

The threat of Global warming and ways to counter it.

### OUTLINE:

#### 1. Introduction:

Thesis statement: Global warming as a serious threat is the result of exploitative anthropogenic activities to the environment which can be countered by effective and collective policy making of different stakeholders.

#### 2/ A. Brief overview of Global warming

#### 3/ Causes that make Global warming

as a serious threat

a - Deforestation increases the amount of CO<sub>2</sub>

b - More carbon emissions by non-renewable sources of energy

c - Greenhouse effect

d - More emissions by vehicles

e - Overpopulation poses a threat to the globe

#### 4/ Implications of increasing Global warming:

a - Ice extent

b - Sea level changes due to increasing temp

c - Tropical Cyclonic activity

d - Disasters that result in human and economic losses

e - Heatwaves increased in 21<sup>st</sup> century

5/ Ways / Remedies to Counter Global Warming:

- Carbon cuts by promoting renewable sources of energy
- Implementation of Paris agreement in letter and spirit
- Large scale reforestation and afforestation for more carbon sinks
- Population control and awareness campaign of global warming

6/ Conclusion:

## Essay

When we heal the Earth, we heal ourselves.

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(Professor of Environmental Studies and Politics)

Every action has a reaction. Same rule can be applied in the context of Global Warming. Humans in their actions, through deforestation, excessive use of non-renewable energy resources, more carbon emissions through industries and vehicles, have been contributed in polluting environment. Global Warming as a reaction has become a serious threat to the integrity of environment.

that results in melting of glaciers, disasters, hurricanes, rise in sea levels. These implications costs both social and economic losses. Global warming is a serious threat is the result of these exploitative anthropogenic activities to the environment which can be countered by effective and collective policy making of different stakeholders.

Global warming, according to IPCC, is an average and gradual increase in the temperature of the Earth's atmosphere. Temperature has increased upto 1.2 degrees from 1850 till 2022. Global warming has a positive face that balance the temperature of the Earth atmosphere but increasing global warming becomes a threat to the same atmosphere. When the sunlight reaches earth, some light is absorbed by Earth surface while some reflect back in the form of infrared rays which then trapped in Earth's atmosphere by greenhouse gases.

Deforestation means clearing of forests cover or tree plantations in order to accommodate industrial, agricultural or urban use. More

deforestation results in more carbon emissions. Cutting of trees results in less carbon sinks as well as reduction in production of fresh oxygen. Trees also play an important role in cooling of temperature. According to FAO, an estimated 18 million acres (7.3 million hectares) of forest are lost each year, which is roughly the size of the country of Panama.

The whole world is dependent on non-renewable sources of energy for their energy supply. Although different projects are installed and many are under-process but that are insufficient to fulfill energy supply demand. In case of Pakistan which is least emitter of carbon, total installed capacity of electricity is 41000 MW. in which thermal, nuclear and renewables is about 58.8%. Industrial sector consumes 28.2% of electricity which is dependent on hydrocarbons.

Greenhouse effect is another factor that contributes to global warming. Increasing greenhouse gas emissions from human activity act like a blanket wrapped

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around the earth, trapping the sun's heat and raising temperatures.

Greenhouse gases like CO<sub>2</sub>, Methane, Nitrous oxide and CFCs are responsible for greenhouse effect. In case of CO<sub>2</sub>, it constitutes 9 to 26% of GHGs which is produced by burning of fossil fuels, deforestation and respiration of flora and fauna.

Overpopulation demands more consumption of resources. Overpopulation increases cutting of trees for land use, more use of vehicles, demands more energy supply, more industries and the use of hydrocarbons. We must not overburden the resources of the earth. All efforts are incomplete if population control is not taken seriously. According to world Population Prospects 2022; today, the world's population is more than three times larger than it was in the mid-twentieth century. The global human population will reach 8.0 billion in mid-November 2022 from an estimated 2.5 billion people in 1950, adding 1 billion people since 2010 and 2 billion since 1998.

We have discussed some

causes of global warming in our essay. The next section of the essay will discuss the implications caused by global warming.

Global warming has decreased the mass of ice on earth.

Due to increase in temperature, the earth is losing its ice cover at a speedy rate. The Greenland and Antarctica ice sheets have decreased in mass. Data from NASA's Gravity Recovery and Climate Experiments shows that Greenland lost an average of 279 billion tons of ice per year b/w 1993 and 2019, while Antarctica lost about 108 billion tons of ice per year.

