

Global Warming: Causes, Impacts and solutions.

Thesis Statement:

Global warming has posed serious threats to life on ^{the} earth and under sea due to excessive use of fossil fuels, deforestation, during agricultural production and anthropogenic activities which lead to rise in temperature, climate change, increased threats to human life and severe impacts on agricultural practices and ecosystems, therefore, to save planet need of hour is switching over to renewable energy resources, ensuring massive forestation, inculcating awareness among farmers and introduction of technological interventions to reduce carbon emissions.

Outline:

- I. Introduction
- II. Causes of global warming
 - a. Excessive use of fossil fuels
 1. In industries which lead to global warming.

ii. In vehicles and transport which contributes in global warming.

iii. Domestic usage of fossil fuels for cooking and heating

iv. For generating electricity

b. Massive deforestation

i. Wood required for industry

ii. Domestic usage of wood

iii. Increase in demand for real estate societies leads to deforestation

iv. Need of wood for construction work has accelerated deforestation

c. Agricultural activities Carbon Emissions

i. Agricultural machines which are operated on fossil fuels

ii. Burning of crops residue by farmers.

iii. Use of fertilizers, pesticides and other chemicals for growing crops.

d. Anthropogenic activities have augmented global warming

i. ^{increasing} ~~the~~ ^{due to} stock overconsumption by humans

ii. Increase of demand of land for housing and agriculture.

- iii. Overdependence on appliances which use chlorofluorocarbons (CFCs).

III Impacts of global warming

a. Rise in temperature

- i. Broke the record of nearly eight decades due to hotness of weather
- ii. Arctic temperature is twice more warm than pre-industrial level
- iii. Global boiling has reached said by United Nations secretary General.

b. Accelerated climate change activities.

- i. melting of glaciers and ice cause floods
- ii. Rising of sea level ~~is~~ threat to coastal area
- iii. Increased intensity of natural disasters which impact both humans and fishes
- iv. Worsening droughts which cause food insecurity

c. Posed threat to human health

- i. Scorching heatwaves cause skin burning
- ii. Respiratory disease due to smog

Day _____
iii. Vector borne disease threats have increased

d. Effected on agriculture crop and ecosystem.

i. Harsh weather has increased

Challenges to food security

ii. Weather variations have decreased

agriculture production

iii. Increased attacks of disease on crops

iv. Threat of extinction of various species has accelerated

IV Solutions to global warming

a. Switching over to renewable energy resources

i. Solar energy which decreases dependency on burning fossil fuels

ii. Wind energy that is safer from coal burning for energy generation

iii. Environmental friendly energy generation through hydro power

b. Ensuring massive forestation

i. Mass plantation of trees for maintaining oxygen cycle

ii. ^{Ensure} Strict laws for those who

support deforestation

- iii. Promoting vertical housing scheme system to avoid deforestation.

c. Inculcating awareness among farmers

- i. Using scientific methods for disposal of crops residue by farmers

- ii. For growing crops use of organic manure

- iii. Sprinkling of eco-friendly pesticides that use natural or low toxicity material

d. Introducing technological inventions

- i. Electrification of public transport which reduces smoke contribution in air

- ii. Energy generation through nuclear technology.

- iii. Emphasizing use of technologies in agriculture sector.

Conclusion

It was the day of Friday, on 28th July 2023, when United Nations secretary general António Guterres said that "The hottest days of July which broke record of eight decades. So, the era of global warming has ended, and the era of global boiling has arrived."

Global warming is the long term heating of earth's surface since the age of industrialization. It has increased 1.2 degree celsius of earth's temperature since 1850. It is due to trapping of sun's rays on the earth's atmosphere. It was the Stockholm Conference which highlighted issue of global warming and organized platform for ^{addressing} climate change and climate justice issues in 1972.

Later it in 1992, Earth Summit took place led to ^{formation of} international climate change organization United Nations Framework Convention on Climate Change (UNFCCC). Intergovernmental Panel on Climate Change (IPCC) decides meeting points

for UNFCCC which fixes obligations for both developed and developing countries to reduce their carbon emissions. In 1997 Kyoto protocol was initiated in Japan. It provided common but differentiated responsibilities (CBDR) to countries to cut down burning of fossil fuels. In 2015 Paris climate deal has occurred. which This deal provides nationally determined contributions (NDC) to both developing and developed nations of the world. The urgency of global warming report which has recently released by world meteorological organization (WMO) reveals that July 2023 has broken record of 1944 the warmest day. Climate change which is global warming has spreaded fear and created chaos in the world. It is in the form of droughts, heatwaves, storms, floods, wild fires and harsh weather in every corner of the world. So, it is clear that global Warming has posed serious threat to life on the earth and under the

Day _____

see due to excessive use of fossil fuels, massive deforestation, during agricultural production and anthropogenic activities which lead to rise in temperature, climate change, increase threats to human life and severe impacts on agriculture practices and ecosystem, therefore, to save planet need of the hour is switching over to renewable energy resources, ensuring massive forestation, inculcating awareness among farmers and introducing of technological tools which deduce carbon emissions.

