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Pakistan climate change

Outline:-

Introduction:-

"Climate change is no longer some far-off problem; it is happening here, it is happening now," and "We are 1st generation to feel the impact of climate change and last generation who can do something about it."

(Barack Obama)

In this Quotes Obama consistently emphasized that climate change was not a future threat but a current reality. we are 1st generation feel the impact of climate change because many decades ago human being were not facing such as a severe climate change problems.

Climate change:-

climate change generally a change in global or regional climate patterns. United Nations defined it long-term shifts temperatures and weather patterns.

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Climate change in Pakistan is increasing due to greenhouse gas, especially CO_2 release due to human activities like burning fossil fuels, deforestation, and vehicle smoke. This activity traps heat in the atmosphere, leading to global warming and range of related impacts: extreme events, water scarcity, food security and greenhouse gas emissions. In Pakistan history recorded temperature 2012-May 44°C and May-2022 temperature recorded 47°C and 3°C increase in temperature is the biggest number. Biggest organization and think tank reported Pakistan is included in high climate change country.

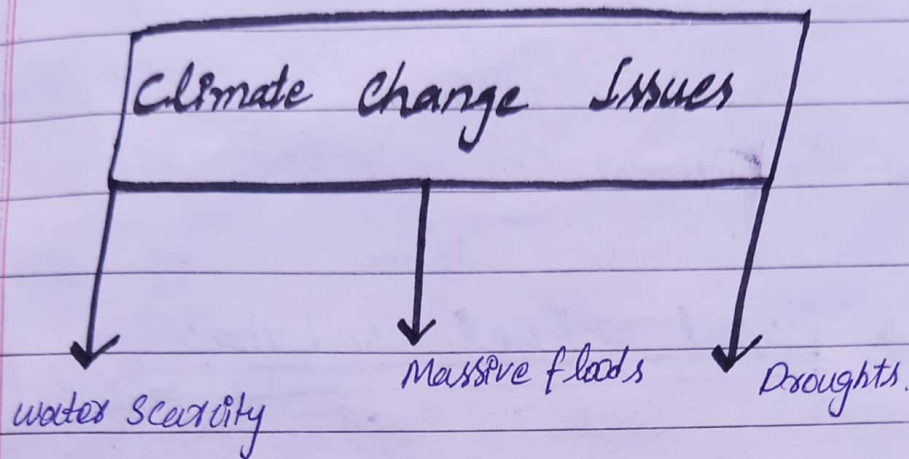
Germanwatch Report

German think tank publishes report by GCRI (Global Climate Risk Index) in Pakistan (2000-2019) 10,000 people died due to climate change and Pakistan economy loss \$3.8 billion.

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According to Pakistan Council of Research
Pakistan face three main Issues
due to climate change.



Heatwave $\rightarrow$ Increase temperature $(5-6)^{\circ}\text{C}$

PMD $\rightarrow$ Pakistan Meteorological Department

A report publish **Jun 2015**

in Karachi a severe heatwave
people died 2000 and 6500 people
admitted to hospital.

In Pakistan climate change is severe
due CO_2 and have negative effect on
our mental, physical, economic, Health
production, resources and geographical.

It is threat to control the Green
house gas, human activities decrease and
global warming issues.

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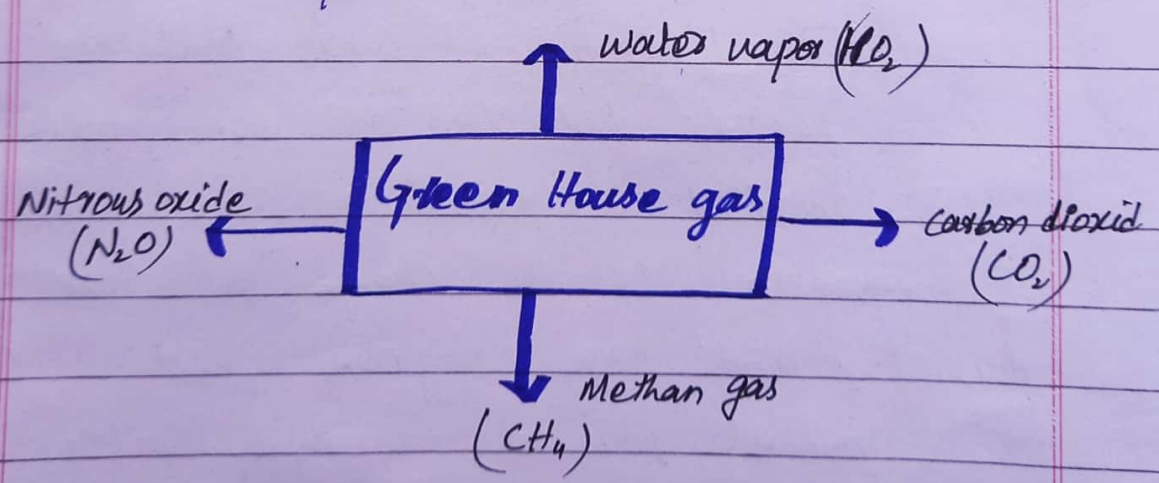
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Causes

- Fossil Fuel Combustion
- Deforestation
- Industrial pollution
- Agricultural practices
- Land use change

1.2 → Fossil Fuel Combustion:-

Burning coal, oil and natural gas for energy generation releases large amount of carbon dioxide (CO_2) gas into the atmosphere, a major greenhouse gas release which increases the earth temperature.

