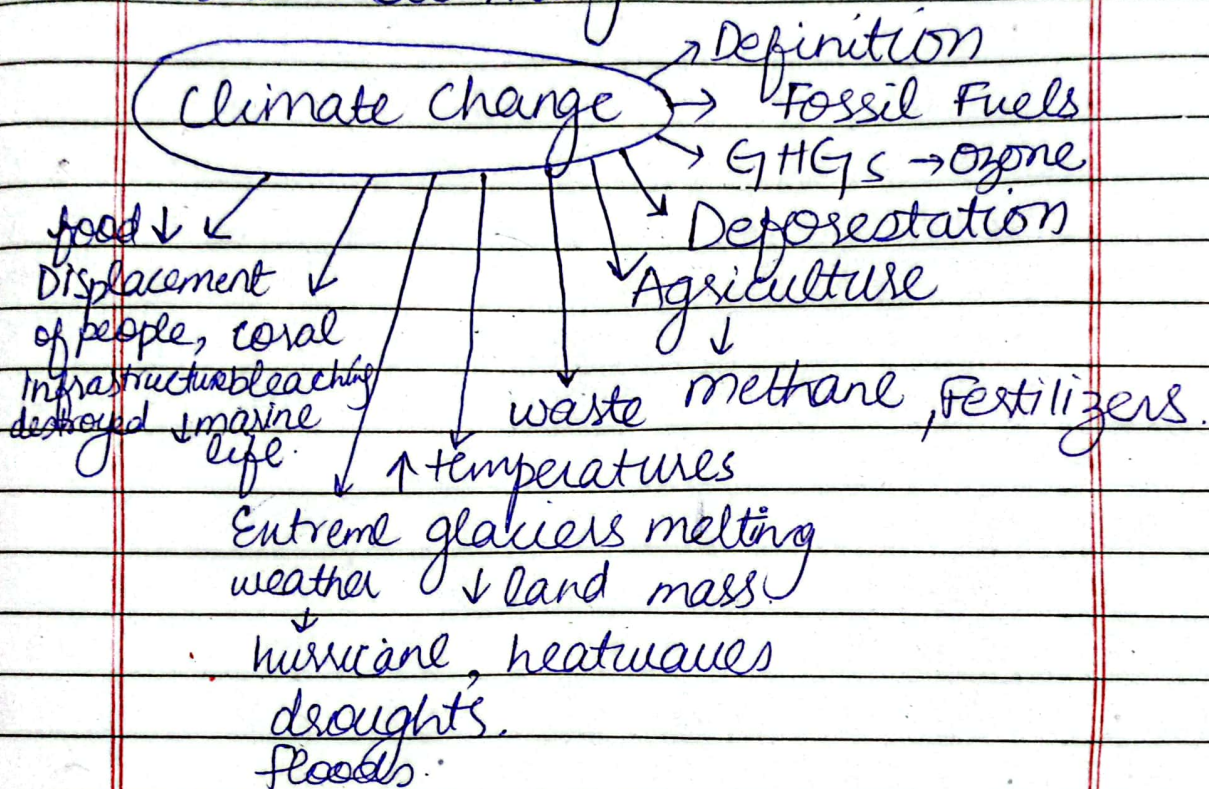


11 Sep 24 BY Alman Rashid

- outline
- thesis statement
- introductory paragraph.

Climate Change: Causes & Consequences.

Brain storming



General → ↓ GHGs, Renewable source, conservation of forest, Policies of govt, individual actions, Education.

Outline

I Introduction

- Definition and quotation of Ban Ki-moon.
- Hook → imaging a world

c. Thesis statement:

Climate change - a reality, driven mainly by human activities such as fossil fuel combustion, greenhouse gas emission, agricultural practices and improper waste disposal leads to severe environmental and societal consequences including increased global temperatures, extreme weather events and disruptions to human and animal lives.

II Main body

a Causes of climate change

1 Increased fossil fuel use

i. Used in transportation and industrial machinery

ii. Greenhouse gases → J/F/F

In 2022 global CO₂ emissions from fossil fuels and industry → 36.8 billion metric tons, highlighting ~~human~~ large scale human impact on climate.

2 Deforestation

41 Trees as carbon sinks - lost

eg A mature tree can absorb

Date: _____

- approximately 22 kgs of carbon dioxide per year.
- ii Decreased biodiversity
Mention of species lost, disruption in ecosystems.

B Agricultural Practices.

- i Methane - a GHG by livestock and rice agriculture.
eg cows \rightarrow 70 - 120 kg / year
sheep \rightarrow 10 - 20 kg / year
goats \rightarrow 10 - 20 kg / year.
- ii Use of Synthetic fertilizers and Pesticides
 \rightarrow Pollution of water, air and land

4 Improper waste management

- i Landfills \rightarrow mention Methane emission and how it is more damaging to the environment than CO_2 (carbon dioxide) \rightarrow leachate
- ii Incineration \rightarrow Carbon emissions
example: burning 1 ton of municipal solid waste can produce 0.8 to 1.2 tons of carbon dioxide.

b Consequences of climate change.

- 1 Increase in Global temperatures.

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- i Overall increased temperature F/F since the late 19th century
Earth's average temperature has increased by approximately 1.2°C with the rate of warming accelerating. ~~ment~~
- ii Melting glaciers and polar caps. (Decrease fresh water resource, decrease land mass)

2 Extreme weather events:

- i hurricane and storms
- ii Droughts and floods.

According to WMO, frequency of extreme droughts has increased over the past few decades. The number of severe droughts \rightarrow have risen by 30% since the 1960s.

3 Disruption to land and marine ecosystems

- i land ecosystem disruption
 \rightarrow mention species migration, loss of biodiversity and wild fires; eg 2019-2020 Australian bushfires burned over 18 million hectares, significantly affecting biodiversity
- ii Marine ecosystem disruption

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i. Coral Bleaching and coral health
The great barrier reef →
severe bleaching in
2016 and 2017.

~~Mention~~ ~~ocean~~ ~~acidification~~
ii. Ocean Acidification
chemical changes and organisms
affected.

4. Disruption of human
life.

i. Decreased food production

ii. Displacement of people

• Hurricane Katrina (2005) 1 million people displaced

iii. Infrastructure destroyed,
and economic losses.

example: due to floods
in Pakistan the WB and
ADB have assessed
reconstruction cost → \$15
billion.

Introductory Paragraph

Climate change refers
to long-term alterations
in temperatures, precipitation
patterns and other aspects
of Earth's climate system.
Ban Ki-moon, former
secretary General of the
United Nations said, "Climate

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is the greatest challenge facing humanity today." This is especially true when we imagine a world where we don't take measures to stop the ongoing actions leading to climate change. How would that world look like? In a world where no measures are taken to halt climate change, the impacts would be severe and pervasive, from heatwaves causing cities to experience record breaking temperatures, leading to heat-stroke and chronic conditions to severe storms displacing populations and widespread destruction. The sea levels would rise, submerging cities, eroding coastlines leading to loss of coastal habitats. A world that fails to address climate change would suffer. Therefore we must accept that climate change is a reality driven mainly by human activities such as fossil fuel combustion,

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greenhouse gas emission,
agricultural practices and
improper waste disposal
leading to severe environmental
and societal consequences
including increased global
temperatures, extreme weather
conditions and disruptions
to human and animal
lives.