There are numerous factors which are responsible for global warming. The world is powered by burning of fossil fuels. The energy generated by using fossil fuels is 78.4 percent (Conference of Parties-26th Report). Moreover, industrial use of fossil fuel is 16.7 percent. This contributes huge in global warming by emitting of carbon and smoke in the atmosphere. Further more,

Usage of vehicles and transport of goods share 30.5 percent of fossil fuels consumption. (World Bank Sustainable development article: Christophe de Grouvello). In addition to this, residential and commercial use of fossil fuels for heating and cooking is 29.8 percent (United Nations Environment report 2022: UN Fact book).

Further, Asian countries powered their houses and factories, industries by using fossil fuels for electricity generation which accounts 52% of their electricity (International renewable energy agency report 2023). From above contribution of fossil fuels to global warming is high. This leads to warming of globe. Therefore, massive use of fossil fuels share its portion to global warming.

Moreover, massive and large scale deforestation has led the warmest globe. The deforestation is done due to increasing demand of wood in the industry. Wood

as major driver of deforestation contributes 16 percent of total deforestation (National Geography Society report 2022). Moreover, domestic usage of wood due to non availability of gas has increased wood demand which leads to deforestation. Further more, the biggest cause of the deforestation is increasing demand of real estate business. This business has swollen forest due to increase demand of housing societies. Food and agriculture organization report 35 percent of deforestation has increased in the world. Moreover, due to increase in demand of timber wood in construction industry deforestation is accelerated. Due to increasing in demand of wood in everywhere deforestation is happening fast. This leads to harsh sun rays direct to ground. So, deforestation is major driver for increasing global temperature and in warming earth's atmosphere.

Further, agriculture activities has increased carbon emissions which

enhance global temperature. Agriculture machines which are used for harvesting agriculture are operated on fossil fuels. These machines emit carbon dioxide smoke which is mixed into atmosphere and traps sun's rays which are emitted to earth and not allowing them to go back. In addition to this, burning of crops residue alone contribute 50 percent of carbon during their seasons (European Union: Climate Change report). Further, the use of pesticides and fertilizers which contribute significantly to greenhouse gas emissions.

Ammonia manufacturing today contributes between 1 and 2 percent of world-wide carbon dioxide emissions (Institute for industrial productivity, industrial efficiency technology database article 2022). From above all, it is clear that anthropogenic agriculture activities emit carbon emissions which lead to global warming.

Last but not least factor which has ^{shared} ~~played~~ a role in global warming is anthropogenic activities. Anthropogenic

activities are those activities which are derived from human activities. Humans have increased consumption of resources. One of them is, they have increased consumption of meat related products which are obtained by animals. This has increased demands of animals which require fodder that is obtained from land. So, land requirement is increased, this leads to deforestation. Furthermore, 14.5 percent of all human caused greenhouse gas emissions are attributable to livestock farming. (Food and agriculture organization data 2022). In addition to this deforestation for housing is major contribution in global warming. USA United states of America alone share deforestation approximately 175,000 acres per year or 36 million trees per year (Madina Galle, ecologist engineer, article 2020 named Urban deforestation). Further more overdependence of human on appliances which are operated on Chlorofluro carbon share 17 percent of

total greenhouse gas (Energy and global warming report: Techie Scientist). By analyzing above facts, it is clear that anthropogenic activities are involved in contributing global warming.

As every problem creates some ~~complication~~ ^{significance}, so, global warming also has some horrific and disastrous. One of the biggest impact of global warming is rise in temperature. The last three weeks of July 2023 has broken record of highest temperature which was set in 1944. UN chief ^{has} called these days boiling days. The multihazard risk has forecast to increase to 85 percent of region's population under 1.5 degree celsius and 87 percent under 2 degree celsius warming. (Multi hazard risk report 2023) Moreover, the melting of arctic ice is accelerated due to increase of temperature twice as compared to pre-industrial era. The global temperature is as much increased that UN chief has called it boiling days.

arrived. Moreover, global surface temperature has increased faster since 1970 than in any other 50 years period over at least last 2000 years. (Intergovernmental panel on Climate Change (IPCC): the sixth assessment report). From about it is clear that earth is warming more faster than expectation due to global warming. Therefore, rising temperature is main impact of global warming.

Moreover, global warming has accelerated climate change. Due to climate change, the speed of melting of glaciers and ice is twice accelerated. 95 percent of the oldest and thickest ice in the Arctic is already gone. (Worldwide life report 2023). Furthermore, due to melting of glaciers caused by climate change, the rising of sea level has posed a serious threat to small island nations and coastal areas of the countries. Rising sea level has inundated low lying wetlands and

dry land, and has eroded shorelines in Asia, Africa and North America (United States of America environmental protection agency findings 2022). In addition to this, climate change has increased intensity of natural disasters which impacts on the both humans life and life below sea. Higher temperature due to global warming is associated with more disasters caused by droughts, wild fires, heatwaves, tropical cyclones and other storms (International monetary fund report on climate change). From given data, it is proven that the climate change ~~got~~ accelerated due to global warming.

