

# Climate Change its Causes and Consequences

## Causes of Climate change

- 1 Deforestation
  - 1.1 Agriculture expansion
  - 1.2 Logging for timber
  - 1.3 Infrastructure development
  - 1.4 Forest fire
  - 1.5 Mining and Industrial Use
- 2 Green House Gas Emission
  - 2.1 Burning Fossil Fuel
  - 2.2 Agricultural practices
  - 2.3 Industrial Process
  - 2.4 Transportation
- 3 Urbanization
  - 3.1 Rapid Growth of Cities
  - 3.2 Increase Energy Consumption
  - 3.3 Urban Heat Island effect
  - 3.4 Transportation Growth and Industrial Expansion

Deforestation significantly contributes to climate change through multiple interconnected causes rooted in human activities. The primary driver is agricultural expansion, as vast forest areas are cleared for crop cultivation and livestock grazing.

to meet the demand of growing population. It disturbs the natural ecosystem and leads to loss the biodiversity. Logging for timber, paper and fuelwood furthermore accelerate the forest loss, often through unsustainable practices. This large scale removal of forest reduce the Earth's natural capacity to absorb carbon dioxide ( $CO_2$ ). Rapid Urbanization and infrastructure development including roads and settlements also leads to large scale clearing of forests. Unplanned developments further accelerate the environmental degradation and ecological imbalance. Mining and industrial process also cause climate change by releasing large amount of greenhouse gases and damaging natural ecosystems. Additionally forests fire whether natural or deliberately set for land clearing release massive amount of carbon dioxide ( $CO_2$ ) into atmosphere. This activity increase green house gas emission. Consequently this contributes to environmental imbalance and climate change.

Green house gas emission is primarily caused by the range of human activities that intensify the Earth's natural greenhouse effect. Burning of fossil fuels like oil, natural gas and coal for energy, transportation release carbon dioxide into the atmosphere. Also forest fire release massive amount of carbon dioxide ( $\text{CO}_2$ ) which trap heat and leads to global boiling. Agricultural Practices contributes through methane emission ( $\text{CH}_4$ ) from livestock like cows and landfills and Nitrous oxide ( $\text{N}_2\text{O}$ ) from excessive use of chemical fertilizers.  $\text{CH}_4$  and  $\text{N}_2\text{O}$  are major gases of greenhouse effect. Industrial process, factories produce emission from cement and steel production and chemical manufacturing release carbon dioxide and other pollutants. Transportation like cars, ships, truck burn fuel release ( $\text{CO}_2$ ) carbon dioxide and other gases that warm the planet. Rapid Urbanization and improve waste management particularly in landfills also generate substantial greenhouse gases. As a result, the natural balance of atmosphere is disturbed, intensifying the greenhouse effect and leading to global warming and climate change.

Urbanization the rapid grow of cities and towns has become a significant contributor to climate change. As urban areas grow, forests and agriculture areas are cleared to make a way for housing, roads, factories and infrastructure, ~~increasing~~ leading to the reduction in the natural absorption of carbon dioxide. The concentration of vehicles, powerplants and factories in cities further increase the greenhouse emission which includes  $\text{CO}_2$ ,  $\text{CH}_4$  and  $\text{N}_2\text{O}$  intensify the green house effect. Urbanization also contributes to the formation of 'Heat-island' where build-up areas experience higher temperature than surrounding regions due to replacement of vegetation with concrete and asphalt. This not only raises the local temperature but also affects weather patterns and increases energy demand for cooling, further adding to emission. Additionally, urban expansion leads to greater waste generation, which produces methane when improperly managed to landfills. Increased use of cars, buses and motorcycles leads to higher emission of  $\text{CO}_2$  and other harmful gases.

Industrial activities such as manufacturing and construction, which emit greenhouse gases and pollutants into the atmosphere. Urbanization accelerates climate change by increasing emissions, reducing green cover, and intensifying energy use.

# Why Aspirants fail in Competitive Exams.

## Digital Distraction

- Excessive use of social media
- Impact of memes and reels
- Excessive use of AI

Digital distraction is one of the major challenge in the modern era due to (over)widespread of smartphones, social media and online entertainment. Excessive use of smartphones and social media consume valuable study time and lower productivity. Frequently checking for notifications from platform like facebook, Instagram, Tik Tok which divert attention from study or tasks. Streaming videos and games takes time meant for study. Constant distraction impact learning, memory retention and quality of output. Memes and short video reels negatively impact attention span and concentration. Trying to do multiple digital activities simultaneously reduces focus, productivity and efficiency in both academic and professional setting. Students may struggle to complete assignments on time, or perform optimally due to frequent interruption. Moreover, excessive digital engagement can lead to mental fatigue, increased stress and sleep disturbance, overreliance on artificial intelligence tools reduce cognitive ability and independent problem solving skills. Digital engagement can create pressure

and distract from important task. Poor time management due to digital usage leads to procrastination. Without proper self-regulation and time management, digital distraction not only hampers personal and professional growth but also affects overall well-being.

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