

# WHAT ARE NATURAL DISASTERS?

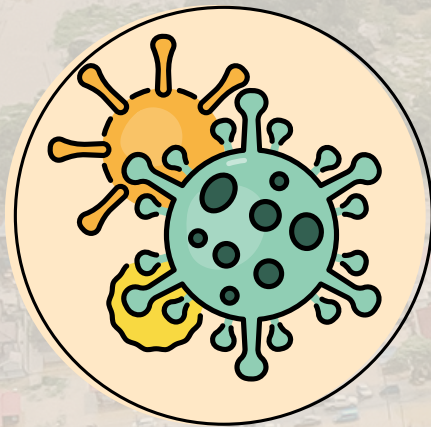
- A situation or event which overwhelms local capacity.
- Necessitating a request to the national or international level for external assistance.
- An unforeseen and often sudden event.
- Causes great damage, destruction, and human suffering.





# CLASSIFICATION OF NATURAL DISASTER BY GROUP

## BIOLOGICAL



- **Epidemic:** Bacterial disease, infectious disease and viral disease.

## HYDROLOGICAL



- **Flood:** Coastal flood, riverine flood and flash flood.
- **Mass movement (wet):** Mudslide, landslide and rockfall.

## CLIMATOLOGICAL



- **Wildfire:** Wildfire and forest fire.
- **Drought**

## GEOPHYSICAL



- **Earthquake:** Tsunami and ground movement
- **Mass movement (dry):** Landslide (dry)
- **Volcanic activity:** Ash fall, lava flow, lahar and pyroclastic flow.

## METEOROLOGICAL



- **Extreme temperature:** Heat wave.
- **Storm:** Tornado, tropical cyclone, thunderstorm and storm surge.



# BIOLOGICAL DISASTER

## Epidemic

### Bacterial disease

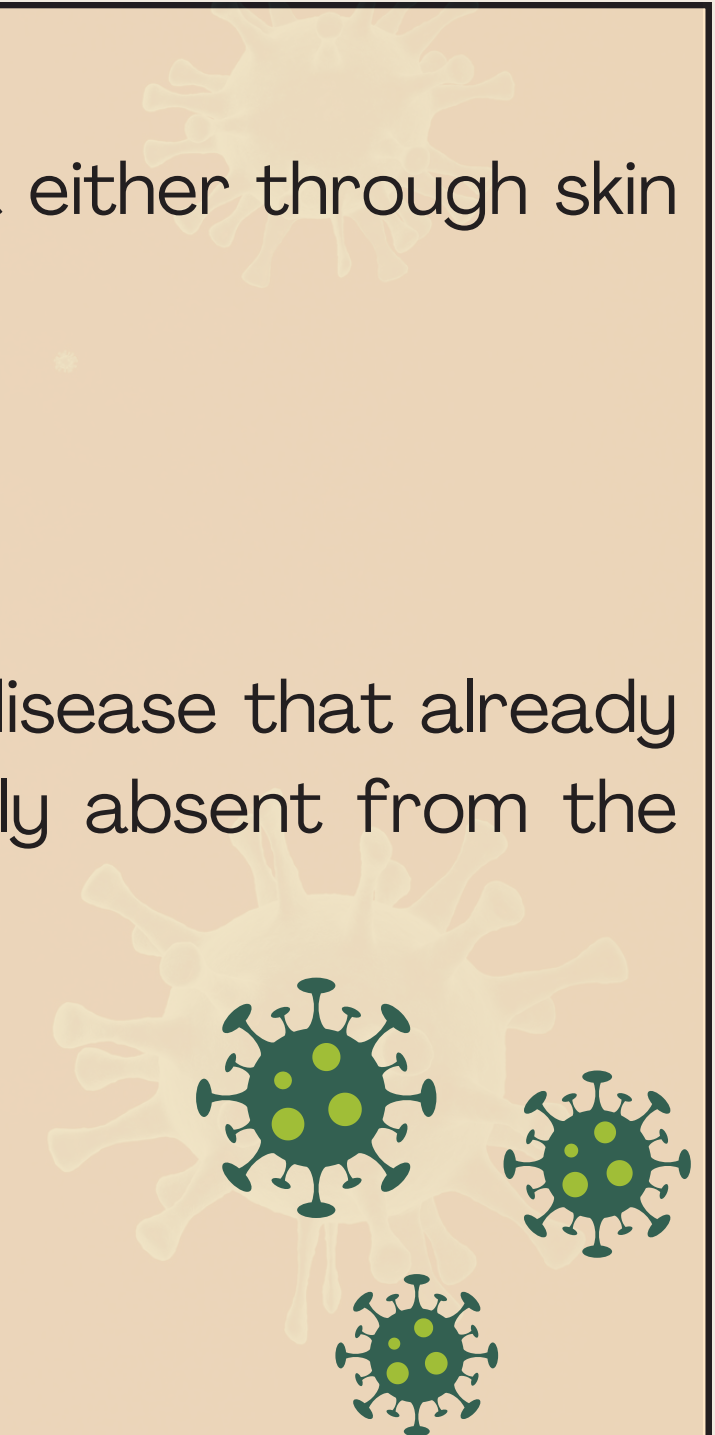
- An unusual increase in the number of cases caused by exposure to bacteria either through skin contact, ingestion, or inhalation.
- Examples include Cholera, Diarrhoea & Meningococcal disease.

