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Fossil Fuels and Greenhouse Gases Play a Part

Burning fossil fuels such as coal, oil, and natural gas for electricity, transportation and industry releases large amounts of carbon dioxide into the atmosphere; contributing to greenhouse gas emissions. These gases are part of the greenhouse effect- a natural process that traps heat in Earth's atmosphere and makes life possible. Ironically, human activities exacerbate the amount of heat trapping gases, thickening the atmosphere's "blanket" and causing Earth's average temperature to rise.

Key greenhouse gases include:

- Carbon dioxide — from burning fossil fuels
- Methane — from agriculture, landfills, and energy production
- Nitrous oxide — from farming and industrial processes

Source: NASA, Climate Change: Causes (<https://science.nasa.gov/climate-change/causes/>)



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Scientific Claims

- Most of Earth's recent warming is driven by anthropogenic causes rather than natural ones.
- The rate of temperature increase since the mid 20th century is unusually rapid as compared to past climate changes.
- Observed changes like warming atmosphere, melting ice and rising sea levels align with increased greenhouse gas concentrations.
- There needs to be reductions in greenhouse gas emissions to avoid severe consequences on mental and physical health.
- Some of the impact on humans include population displacement, heat waves and drought, flooding, infectious and vector borne diseases.

Source: NASA, Climate Change: Scientific Consensus <https://science.nasa.gov/climate-change/scientific-consensus/>



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A Look at the Numbers

Climate change is affecting ecosystems in several ways, including:

- Increasing temperatures: Earth's average temperature has risen about 2° F since the late 1800's.
- Warming oceans: Oceans absorb 90% of excess heat from greenhouse gases.
- Decreased snow: Northern Hemisphere snow cover and Arctic sea ice are declining.
- Rising sea levels: Global sea levels have risen about 8 inches in the past century.
- Extreme weather: Heat waves in the US are about 3 times more common than they were in the 1960's.

Source: NASA, Climate Change: Evidence (<https://climate.nasa.gov/evidence/>)

Photos: NOAA Photo Library (<https://www.noaa.gov/noaa-collections/>)

Take action: Check out climate petitions and campaigns at Fridays for Future- <https://fridaysforfuture.org/take-action/>
Discord: just.bisha

Notes from a Shapeshifting Planet: The Battle for Climate Change

The Backdrop

The long term shifts in temperature, precipitation and weather patterns over decades is what defines climate change. These non human shifts may occur in ocean currents which can redistribute heat around the globe, erupting volcanoes releasing ash that can temporarily cool the planet by blocking sunlight from reaching earth's surface or earth's spin, tilt and orbit; which affects the amount of solar energy received around the globe. Ironically, our current warming trend is distinct because it's the result of human activities.

Source: National Resources Defense Council, What are the Causes of Climate Change?

<https://www.nrdc.org/stories/what-are-causes-climate-change#natural>