~~Sea~~ Sea level has been changed due to increasing temp. The two major causes of global sea level rise are thermal expansion of the oceans (water expands as it warms) and the loss of ice due to increased melting.

Average sea level rose about 8 inches in the past 100 years.

As per IPCC, sea levels will most likely rise b/w 0.95 feet and 3.61 feet by

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the end of this century. Moreover, increase in sea level poses a threat to island countries of the world. The foremost example is of the danger posed to Maldives. Situated in the Indian Ocean, every part of Maldives land lies only one meter above the sea level. Scientists are estimating that if the global temperature continues to rise, the rising sea level will eventually engulf the entire island.

Increase in temperature and changing weather patterns cause disasters like floods, storms and cyclones. Floods caused by increase in melting of glaciers and unprecedented rain patterns.

The recent example is 2022 floods in Pakistan which added \$16bn loss to country's economy and has taken the lives of more than 1700 people, according to World Bank. Similarly, Cyclones are related to change in temp of oceans. The IPCC project that tropical cyclones will become more intense over the 21st century, with higher wind speeds and heavier rains. The most

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recent example is Cyclone Biparjoy formed over Arabian Sea in June 2022.

Heatwaves has been increased in 21<sup>st</sup> century due to increase in world temperature. When people are exposed to extreme heat, they can suffer from deadly heat-related illness such as heatstroke. In May 2018, a heatwave killed 65 people in Karachi. Last year, in 2022, Pakistan along with India faced a deadly heatwave, resulted in 65 deaths in Pakistan and 25 deaths in India. In 2015, Karachi heatwave killed more than 1200 people.

The causes and implications of Global warming has discussed in the essay. The next section will throw light on the recommendations or ways to counter increasing temperature of the globe.

The world is dependent on non-renewable sources of energy to fulfill its energy demand. Shifting from non-renewable sources such as hydro-carbons to renewable sources such



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as solar, wind, & hydel will definitely counter the increasing temperature. Using renewable sources are sustainable methods that do not pollute the environment. Denmark, for instance, is utilizing its natural wind corridors to generate energy from wind. Similarly, Qaid-e-Azam solar park is installed in Pakistan which generated 1000 MW of electricity. In addition to this, conservation of ~~power~~ energy through power saving technology in appliances should be installed. Inverter Devices that use invertors should be produced more.

Implementing the Paris Climate Award in letter and spirit is another key step in fighting global warming. The agreement was signed by one hundred and ninety countries and aims to limit the emissions of carbon dioxide to bring the global temp down. The agreement demands countries to provide their carbon cuts target and plans. The agreement also agrees on the review of carbon cuts by countries every five years. The agreement demands from the developed countries to invest in

developing countries in order to achieve the goals of the agreement. The developed countries should contribute generously in the UN climate fund to bring about the technological changes for limiting the global temperature.

The world also needs to kick start a major global reforestation and afforestation campaign. Trees should be planted in areas destroyed by deforestation and in areas where there was no forest cover. Trees and greenery have been termed as major carbon sinks. They soak in carbon emissions & prevent the warming of the globe. Hence, countries should plant more trees. For every tree cut, multiple trees must be installed. For this purpose, the example of Bonn Challenge is worth mentioning. The Bonn Challenge is a global goal to bring 150 million hectares of degraded land into restoration by 2020 & 350 million hectares by 2030. Countries should implement the goals of Bonn Challenge in their respective and

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should run projects that can help in achieving the goals of SDG challenge. Similarly, countries should start projects like Billion tree tsunami in Pakistan which will definitely help in achieving a green and carbon free world.

Lastly, it is necessary for the world to control population in order to boost global efforts to rid the world of the menace of climate change. All the efforts are futile if the growing population continuously pollute the environment. For this purpose, environmental education and campaigns can make a change. Media should play its role to educate people regarding the threat of climate change. Different campaigns should be carried out by people in every country to raise this issue. Media should give priority to its coverage. It will definitely bring a change, if people get aware of the consequences of global warming. Unfortunately, majority of people is unaware of the threat of climate change.

To conclude, it can safely be stated that global warming is a major threat to humanity. The world is facing economic as well as human losses because of climate change disasters. In fact, it has the potential to destroy the entire planet. The situation warrants immediate attention on part of stakeholders. It is an urgent need of the hour for the global community to make carbon cuts by implementing the Paris Climate Accord, reforestation, control population and make a transition towards renewable sources of energy. Doing so would certainly be a welcome step in terms of tackling climate change.