### Infectious disease

- Often sudden or unusual increase in the number of cases of an infectious disease that already existed in the region or the appearance of an infectious disease previously absent from the region.
- Examples include E. coli & Polio.

### Viral disease

- Caused by viruses and require a host cell to reproduce.
- Examples include Influenza (H5N1), Measles & Poliomyelitis.





# HYDROLOGICAL DISASTER

## Flood

### Coastal flood

- Unusually high coastal water levels caused by tides or storms that lead to flooding, lasting from days to weeks.

### Riverine flood

- Water overflow from a stream or river onto normally dry land.

### Flash flood

- Heavy rain causing sudden, intense floods that occur in a short period of time.



## Mass Movement (wet)

### Landslide (wet)

- A landslide is the downhill movement of soil or rock, often fast and triggered by wet conditions. It includes mudslides, lahars, and debris flows.

### Rockfall (wet)

- Sudden detachment and downward movement of rocks from a steep slope or cliff, triggered by water infiltration



# CLIMATOLOGICAL DISASTER

## Wildfire

### Wildfire

- An uncontrolled fire in natural areas like forests or grasslands. It spreads with the help of wind or terrain and can be started by lightning or human activity.

### Forest fire

- A type of wildfire occurs in wooden area.

### Prevention

- Restore peatlands.
- Policy enforcement.
- Satellite monitoring.
- Educational campaigns.



Source: Juice Malaysia

17 Sept 2019: Broga Hill caught on fire.

## Drought

- A drought is a long period of unusually low rainfall that causes water shortages for people, animals, and plants. It develops slowly and can be worsened by human activities.

### Prevention

- Collect rainwater.
- Save water usage.
- Plant more trees.



Source: Today

April 2016: Rice field in Kubang Pasu, Kedah.



# GEOFYSICAL DISASTER

## Earthquake

### Tsunami

- Large and fast ocean waves caused by underwater earthquake. In deep water, they move quickly but slow down and grow taller near the shore.

### Ground movement

- Surface displacement of earthen materials due to ground shaking.

## Volcanic Activity

### Ash fall

- A loose debris (under 4 mm) blown into the air during an eruption. It can stay in the air for a long time and travel far from the volcano.

### Lava flow

- A molten rock that flows from the volcano during an eruption.

### Lahar

- A flow of hot or cold earth material down a volcano, during or between eruptions.

### Pyroclastic flow

- A fast-moving flow of extremely hot gas, ash, and materials (over 1,000°C) down a volcano during an eruption.

## Mass Movement (dry)

### Landslide (dry)

- A downhill movement of soil or rock, often fast and caused by gravity. It includes mudslides, lahars, and debris flows in dry conditions.



# METEOROLOGICAL DISASTER

## Extreme Temperature

### Heat wave

- A heat wave is a stretch of unusually hot and/or humid weather lasting at least two days. The temperature needed to count as a heat wave depends on the location.

## Storm

### Tropical cyclone

- A massive rotating storm that forms over warm ocean waters.

### Storm surge

- An abnormal rise in sea level caused by a tropical cyclone's or other intense types of storm.

### Thunderstorm

- A high-voltage, visible electrical discharge produced and followed by the sound of thunder.

### Tornado

- A violent, rotating column of air that reaches the ground.

### Hail

- Solid precipitation in the form of irregular pellets or balls of ice more than 5 mm in diameter.



# DISASTER OCCURRENCE (JAN - APRIL 2025)



## Flash flood near IOI Mall Puchong brings LDP to standstill

**Source: Sinar Harian Online**  
**5 Jan 2025**  
**Disaster type: Flood**

A flash flood near IOI Mall Puchong caused a rapid rise in water levels, affecting vehicles and causing a traffic jam.

