

"Climate Change: Causes and Consequences"

I) Introduction

Thesis:

A change in global and regional climate patterns, is the most critical, all-encompassing and "threat multiplying" phenomenon of our time because it is rapidly destabilizing the natural systems - water, food, ecosystems that support human life. Increased levels of Carbon dioxide (CO₂) emissions in the atmosphere are caused by human-induced activities and poses risks to those same beings.

(ii) Causes Of The Climate Change:

Human-driven Activities (Anthropogenic):

(a) Burning of Fossil fuels.

1) Emissions of green house gases;

a) CO₂ - notably Carbon dioxide (CO₂)

b) Increase percentage of methane

c) Land nitrous oxide emissions

(i) Fertilizer use

(ii) Reliance on transportation.

a) Burning Petroleum-based fuel

releases massive Carbon dioxide (CO₂)

(iii) Electricity generation.

a) Burning of fossil fuels for power generation.

(iv) Deforestation.

a) Stored carbon is released upon clearing or burning.

b) Breaking natural cycle of storing CO_2 .

(v) Industrial emissions

a) Industries emit (CO_2), (NO_2), methane (CH_4) and (SO_2).

(vi) Modern industrialized agriculture.

a) Large amount of Nitrous oxide.

b) Large-scale industrialized livestock production, a source of atmospheric methane.

Natural Causes of Climate Change:

(i) Volcanic eruptions.

(ii) Disturbance of tectonic plates.

Slight contributors to climate change.

III Consequences of the climate change

(i) Impacts on weather:

a) Higher average temperatures

b) Longer-lasting droughts.

c) More-intense wildfires.

d) Stronger storms.

(ii) Impacts on the environment:

- a) Sea-level rise.
- b) Flooding.
- c) Ecosystem stressors.

(iii) Impacts on Agriculture:

- a) Less predictable growing seasons.
- b) Reduced soil health.
- c) Food shortages.

(iv) Impacts on Human Health:

- a) Deterioration of human health.
- b) Mass displacement.

(v) Economic Loss:

- a) Lesser productivity
- b) Impact costs

iv) Global Agreements on Climate Change Mitigation:

(a) United Nations Framework Convention on Climate Change (UNFCCC)

(b) Paris Agreement 2015

Conclusion