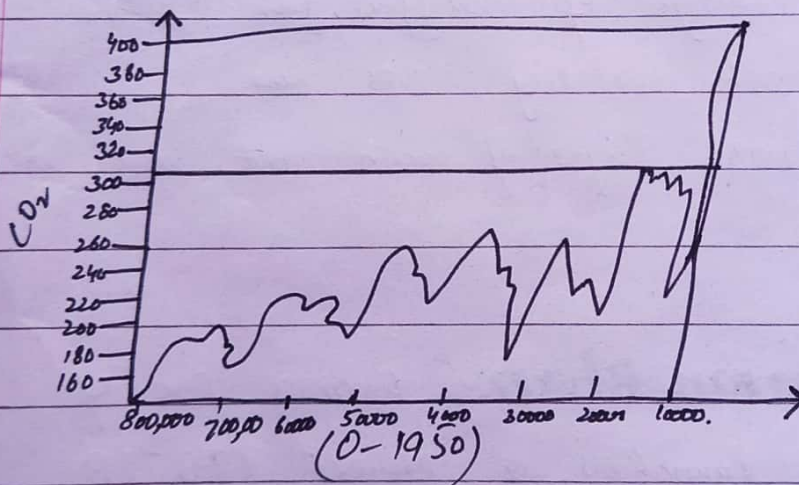
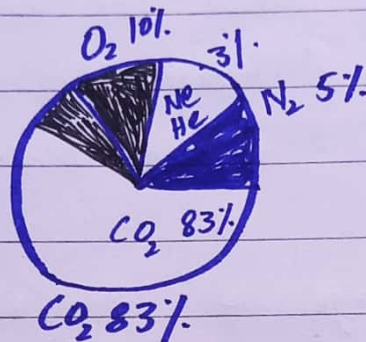


powerful green house that blanket the Earth and trap the sun's heat and raise the temperature of the earth.

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The last decade (2011-2020), is the warmest on record. Since 1980, each decade has been warmer than the previous one. CO_2 increases last 1950 and raise temperature 3 times from 1950.



This graph shows that temperature increase due to CO_2 increase.

In Pakistan 2023, produced CO_2 nearly 200 million metric tons due to fossil fuel. CO_2 emissions in 2020 0.01% increase from 2019.

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2.2 → Deforestation;

Trees absorb carbon dioxide, so deforestation reduces the Earth's capacity to store carbon and releases stored carbon into the atmosphere. Deforestation refers to cut down trees for house, fire, place and making furniture. Deforestation causes shortage human and living thing activity.

Causes:-

- Shortage of rainfall.
- Shortage of oxygen gas
- Earth fertility crops low.
- crust layer of earth not maintain nutrient.

P.m Imran Khan:- Former P.m of Pakistan launches a project (TBTP) 10 billion tree project next 10 years produce 148 million tons carbon dioxide gas absorb. Tree planting next 10 years 148 million tons absorb CO_2 . Each year approximately 12 millions hectares of forest destroyed.

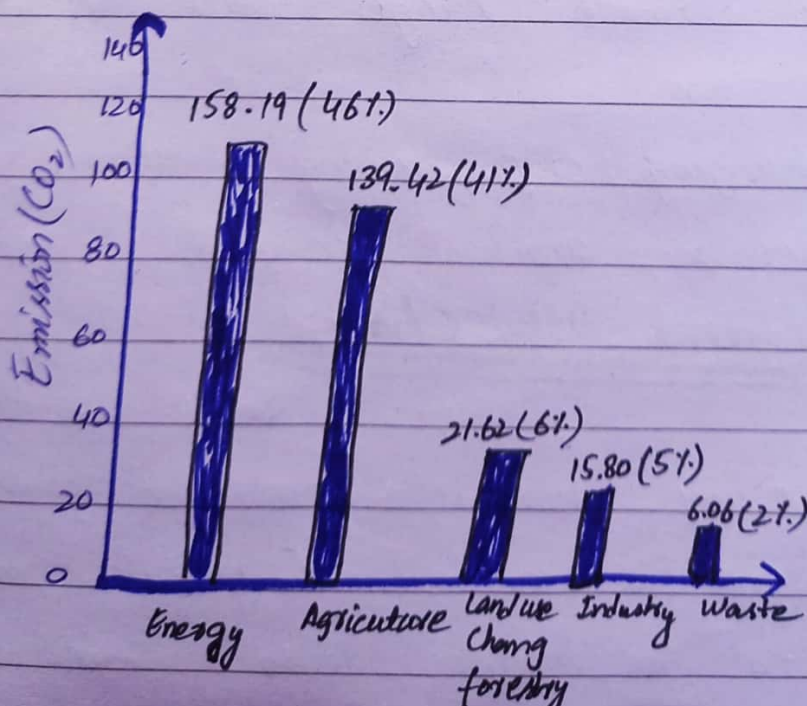
1.3 Industrial pollution:

Manufacturing and Industry produce emissions, mostly from burning fossil fuels to produce energy for making things like cement, Iron, steel, electronics, plastics, clothes and other goods. Mining and other Industrial processes also release gases. manufacturing Industry is one of the largest contributors to greenhouse gas emissions.

