Geography Revision

Natural Hazards

What is a Natural Hazard?

A natural hazard is a natural event which poses a threat to human activity. A natural event which does not affect human activity is not a hazard.

A Natural Disaster is a natural hazard which has occurred. Extreme events which do not pose any threat to human activity (Eg an avalanche in Antarctica) are not considered to be natural hazards.

*Natural Hazards are* ***only*** *when a Natural Event and Human Activity overlap.*

Types of Natural Hazards

There are two main types of natural hazards –

* Geological Hazards – Caused by land and tectonic processes (Eg volcanoes and earthquakes)
* Meteorological Hazards – Caused by weather and climate

(Eg tropical storms)

Note – climate change may increase the risk of meteorological hazards.

Hazard Risk

Hazard Risk is the probability of people being affected by a hazard in a particular area. There are many factors which can affect hazard risk:

* Vulnerability – The greater the number of people in an area, the greater the risk of them being affected. An example of this is densely populated cities, where more people are affected as a result of a natural hazard.
* Capacity to Cope – The better an area can cope with a hazard, the lower the risk of it severely affecting them. For example, Higher Income Countries (HICs) are better able to cope with flooding, as they can afford to build flood defences and evacuate people.
* Nature of the Hazard – The risk from some natural hazards is greater than the risk from others. Some hazards can be easily predicted, such as tropical storms, which gives people more time to prepare, reducing the risk. Also, the severity (magnitude) of a hazard can also affect the risk. A 9.0 magnitude earthquake in Japan killed 15,000 people, whereas a 6.3 magnitude in Italy killed 300.

Effects of Natural Hazards

Natural Hazards have two main types of effects – Primary, and Secondary. The primary effects of a disaster are caused by the disaster itself. Whereas the secondary effects happen later, often as a result of the primary effects.

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| **Primary** | **Secondary** |
| Buildings and roads are destroyed | *Additional hazards can be triggered (Eg tsunami caused by an earthquake)* |
| People are injured or killed | *Aid cannot reach those in need due to blocked roads/bridges* |
| Food and water supplies are damaged or contaminated | *A shortage of water and food can cause more deaths* |
| Electricity, gas and communication can be cut off | *More people can die due to a lack of electricity or gas* |

Responses to Natural Hazards

Some effects of a natural hazard have to be dealt with before, during, or after the hazards occurs. Others, however, have to be dealt with in the longer term.

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| **Immediate Response** | **Long Term Response** |
| Evacuate those at risk (before the hazard occurs if possible) | *Repair homes and rehouse those who have lost their homes* |
| Treat the injured and rescue those trapped by damaged roads/bridges | *Repair and rebuild broken roads, railways and bridges* |
| Provide temporary supplies of electricity and gas to those affected | *Reconnect damaged electricity and gas supplies* |
| Provide food, drink, and shelter to people affected | *Improve forecasting, monitoring, and evauation plans* |