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# Understanding the climate-weather connection

These greenhouse gases have a significant impact on Earth's climate. Initially, they help maintain a warm temperature necessary for life to thrive. Without them, the Earth would be too cold for organisms to survive. However, an excess of greenhouse gases, primarily caused by human activities, is disrupting weather patterns.

**KUCHING:** Climate and weather are different but connected. Weather refers to temporary and quickly changing conditions, while climate describes the long-term characteristics of a place, such as whether it's hot or cold.

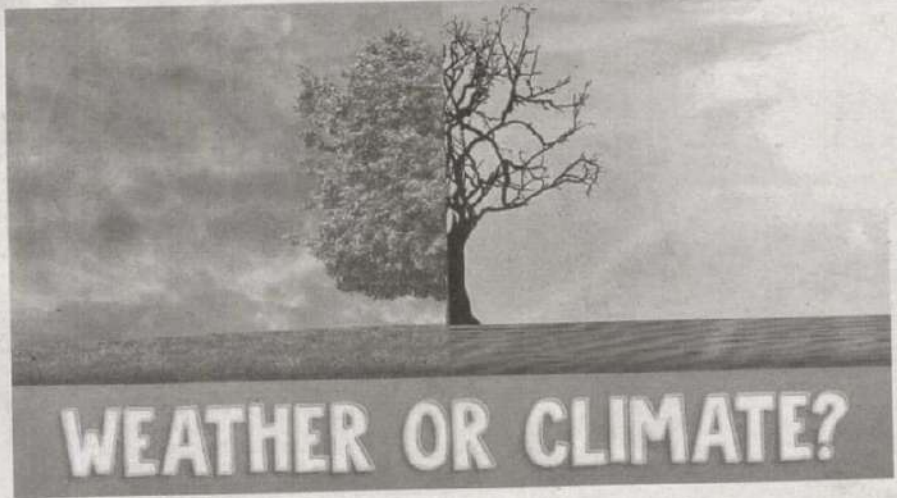
The relationship between weather and climate is important because climate influences things like temperature, weather patterns, winter features, precipitation levels, and the intensity of storms.

These factors are interconnected and contribute to rising temperatures, more extreme weather events, and increased natural disasters caused by climate change.

The earth's atmosphere contains various gases, including greenhouse gases. Greenhouse gases are those that can absorb heat from the sun, contributing to the greenhouse effect.

Normally, heat from the sun is reflected in space, but greenhouse gases trap it in the earth's atmosphere.

There are several greenhouse gases found in the atmosphere, including water vapour, carbon dioxide, methane, ozone, nitrogen oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride. activities, such as large-scale industrialization, release excessive amounts of greenhouse gases, which can harm living



organisms on earth.

Cattle production and the oil and gas industry are major contributors to methane gas, deforestation and fossil fuel burning releases carbon dioxide, and nitrous oxide coming from agricultural activities and wastewater treatment.

According to the United States Environmental Protection Agency (2021), carbon dioxide contributes 79% of greenhouse emissions, followed by methane at 11.5%, nitrous oxide at 6.2%, and other gases at 3%.

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climate. Initially, they help maintain a warm temperature necessary for life to thrive. Without them, the Earth would be too cold for organisms to survive.

However, an excess of greenhouse gases, primarily caused by human activities, is disrupting weather patterns.

The increased amount of greenhouse gases trap more heat, leading to higher average temperatures and more frequent abnormal climate events like droughts and typhoons.

The warmer atmosphere also contributes to glacier melting and rising sea levels. This, along

with warmer ocean temperatures, can result in destructive weather phenomena like typhoons.

Climate change caused by global warming also leads to droughts, affecting human lives, agriculture, food production, and food security.

While greenhouse gases are naturally present in the environment and necessary for life, human activities have caused their levels to rise uncontrollably.

Everyone needs to support efforts to reduce greenhouse gas emissions and adopt a green lifestyle to mitigate the impacts of climate change.