(Scientist direct Search)

Pakistan climate change due to Industry less than 1% of the greenhouse gas emissions.

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1.4

→ Agricultural practices:-

Livestock (Methan from belching cattle) and rice cultivation (Methan), as well as fertilizer application (Nitrous oxide) contribute to greenhouse gas emissions from the agricultural sector.

For production of agriculture people use chemicals, pesticides, fertilizers and other products, These are formed by Industry or machine which release CO_2 and enhance temperature. These chemicals effects our life

→ In Pakistan → 60% people depend upon agriculture by direct or Indirect way.

Due to climate change our agriculture depend upon

- Changing crop growing patterns
- Decrease annual rainfall.

1.5

→ Land use Change

Land use change is driven by urbanization, population growth and economic development. Urban areas tend to be hotter than surrounding

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Urban areas due to high concentrations of buildings and material that absorb heat, contributed to increased temperature. Land change occurs due to direct or indirect human intervention.

Lahore is facing imminent threats from rapid land use.

In Pak: In Pakistan (2010-30) CO_2 12% increase. Pakistan agreement in Paris will reduce CO_2 50% less till 2030. German Report watch telling about 1999 Pak is most effected country climate change.

Effects:-

1.1 Increased natural Disaster:-

Pakistan climate change have natural disaster impacts. Pakistan experience more frequent and intense floods, droughts and cyclones. In 2022 floods caused widespread devastation, affecting 30 million

and causing significant economic loss.

Oct 2005 Earthquake in Quetta, KPK

caused death about (40,000-60,000)

Due to climate change many people died

World Bank, Asian Development Bank (Pakistan climate change risk rank 8th in world)

Temperature in Arctic is increased which cause natural disaster.

1.2 Water Scarcity

Climate change caused scarcity of water in Pak, Pakistan rank in water scarcity at 3rd. Pakistan projections indicating 50% decline in water availability by 2030. This poses a threat to agriculture, drinking water supplies, and energy generation.

Our agriculture depends upon three main factors, (water, Sun, Nutrients)

If water scarcity not control our economic, agricultural, population and all living thing will be effected.

1.3 Food Insecurity

Changes in weather patterns and Increased frequency of extreme events are impacting agriculture, leading to reduced crop yields and threatening food security.

- production are shortage
- crops yield most effect.
- organic products included chemicals.

1.4 Health Risks:-

Rising temperatures and changing weather patterns are contributing to heat-related illnesses, Increased air pollution, impacting public health. psychological impacts anxiety, stress.

Disease

- Asthama, Sneezing, Allergy
- Lungs issues, anxiety in young people
- High risk of (breathing, fever, Headach)

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1.5 Glacier Retreat:-

In Pakistan's northern glaciers are melting rapidly due to rising temperatures, leading to potential water shortage and increased flood risk.

Scientist Theory

Increasing temperature Ice sheets melt which causes sea level rise. In Pakistan (1960-2020) 4 millions acre land are included in sea level.

1.5 Economic Stability;

Climate-related disasters are causing damage Infrastructure, loss of money, loss of agricultural production, and Increased Health Care Costs, straining the national budget and hindering economic health.

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Conclusion:-

Improvement climate change

In Pakistan climate change increased temperature causing greenhouse gas, which have many impacts on our social, economic, agricultural sector and mental and other factors of health. So we should reduced all these causing factors increased emissions CO_2 .

Steps

- Used cycling instead of vehicle.
- Don't waste organic products.
- Used wind energy, solar energy.
- Reduced energy consumption.
- Implement tax Government on Industry.
- Tree planting promotes every year.
- Water preserved.
- Reduced the used of electricity.
- International Cooperation.

We can reduced climate change factors by adopting above factors.

In Pakistan our mission reduce

50% decrease CO_2 up 2030.

Elon Musk:-

"Elon Musk (Carbon Capture Technology) Tree convert CO_2 into O_2 and rocket fuel."

World largest Carbon capture plant Implanted in **Iceland** 9 Sep 2021
Annually 4000 tons collect convert O_2 and Rocket fuel.

Bill Gates :-

In 2021 a book publish How to avoid climate disasters

"Zero emission"

CO_2 for it Country depend upon Wind energy, Solar energy Nuclear

Agreement emissions need to be reduced by 45% by 2030 and reach net zero by 2050.