

# Topic : Climate change : causes & consequences

## Outline

### 1. Introduction

a. Hook

b. Background

c. Thesis statement : The causes of climate change are burning fossil fuels for energy, widespread deforestation, massive industrialization and agricultural practices leading to severe consequences (rising global temperatures, extreme weather events, rising sea levels and oceans and food insecurity).

### 2. Effects of burning fossil fuels on the climate

a. Primary source of energy for transportation

b. coal as the primary driver of climate change.

case in point : Fossil fuel pollution responsible for 30.7% deaths in Eastern Asia and 13% in the US.

### 3. Contributions of deforestation to the climate change

a. Releasing stored carbon dioxide into the atmosphere.

b. Allowing more CO<sub>2</sub> to accumulate in the atmosphere.

c. Reducing moisture evaporation

d. Resulting in drier conditions

e. Increasing the risk of wild fires.

case in point : Tropical deforestation alone accounted for roughly 6% of global carbon emissions 2023.

### 4. Industrialization as a catalyst for climate change.

a. Burning fossil fuels to power manufacturing.

b. Manufacturing industries producing high emissions

c. clearing forests for developing industries.

d. causing water pollution by releasing solid or liquid waste.

Case in Point: The Industrial Revolution (18<sup>th</sup>-19<sup>th</sup> century) caused climate change by initiating large-scale burning of fossil fuels.

### 5- Contribution of Agriculture to Climate change.

a. Producing large amounts of methane during digestion

b. Using Nitrogen based fertilizers resulting in significant releases of nitrous oxide.

c. Causing for over 20% of global carbon emissions.

### b. Effects caused by climate change on global temperatures.

a. Rapid warming of earth.

b. Increased frequency of extreme heatwaves.

c. Increase in night-time temperatures

d. Significant warming of The arctic.

Case in Point: An IPCC special report of the impacts of global warming of 1.5°C above pre-industrial levels.

### 7- Climate change as a driver of extreme weather events.

a. Increased moisture and Precipitation

Case in Point: Pakistan floods 2022

b. Intensified Heatwaves

Case in Point: Karachi Heatwave June 2015

c. Worsening Droughts

d. Fueling wildfires.

8. Climate change responsible for rising sea levels and oceans.

- a. Thermal expansion of seawater
- b. Addition of water from melting land-based ice.
- c. Reduced land water storage

Case in Point: Parts of Jakarta are sinking by up to 10 inches per year due to ground water extraction and rising sea levels.

9. Impacts on climate change on Food-security.

- a. Reducing agriculture yields
- b. Disrupting supply chains
- c. Spiking food prices through extreme weather
- d. Events like floods and droughts.

10. The way forward to control the consequences of climate change

- a. Energy transition
- b. Industrial and urban solutions
- c. Carbon Removal
- d. Policy and Finance

11. Conclusion.