

Climate Change

Climate change refers to long-term shifts in temperatures and weather patterns. These changes can occur naturally due to variations in the Earth's climate system. However, since the industrial revolution, human activities have become the primary cause of rapid climate change. The burning of fossil fuels such as coal, oil, and natural gas releases large amounts of greenhouse gases into the atmosphere, which trap heat and lead to global warming.

The increase in global temperatures has a wide range of impacts on natural and human systems. Melting glaciers and polar ice contribute to rising sea levels, which threaten coastal communities. Changes in rainfall patterns can lead to more frequent floods in some regions and severe droughts in others. Extreme weather events, including heatwaves, hurricanes, and wildfires, are becoming more common and more intense due to the changing climate.

To address climate change, both mitigation and adaptation strategies are necessary. Mitigation focuses on reducing greenhouse gas emissions by transitioning to renewable energy sources, improving energy efficiency, and promoting sustainable transportation. Adaptation involves preparing societies to cope with the impacts of climate change through resilient infrastructure, improved water management, and disaster preparedness. Collective global action is essential to limit long-term environmental and social damage.