

TOPIC :- Climate Change is a huge threat for economic prosperity of Pakistan

Outline

A. Introduction

1. Industrial revolution
2. How climate change is a huge threat for economic prosperity of Pakistan
3. Thesis Statement

B. Causes of Climate Change

1. Greenhouse gases emission
2. Burning fossil fuel
3. Deforestation
4. Global Warming

C. Climate change impacts on economic prosperity of Pakistan

1. Extreme Weather events
 - a. Total cost of damage in floods 2022 is \$30 billion
 - b. Pakistan is ranked top 10 most vulnerable countries

2. Impact on agriculture

- a. Projected loss of wheat and rice crop is estimated \$19.5 billion by 2050

3. Healthcare

- a. Spread of viral, waterborne and vector-borne diseases.

4. Water Scarcity

- a. Pakistan's water availability reduced by 10% in 2050.

5. Reduce tourism

6. Loss of Biodiversity

7. Infrastructure damage

- a. Huge infrastructure damage in recent floods in Pakistan

D. Steps taken to counter it

1. Pakistan develop National Climate Change Policy (NCCP) 2021
2. Establishing Climate Change Institution
 - a. Climate Change council
 - b. National Climate Change Authority
3. Promoting the development of Renewable Energy
4. Enhancing forest covers
 - a. 10 billion Trees tsunami program
5. International Collaboration
 - a. Green Funds (GCF)

E. Conclusion

Essay

Industrial revolution was a period of numerous technological advancements in the 19th and 20th century.

It cause great social and economic changes that transformed society.

It replaced hand tools and manual labor with machines. It was the successful revolution. But, it also

reason of climate change. Climate change is the long-term process of change of weather patterns and temperature.

Climate change poses a significant threat to the economic prosperity of Pakistan. It has far-reaching impacts in various sectors.

The country is highly vulnerable to the climate change disasters.

There are many cause of climate change. One of the major cause of climate change is green house gas emission such as Carbon dioxide

CO₂, methane etc. The burning of fossil fuel and deforestation has major contribution in the climate change.

Global warming is the other major reason that trap heat into the atmosphere. Climate change has significant impact on Pakistan's economic prosperity. In the past few decades, Pakistan has faced

extreme weather events such as floods, glacier melting, drought and heavy rainfall etc. These climate change event poses threat to the agriculture and healthcare in Pakistan. Climate change threat caused water scarcity and loss of biodiversity. Due to climate change impacts Pakistan experienced huge infrastructure damage and reduce tourism. Pakistan has taken number of steps to counter the threat of climate change. Pakistan was formed National Climate change policy in 2021 and establishing climate change institutions. Pakistan put its efforts to Promoting renewable energy and enhancing forest covers. Pakistan also need for international collaboration. Hence climate change is the multifaceted issue that faced by peoples of Pakistan. Pakistan's government consider climate change as a national security threat and take steps to address it.

However, climate change is the reality of 21st century that have various causes.

Moreover, ~~the~~ greenhouse gases emission has largely impacts on

on the climate. The Carbon dioxide (CO_2) and other pollutants trap heat into the atmosphere. Carbon emission has majority contribution that released in the atmosphere. There are many reasons of carbon emission in the atmosphere such as energy production, industrial process and deforestation etc. For instance, global carbon emission were 37.12 billion metric tons in the 2021. This represent an increase of 1.3% from 2020, according to global carbon budget. The continued growth of carbon and other gases emission is a major concern that play important role in the climate change. Hence, the global carbon emission and different green house gases poses significant change in climate.

As well as, burning fossil fuel is the primary cause of man-made climate change. When fossil fuel burns, the release of carbon dioxide (CO_2) and other greenhouse gases release into the atmosphere. These gases trap heat that causing warm planet. For example, fossil fuels accounted for 78% of global CO_2 emission. These statistic highlight the significant role that

Burning fossil fuel plays in climate change. Finally, burning fossil fuel has major contributor in the climate change.

Furthermore, deforestation is the other cause of climate change. When trees are cut down, the greenhouse gases is stored in their trunks and leaves released into the atmosphere. Deforestation has many negative consequences such as soil erosion, loss of biodiversity, flooding etc. Deforestation is also responsible for about 10% of global greenhouse gas emission. For instance, the total deforestation increased 25% between 2019 to 2021. Deforestation was responsible for 3.7 Gt of CO₂. In a conclusion, Cutting down trees remains a major threat for of the climate change & environment.

In addition, global warming proved that climate change is the biggest threat for humanity. The global warming is the usually rapid increase in the Earth's surface temperature over the past century. It is primary due to pollutants released by the people through

Page = 61

various sources. For example, the emission of methane (CH_4) into the air to be around 580 million metric tons per year. Due to emission of these pollutants, the average surface temperature could rise between 2C to 6C by the end of 21st Century. Hence, global warming is rapidly increase due to released of pollutants into the atmosphere poses threat for the environment.

However, climate change has significant challenge for the Pakistan. Climate change poses threat to economic prosperity of Pakistan. In recent few decade, it considered as a national security threat for Pakistan.

In addition, Pakistan has faced extreme weather events in the past few decades. These weather events include floods, heavy rainfalls, droughts, glacier melting etc. The change of weather patterns in the Pakistan due to climate change. For example, Pakistan's ranked top 10 position in the most vulnerable countries from climate change. These extreme weather

events caused major economic loss of Pakistan. For example, total cost of the damage in floods in 2022 is estimated around \$30 billion. The floods caused widespread damage to infrastructure, agriculture, housing, health etc. Hence, Pakistan is the top climate change affected countries that poses threat to the economy of country.

