

GCSE GEOGRAPHY - UNIT 1:
living with the physical environment

Natural Hazards

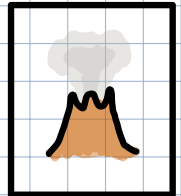
A natural hazard is a natural process which can cause death, injury, or disruption to humans, or destroy property and possessions.

A natural disaster is a natural hazard that has already happened.

2 MAIN TYPES OF NATURAL HAZARDS:

Geological hazard: caused by land and tectonic processes

Meteorological hazard: caused by weather and climate



HUMAN FACTOR	NATURAL FACTOR
<p>POPULATION</p> <p>WHETHER IT IS A HIC OR LIC</p> <p>HOW THE COUNTRY CAN COPE WITH EXTREME EVENTS</p>	<p>TYPE OF NATURAL HAZARD</p> <p>FREQUENCY AND MAGNITUDE OF THE NATURAL HAZARD</p> <p>PHYSICAL GEOGRAPHY OF THE AREA (FLAT / MOUNTAINOUS / ISLAND / LANDLOCKED)</p>

IMMEDIATE RESPONSES:
<p>evacuation</p> <p>rescues and helping injured</p> <p>food, water, shelter and money gifted</p>

PRIMARY EFFECTS	SECONDARY EFFECTS
<p>Building and road destruction</p> <p>deaths and injured</p> <p>crops and water supplies damaged</p> <p>cables / pipes damaged</p>	<p>initial hazard triggers other hazards</p> <p>emergency aid unable to get through due to blocked roads</p> <p>lack of clean water and sanitisation → disease</p>

LONG TERM RESPONSES:
<p>repair houses and roads</p> <p>improving forecasting</p> <p>creating evacuation plans</p>

GCSE GEOGRAPHY - UNIT 1:
living with the physical environment

Chile vs Nepal



CHILE - 2010 - 8.8 RS

CAUSE:

destructive plate boundary.

Nazca plate (oceanic crust) subducting the South American plate (continental crust)

PRIMARY EFFECTS:

- 500 deaths, 12000 injured and 800,000 homeless.
- Major ports and airport damaged.
- Most of Chile lost its power and water supply.
- Cost of US\$30 billion.

SECONDARY EFFECTS:

- a large fire at a chemical plant near Santiago (Chile's capital)
- Tsunami damaged coastal towns.
- Landslides damaged 1500km of roads cutting off remote villages.

IMMEDIATE RESPONSES:

- Power and water restored to 90% affected within 10 days.
- Temporary repairs to highway 5 within 24 hours.
- National appeal raised US\$30 million to build shelters.

LONG-TERM RESPONSES:

- Nearly 200,000 households helped by a reconstruction program launched by the government within a month.

NEPAL - 2015 - 7.9 RS

CAUSE:

destructive plate boundary.

Eurasian plate and Indo-Australian plate are colliding.

PRIMARY EFFECTS:

- 9000 deaths, 20000 injured and 3 million people homeless.
- 7000 schools destroyed and hospitals overwhelmed.
- 1.4 million people needed food, water and shelter.
- Cost of US\$5 billion.

SECONDARY EFFECTS:

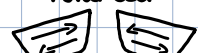
- Avalanches on Mt. Everest killed at least 19 people.
- Landslides blocked roads hampering the aid effort.
- Kali Gandaki River blocked by landslides and area was evacuated due to fear of flooding.

IMMEDIATE RESPONSES:

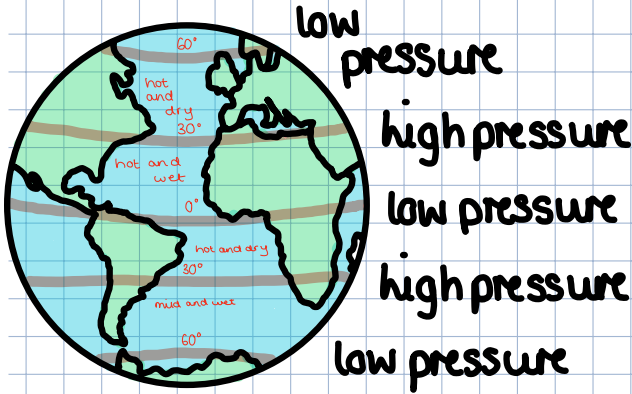
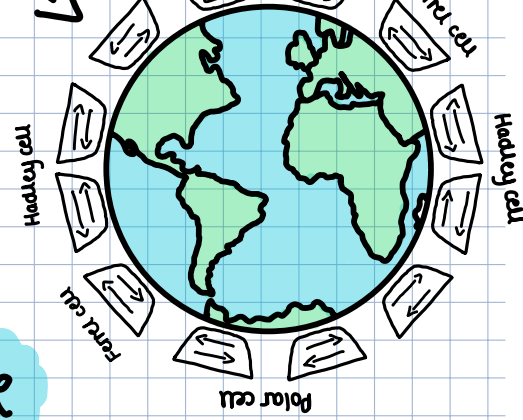
- UK, India and China sent search and rescue teams, water and food aid.
- 500000 tents provided.
- Helicopters supplying aid to isolated areas.

LONG-TERM RESPONSES:

- Repairs to Everest base camp.
- Stricter building code control.
- Roads repaired + landslides cleared.



Global Atmospheric Circulation



Air Pressure

FOR TROPICAL STORMS TO FORM, A MINIMUM TEMP. OF

26.5°C MUST OCCUR.

Tropical Storms Formation

Strong upward movement of air draws water vapour up from the warm ocean surface.

This evaporated air cools as it rises and condenses to form towering thunderstorms.

As the air condenses it releases heat which powers the storm and draws up more and more water from the ocean.

Several smaller thunderstorms join together to form a giant spinning storm. When surface winds reach an average 75mph the storm becomes a tropical storm.

The storm now develops an eye at its centre where air descends rapidly. The outer edge of the eye is the eyewall where the most intense weather conditions are felt.

As the storm is carried across the ocean by prevailing winds, it continues to gather strength.

On reaching land the storm's energy supply is cut off. Friction with the land slows it down and begins to weaken. If the storm reaches warm seas after crossing the land it may pick up strength again.

Typhoon Haiyan

FACTS AND STATISTICS:

More than 6000 people reported dead. More than 14 million people affected.

Nearly 1600 evacuation centres set up. Over 1 million homes

8th November 2013

damaged, many of which were destroyed completely.

US \$20 billion cost to the Phillipines.

A 6 metre tall wave from the storm surge hit Tacloban bay. The funnel shape of the bay helped increase the height of the wave.

Stagnant water attracted mosquitos and more people contracted Malaria.

The storm resulted in widespread power interruptions, landslides, roads blocked by trees and hundreds of domestic and international airline flights were cancelled.

The 3Ps

PLANNING

PREDICTION

PROTECTION

all used to lessen the effects of meteorological disasters.

EXTREME WEATHER

Extreme weather in the UK

unexpected, unusual, unpredictable, severe, or unseasonal weather.

EXAMPLES

BEAST FROM THE EAST (EARLY 2018)

50cm of snow in some areas. Red weather warnings issued. Temperatures as low as -15°C . Total damage = £1.2 billion.

SUMMER HEAT WAVE (MID 2018)

UK's hottest and driest summer on record. 6 weeks of no rainfall caused drought and low crop yield. In the south, temperatures rose to 40°C . Hosepipe ban enforced.

flash flooding, drought, storms, cold spells and heatwaves.