Furthermore, global warming has posed a serious threat to human health. Climate change is the single biggest threat facing humanity due to harming health through air pollution, diseases, extreme weather events. Every year, environmental factors take the lives of around 13 million people (world health organization report). scorching

heatwaves cause skin burning. Moreover, increased intensity of heatwaves has been linked to cardiovascular and respiratory diseases (Aljazeera article: July 2023). Furthermore, respiratory diseases caused due to smog and harsh weather. In addition to this, the intensity of vector borne disease is increased due to warm temperature (WHO study). By analyzing above climate change is the single biggest threat to humanity. Therefore, global warming has led to increased in threats to human health.

Last but not least, global warming has impacted on agricultural production and ecosystem of the universe. Due to harsh weather food production and harvesting is decreased. This leads to increased in food insecurity. It is due to global warming which is influencing weather patterns, causing heatwaves, heavy rainfall, and droughts. Due to these 30 million people in low income countries fall in food insecurity (World Bank 2022).

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report). Moreover, weather variation has declined yielding capacity of crops. It has also increased attacks of insects and flies on crops. Pakistan's wheat yield production is expected to decline by 16 percent by 2050 due to global warming (DAWN newspaper on 25 June 2023). Furthermore, threats of extinction of various species are increased. Climate change has currently affected at least 10,967 species and increasing the likelihood of their extinction (International Union for Conservation of Nature red list). So, from above it is evident that global warming has affected agriculture yielding capacity and accelerated extinction of species.

As every problem has some solutions, so global warming also has solutions. The biggest need of hour to cope global warming is switching over renewable energy sources. Renewable energy is climate friendly energy source which is

available in various forms. It is key to safer, cleaner and sustainable world. Sunlight, wind and water are such sources. Nearly 30 percent of the world's electricity currently comes from renewable sources of energy (International Energy Agency report 2022). The biggest share is hydropower, followed by solar and wind and geothermal. But, the world needs to move 100 percent in renewable as Iceland generates nearly 100 percent electricity from renewable sources (United Nations Environment Programme report). This will lead to end of burning of fossil fuels which help in cooling global temperature. Because, major contributor of global warming is burning of fossil fuels. When these fossil fuels burning will end. Global warming issue will be resolved. Moreover, urgency of situation to cope global warming is ensuring massive forestation. Forestation is needed due to nature of trees which capture carbon dioxide from the

atmosphere and stores carbon in living biomass, dead organism matter and soils, making forestation a negative emission method. Moreover, forestation saves from natural calamities like floods, heavy rains and harsh temperature. Moreover, strict laws must be made for those who are involved in deforestation activities. Furthermore, vertical housing society needs to promote. This not only saves land but also protects land from deforestation. People must abandon that luxury life which is obtained due to cutting of trees. So, need of the hour is plantation of massive trees and supporting projects like ten billion tsunami trees. So, this way will be fruitful to cope climate and global warming crisis.

In addition to this, inculcating awareness among farmers is way out to deal global warming. Usage of scientific methods for disposal of crops residue must be taught to farmers instead of burning. It not only helps in dealing with global warming but also increases soil surface and reduces soil erosion of land. Moreover, farmers must be known to

usage of organic manure and sprinkling of eco friendly pesticides which use natural or low toxicity material. This can be done through different workshops and training organization for farmers. This not only helps from global warming but also leads to increase in crop yielding. Therefore, it is panacea with dual benefits which must be adopted for controlling effects of global warming. Last but not least, to

cope with global warming is introduction of technological inventions to masses.

Electric vehicles usage is one of them. It reduces smoke contribution which is caused by burning of fossil fuels. Moreover, energy generation by using nuclear technology which lowers down burning of coal and other fossil fuels. Further more, usage of hybrid technologies in agriculture sector will help in lowering down carbon contribution and also will contribute in more production.

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Therefore, it is easy way to deal with global warming crisis.

To sum up, warmer days are ahead. It is because of extremely hot days are warming twice as fast as average due to global warming which is mainly caused due to burning of fossil fuels. Many summit and organization are held, but, they are still unable to cope global warming menace. From Kyoto protocol to Paris agreement are unable to solve global warming crisis which are dated back to industrial revolution.

July month of year 2023 has broken record and has become ^{the} hottest day after nearly 8-10 decade. So, global warming has posed serious threats to life on the earth and under the sea due to excessive use of fossil fuels, deforestation, during agricultural production and anthropogenic activities which lead to rise in temperature, climate

Change, increased threats to human life and severe impacts on agricultural practices and on ecosystems, therefore, to save planet the need of the hour is switching over renewable energy resources, ensuring massive plantation, inculcating awareness among farmers and introduction of technological interventions to reduce carbon emissions.