

Edexcel A Geography GCSE

Topic 2: Weather Hazards and Climate Change

Glossary of Definitions

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Atmospheric Circulation - The general movements of air around the Earth due to pressure and temperature.

Climate Change - A distinct change in global or regional patterns of climate, such as changes in temperature or precipitation patterns.

Convection Current - The movement of a fluid caused by a difference in temperature or density.

Coriolis Effect - The effect of the earth's rotation on wind movements.

Cyclone - A tropical cyclone that hits Oceania or Madagascar.

Drought - A prolonged dry period in the natural climate cycle that can occur anywhere in the world (WHO Definition).

Eccentricity - A measure of how much the Earth's orbit around the Sun changes from a circular shape to an ellipse.

Eye - An area of a tropical cyclone with extremely low pressure and calm conditions.

Eyewall - An area of a tropical cyclone with the most intense, powerful winds and torrential rain.

Ferrel Cell - At around 60° North and South of the equator, moist air rises, and travels to lower latitudes at around 30°. Here, it sinks along with air travelling from the equator.

Fossil Fuels - Fuels made up of the remains of organic material, such as oil, coal and gas.

Greenhouse Gases - Gases in the Earth's atmosphere that trap energy in the Earth's system and contribute to the greenhouse effect (carbon dioxide, methane, water vapour and nitrous oxides).

Hadley Cell - Warm, moist air rises near the equator and then cools as it travels to higher latitudes (30°) where it sinks.

Hazard Risk - The probability that a natural hazard will negatively affect a population.

Hurricane - A tropical cyclone that hits the USA, Latin America or the Caribbean.

Hydrological Drought - When reduced precipitation impacts water supply. There is a decrease in streamflow, soil moisture, reservoir, lake and groundwater levels.

Ice Core - A cylinder of ice extracted from an ice sheet or glacier, which is used to analyse past environmental conditions.

Immediate Responses - Actions taken as soon as the hazard occurs and in its immediate aftermath (hours, days, and potentially a week or so after the event).

Intertropical Convergence Zone (ITCZ) - An area surrounding the equator where global winds converge, causing an area of low pressure with rainy conditions.

Long-term Responses - Actions taken after the immediate responses when the effects of



the hazard have been minimised (weeks, months, and years after the event).

Meteorological Drought - When the amount of precipitation received in an area is below average.

Milankovitch Cycles - The cyclical variations in the Earth's orbit around the Sun. Includes: Eccentricity, Obliquity (tilt) and Precession (wobble of Earth's axis).

Obliquity (or Axial Tilt) - The tilt of the Earth's axis, which changes from 21.5° and 24.5° .

Ocean Currents - The predictable, continuous circulation of ocean water which transfers heat around the globe.

Polar Cell - At 60° north or south of the equator, moist air rises, and travels to the poles (90°), where it sinks.

Precession - The 'wobble' of the Earth's axis.

Pressure Belt - A region of the Earth which is generally under the same pressure.

Primary Effects - The effects that are directly caused by the hazard itself.

Quaternary Period - The geological time period which began 2.6 million years ago and extends into the present.

Secondary Effects - Impacts that are a result of the primary effects of a hazard.

Storm Surge - When a tropical cyclone pushes a large amount of sea water onto the shore, causing a rise in sea level.

Subduction - A process that occurs at a destructive plate boundary when a plate is pushed below another plate, forcing it to sink into the asthenosphere.

The Enhanced Greenhouse Effect - A process where the Earth's surface is heated by the greenhouse effect at an increased rate due to larger greenhouse gas emissions from human activities.

The Greenhouse Effect - A natural process where greenhouse gases trap the energy from the Sun inside the Earth's atmosphere, warming the Earth's surface.

Track - A typical pathway that a tropical cyclone takes which is driven by global wind circulation.

Tree Rings - A ring in a tree trunk that grows annually, indicating the conditions in the year it grew.

Tropical cyclone - A very large, spinning storm with high winds and torrential rain that forms in the tropics.

Typhoon - A tropical cyclone that hits India, Japan or the Philippines.