Along with, economy of Pakistan is damaged due to climate change has significant impact on agriculture. Agriculture is the second-largest sector in Pakistan's economy with 19.2% contribution to the GDP. In recent years, agriculture faced challenges such as floods, droughts and soil erosion due to climate change. Climate change has deep affects on agriculture based income in future. For example, the world bank projected the loss of wheat and rice crop that is estimated \$19.5 billion by 2050. The study highlights the deep impacts on agriculture sector due to climate change. In a conclusion, the loss of agriculture sector poses a significant threat for the economic prosperity of Pakistan.

Then, climate change impacts caused of different diseases that are ~~an~~ additional burden to the healthcare system. Health is also one of the affected sector of climate change. For instance, climate change caused many events such as floods, droughts, heavy rainfalls. These events are the reason of contagious diseases. For instance, spread of viral, waterborne and vector-borne diseases due floods, affected crops and heavy rainfall. In a conclusion, climate change has wide spread affects on healthcare system.

Furthermore, water scarcity is a growing concern for Pakistan. As climate change is expected to exacerbate the country's already strained water resources. Pakistan is ~~th~~ considered one of most water-stressed countries due to climate change and other reasons. For example, the study of world bank shows the water availability in Pakistan reduced by 10% in the 2050. Erratic rainfalls and glacier melt further diminishing water availability in the

country. In a conclusion, water scarcity is diminishing due to climate change in the Pakistan.

Likewise, tourism industry is also affected from the destruction of climate change. Tourism industry revive in the recent decade and generate income. But, due to recent floods in Pakistan, tourism industry faced challenges. For instance, Pakistan received an estimated 650,000 tourists, down from 1.7 million in 2019. The floods also led to a significant decline in tourist arrivals. Hence, tourist industry face downfall of tourist arrival due to impacts of climate change.

Moreover, climate change caused loss of biodiversity in Pakistan in the last few decades. Pakistan has rich biodiversity but rising temperatures, shifting precipitation patterns, and extreme weather events are disrupting habitats. For example, melting glaciers and snowcaps are reducing the extent of alpine meadows and high-altitude crucial habitats for

many endemic species. Hence, loss of biodiversity due to climate change create dangerous situation for ecosystem and species.

Furthermore, Infrastructure Climate change is causing widespread damage to infrastructure in Pakistan. These infrastructures are most expensive. It poses significant threat to the economy of Pakistan. For example, the total loss of infrastructure damage in the floods 2022 is estimated \$13b to \$30 billion. The flood washed away many infrastructure projects. Hence, infrastructure damage is particularly vulnerable effects of climate change that poses burden on the economy.

However, the government of Pakistan taken many steps to counter. These steps are below in the paragraphs

In addition, Pakistan is formed National Climate Change Policy (NCCP) in the year 2024. The policy has given a comprehensive framework for adaption and mitigation measures. Policy

formulate to strengthen institutional capacity for climate change to counter it. For example, NOAA established Climate Change command center to assess vulnerabilities of climate change and mitigation it. Hence, National Climate Change Policy 2021 provide framework to counter climate change.

As well as, government was established institutions of climate change with the task of assessment and mitigation on it. These institution has capacity to develop and implement climate-resilient management system. For instance, Pakistani Climate Change Council (PCCC) is a high-level advisory body which provide strategic guidelines on climate change policies and action. As well as, National Climate Change Authority (NCCA) has mandate to coordinate and oversee the implementation of National Climate Change Policy and other policies. These institutions play significant role to counter climate change damages. In a conclusion, government climate change institution have significant role

to counter climate change.

As well as, promoting the development of renewable energy is the one of major step to the address climate change. Non-renewable energy sources are the major cause of climate change while renewable energy is sustainable energy that have less affect in the climate. Pakistan has developed renewable energy sources. For instance, Several cities in Pakistan are introducing electric buses for public transportation with the aim of buses offer zero emission. Pakistan can reap the environmental and sustainability benefits of transitioning to electric vehicle. Hence, the development of renewable energy sources has contributing to a cleaner and more sustainable sources to counter it.

Moreover, Pakistan is committed to enhancing forest covers to counter climate change. The government of Pakistan running many programs on the forest covers. For example, former prime minister of Pakistan launched Ten billion Tree

Tsunami Program with the aim of reducing green house gases emission, improving air quality, preventing soil erosion etc. In a conclusion, Pakistan is making significant progress in enhancing forest covers to counter climate change.

Lastly, Pakistan is actively involved in international collaboration to counter climate change. Pakistan is also member of many international organizations which are working on climate change. For example, Pakistan is a recipient of funding from Green climate fund. GCF is supporting Pakistan in many climate-resilient projects. Hence, international collaboration help to Pakistan to counter climate change.

In a conclusion, climate change is a huge threat for economic prosperity of Pakistan. Climate change has many causes such as global warming, deforestation, burning fossil fuel and green house gases emission. Pakistan has faced climate change pattern.

The climate change poses threat to Pakistan's economic prosperity. The extreme weather events caused of massive humanitarian and financial loss. Climate change has significant impacts on agriculture, healthcare and water scarcity. Climate change caused the loss of biodiversity, reduced tourism and infrastructure damage. Pakistan has taken many step to counter it such as formulation of National Climate Change Policy, establishing climate change institutions and development of renewable energy source. Pakistan has committed forest cover and international collaboration. However, climate change consider as national threat for Pakistan. In short, it is stated that impacts of climate change is the threat for Pakistan's economic prosperity.