## Cameron Highlands landslide triggered by heavy rain

**Source: New Strait Times**  
**7 Jan 2025**  
**Disaster type: Mass movement (wet)**

The landslide at Jalan Besar Kampung Raja, near Blue Valley junction was triggered by heavy rainfall that had started two days prior.





# DISASTER OCCURRENCE (JAN - APRIL 2025)



## Kota Tinggi flood: 10 roads cut off

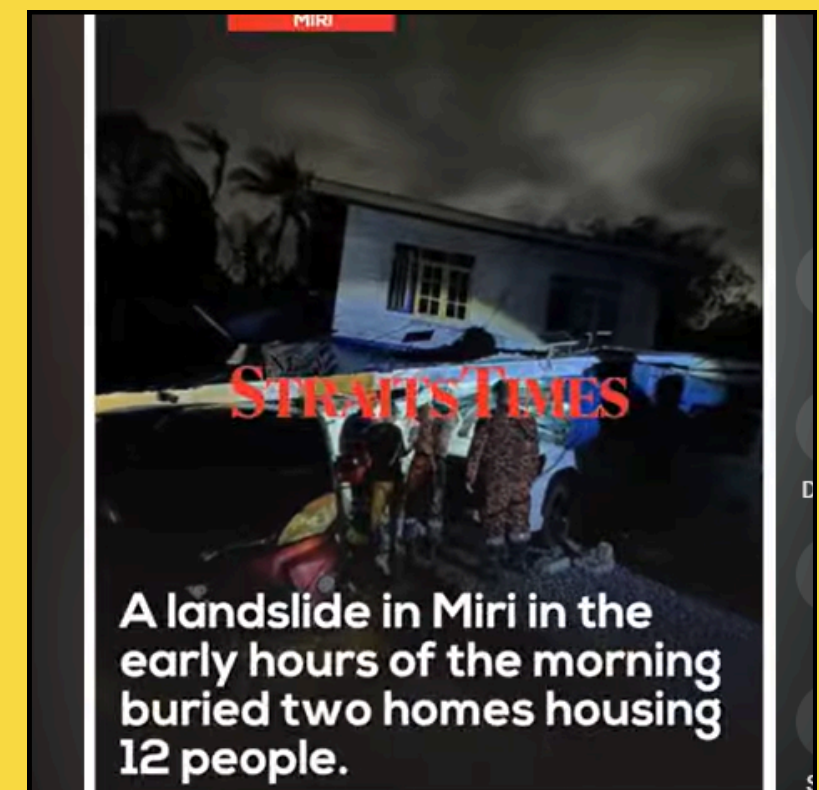
**Source: Astro Awani**  
**11 Jan 2025**  
**Disaster type: Flood**

Two days of heavy rainfall caused flash floods and cut off 10 roads access in Kota Tinggi, Johor.

## Miri landslide buries 12 alive, 1 dead, 7 rescued

**Source: New Strait Times**  
**29 Jan 2025**  
**Disaster type: Mass movement (wet)**

A landslide in Miri buried 12 people in two houses, and authorities have confirmed that one person has died.





# DISASTER OCCURRENCE (JAN - APRIL 2025)



Photo: Facebook/ Luka Nis Man

## Floods: Situation in Sarawak worsens, slightly more evacuees in Sabah

**Source: The Star**  
**1 Feb 2025**  
**Disaster type: Flood**

The flood situation in Sarawak continues to worsen, with an increasing number of victims being housed at temporary evacuation centres.

## Kuantan plantation fire rages for 13 days, now spreads to forest

**Source: New Strait Times**  
**6 March 2025**  
**Disaster type: Wildfire**

Peat soil fires have burned about 130 hectares of coconut plantations near the Kuantan-Sungai Ular bypass and spreading into nearby forest areas with the cause of the fire remaining unknown.





# DISASTER OCCURRENCE (JAN - APRIL 2025)

## East Malaysia flood 2024 DREF operation

**Source: Reliefweb**  
**29 March 2025**  
**Disaster type: Flood**

The severe flooding in Sabah State began on 8 March 2025 due to continuous heavy rainfall, causing major rivers to overflow and triggering widespread flooding across six districts: Beaufort, Membakut, Keningau, Sook, Tenom and Kemabong.



## Mandatory evacuation order enforced in Kinabatangan amid rising floodwaters, crocodile threats

**Source: New Strait Times**  
**5 April 2025**  
**Disaster type: Flood**

The recent flooding in Kinabatangan, Sabah, was triggered by continuous rainfall and rising river water levels that breached the danger mark.

