

### **1. Natural hazards pose major risks to people and property**

- Natural hazards are natural events that can cause death, injury or damage to property. Examples: earthquakes, volcanoes, storms, floods.
- Risk depends on how strong the hazard is, how many people live nearby, and how prepared they are.
- More people now live in danger zones, so the risk is higher.
- Good planning and education help reduce impacts.

### **3. The effects of, and responses to, a tectonic hazard vary between areas of contrasting levels of wealth**

- Poorer countries suffer more because buildings are weaker and emergency help is slower.
- Richer countries can afford better buildings and faster aid.
- Effects can be primary (buildings collapsing) or secondary (fires, landslides).
- Responses include rescue, medical help, and rebuilding. (See separate cards: L'Aquila, Nepal)

### **2. Earthquakes and volcanic eruptions are the result of physical processes (Tectonic hazards)**

- The Earth's crust is split into plates that move slowly.
- When plates move, pressure builds up and can cause earthquakes and volcanoes.
- At destructive margins, one plate sinks under another, causing earthquakes and explosive volcanoes.
- At constructive margins, plates move apart, forming new crust and gentle volcanoes.

### **4. Management can reduce the effects of a tectonic hazard**

- People live near volcanoes for fertile soil, energy, tourism, or because they have no choice.
- Monitoring, prediction, protection (strong buildings) and planning (evacuation routes) help reduce damage.
- Education is important so people know what to do in an emergency.

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**1. Natural hazards pose major risks to people and property**

**4. Management can reduce the effects of a tectonic hazard**

**2. Earthquakes and volcanic eruptions are the result of physical processes**

### **5. Global atmospheric circulation helps to determine patterns of weather and climate**

- The sun heats the Earth unevenly. Warm air rises at the Equator and cool air sinks at the poles.
- This movement of air creates wind and pressure belts, which affect weather.
- These patterns explain where deserts, rainforests and storms are found.

### **7. Tropical storms have significant effects on people and the environment**

- Primary effects: strong winds, heavy rain, floods and storm surges.
- Secondary effects: disease, homelessness, job loss.
- Responses: emergency rescue and shelters; later rebuilding and better warning systems.
- Poorer countries suffer more because of weaker buildings and less money. (See separate card on Typhoon Haiyan)

### **6. Tropical storms develop as a result of particular physical conditions**

- Tropical storms form over oceans hotter than 27°C.
- Warm, moist air rises and spins because of the Earth's rotation.
- They happen between 5° and 30° from the Equator.
- The storm has a calm eye, an eyewall with strong winds, and heavy rain.
- Climate change may make them stronger and wetter.

### **8. The UK is affected by a number of weather hazards**

- The UK can have storms, floods, snow and heatwaves.
- These damage homes, transport and power supplies.
- Floods can ruin crops and affect people's health.
- The UK manages hazards by forecasting weather, building flood defences and warning people. (See separate card on Storm Desmond)

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| <p><b>9. Extreme weather events in the UK have impacts on human activity</b></p> <ul style="list-style-type: none"> <li>• Floods and storms can stop travel, close schools and businesses, and cost millions in repairs.</li> <li>• Snow and ice cause crashes and power cuts.</li> <li>• People and councils prepare by improving drainage, building defences and giving weather warnings.</li> </ul>                                                                             |  | <p><b>11. Managing climate change involves both mitigation and adaptation</b></p> <ul style="list-style-type: none"> <li>• Mitigation means reducing causes of climate change, like using clean energy and planting trees.</li> <li>• Adaptation means changing life to cope, like building flood walls or changing crops.</li> <li>• Countries must work together to slow down climate change and protect people.</li> </ul>                                                                            |
| <p><b>10. Climate change is the result of natural and human factors, and has a range of effects</b></p> <ul style="list-style-type: none"> <li>• The Earth's climate is changing. It has got warmer, mostly because of humans burning fossil fuels.</li> <li>• This releases greenhouse gases that trap heat.</li> <li>• Effects include melting ice, higher sea levels and more extreme weather.</li> <li>• Some places may suffer droughts, floods or food shortages.</li> </ul> |  | <p><b>12. L'Aquila Earthquake (HIC – Italy, 2009)</b></p> <ul style="list-style-type: none"> <li>• Date &amp; magnitude: 6 April 2009, 6.3 Mw.</li> <li>• <b>Primary impact:</b> 300 people killed, buildings collapsed.</li> <li>• <b>Secondary impact:</b> Aftershocks caused more damage and landslides.</li> <li>• <b>Immediate response:</b> Search and rescue by Italian Red Cross and army.</li> <li>• <b>Long-term response:</b> New homes built and rebuilding of city centre began.</li> </ul> |

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| <p><b>13. Nepal Earthquake (LIC – 2015)</b></p> <ul style="list-style-type: none"> <li>• Date &amp; magnitude: 25 April 2015, 7.8 Mw.</li> <li>• <b>Primary impact:</b> 9,000 people killed, homes destroyed.</li> <li>• <b>Secondary impact:</b> Avalanches on Mount Everest killed 19 people.</li> <li>• <b>Immediate response:</b> UK and India sent rescue teams and aid.</li> <li>• <b>Long-term response:</b> Homes and roads rebuilt; new building rules introduced.</li> <li>• Shows LICs face higher vulnerability despite community resilience.</li> </ul>                                                                                                           |  | <p><b>15. Storm Desmond – Glenridding (UK, 2015)</b></p> <ul style="list-style-type: none"> <li>• Date: 5–6 December 2015; extreme rainfall in the Lake District (341.4 mm in 24 hours at Honister Pass).</li> <li>• <b>Primary impact:</b> Homes and shops flooded; roads damaged.</li> <li>• <b>Secondary impact:</b> Tourism and local businesses lost income.</li> <li>• <b>Immediate response:</b> Volunteers and rescue services helped people; shelters opened.</li> <li>• <b>Long-term response:</b> River banks strengthened and better flood defences built (on one side of the river, allowing flooding of the car park but protecting shops and homes).</li> <li>• Shows: Even a small village like Glenridding faced major social, economic, and environmental disruption, showing that extreme UK weather can have severe local impacts.</li> </ul> |
| <p><b>14. Typhoon Haiyan (Philippines – 2013)</b></p> <ul style="list-style-type: none"> <li>• Date &amp; category: 8 Nov 2013, Category 5; winds ≈275 km/h; storm surge ≈5 m.</li> <li>• <b>Primary impact:</b> 6,300 killed; many homes destroyed by storm surge.</li> <li>• <b>Secondary impact:</b> Shortages of food and water led to disease.</li> <li>• <b>Immediate response:</b> UK sent ships and aid; UN gave emergency help.</li> <li>• <b>Long-term response:</b> Houses rebuilt on safer land (build back better); shelters built for future storms.</li> <li>• Shows: poverty and low-lying settlements worsen impact; global aid improves recovery.</li> </ul> |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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