

Climate Change Causes

Introduction

Climate change is primarily driven by human activities. While natural factors like volcanic eruptions and solar variation play a role, human-caused greenhouse gas emissions are the dominant force behind the current changes.

Key Causes

1. Burning Fossil Fuels: Coal, oil, and natural gas are used for electricity, heating, and transportation.
2. Deforestation: Trees absorb CO₂. Cutting forests releases stored carbon and reduces absorption capacity.
3. Industrial Emissions: Factories release CO₂, methane, and other pollutants.
4. Agriculture: Livestock release methane, and fertilizers emit nitrous oxide.
5. Waste: Decomposing waste in landfills emits methane.

Emissions by Sector (Global Averages)

- Energy production: ~25%
- Industry: ~21%
- Agriculture, forestry, and land use: ~24%
- Transportation: ~14%
- Buildings: ~6%
- Waste: ~3%

Classroom Discussion Questions

- Why do fossil fuels contribute more to climate change than other energy sources?
- How can individuals reduce emissions from food and travel?
- What industries could transform their processes to reduce climate impact?