Geography Sample Answer

2021 Long Question 1C

In this answer, I am going to discuss how the occurrence of earthquakes can be predicted and their effects reduced. Seismic activity refers to the size, types and frequency of earthquakes that take place due to tectonic movement. Seismologists are the scientists that study earthquakes. Earthquakes occur due to tectonic movement. They are most common at destructive plate boundaries e.g. Pakistan earthquake 2005. They also can occur at transform plate boundaries e.g. San Andreas fault. A seismograph is an instrument used to measure the seismic waves of an earthquake. Although we can't use the seismograph to predict the earthquake itself, it can be used to predict when the main tremor of an earthquake may occur. Seismologists can predict earthquakes by studying the seismic gaps in an area. If there has been a long gap in earthquakes in an area on or near a plate boundary, they may be able to predict an earthquake happening soon. Tiltmeters are instruments used to measure any land bulges. Land bulges can be a sign of plate movement which may cause an earthquake. Laser beams from satellites are used to measure any bulges in the rock, this can be used to predict the occurrence of earthquakes as it is showing that land is moving. Radon gas levels are measured as these are thought to rise before an earthquake occurs. Water levels in wells are monitored as a rise in these levels can be a sign that an earthquake is about to happen. Animal behaviour is watched as some people believe that animal behaviour changes if an earthquake is imminent e.g. China

The main way to reduce the effects of earthquakes is by planning. Strict planning laws should be in place that prevent the building of anything near or on a plate

boundary. It is important to earthquake proof buildings in areas that are prone to earthquakes. Hollow bricks and wooden frames should be used in buildings to prevent any harm to humans in the case of the building collapsing. Steel reinforced concrete frames should be used to help buildings sway with the earthquake rather than collapse. Buildings should be built with a wide base and narrow top. Inside homes, goods should be secured to walls to prevent them falling on anyone during an earthquake. National emergency plans should be developed in schools and workplaces in countries prone to earthquakes.