornadoes can occur one at a time, or can occur in large tornado outbreaks along squall lines or in other large areas of thunderstorm development. Waterspouts are tornadoes occurring over water in light rain conditions.

### Hurricane

Hurricanes, tropical cyclones, and typhoons are different names for the same phenomenon: a cyclonic storm system that forms over the oceans. It is caused by evaporated water that comes off of the ocean and becomes a storm. The Coriolis Effect causes the storms to spin, and a hurricane is declared when this spinning mass of storms attains a wind speed greater than 74 mph. Hurricane is used for these phenomena in the Atlantic and eastern Pacific Oceans, tropical cyclone in the Indian, and typhoon in the western Pacific.

### Precautions

Do not use contaminated water to wash dishes, brush your teeth, wash and prepare food, or make ice. Containers for water should be rinsed with a bleach solution before reusing them. Use water storage tanks and other types of containers with caution. For example, fire truck storage tanks, as well as previously used cans or bottles may be contaminated with microbes or chemicals. Do not rely on untested devices for decontaminating water. Leave the area immediately. If you are warned to evacuate because an eruption is imminent, evacuate.