

Climate Change and Global Warming

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1. Introduction

- Climate change refers to long-term alterations in temperature and typical weather patterns in a specific region. Global warming specifically relates to the increase in Earth's average surface temperature due to human activities.

2. Causes of Global Warming

- Greenhouse gases such as carbon dioxide, methane, and nitrous oxide trap heat in the Earth's atmosphere, leading to a warming effect.
- Human activities such as burning fossil fuels, deforestation, and industrial processes significantly contribute to the increase in greenhouse gas emissions.

3. Effects of Climate Change

- Rising global temperatures lead to melting glaciers, rising sea levels, extreme weather events, and shifts in ecosystems.
- Negative impacts on agriculture, water resources, human health, and biodiversity are also observed due to climate change.

4. Mitigation and Adaptation Strategies

- Mitigation involves reducing greenhouse gas emissions through measures like transitioning to renewable energy sources, energy efficiency, and afforestation.
- Adaptation focuses on adjusting to the impacts of climate change by implementing resilient infrastructure, sustainable water management, and disaster preparedness plans.

5. International Efforts

- The Paris Agreement, signed by almost 200 countries, aims to limit global warming to below 2 degrees Celsius through collective efforts to reduce emissions and enhance climate resilience.
- Various organizations and initiatives work towards promoting sustainability, climate action, and awareness of the importance of addressing climate change.

6. Individual Actions

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- Individuals can contribute to combating climate change by adopting sustainable practices such as reducing energy consumption, using public transport, recycling, and supporting eco-friendly products.

7. Conclusion

- Climate change and global warming pose significant challenges to the environment, ecosystems, and human well-being. Addressing these issues requires global cooperation, policy interventions, and individual responsibility to create a sustainable future for generations to come.