

The Impact of Global Warming on Environment

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Abstract

The environment of the earth has been changing very rapidly since the last century due to the continuous increase in the population of human beings and their activities. Today, scientists are of the unanimous opinion that now man has reached at that stage where he can change worldwide seasonal pattern. The main causes of global changes are extensive exploitation of natural resources by man, depletion of fossil fuel and the change in land utilization on a large scale. The increase in the quantity of carbon dioxide in the environment and in green house gases by man's activities, the depletion of ozone layer of stratosphere etc. are the main causes responsible for the global environmental changes. The changes in the environment at the global level produce effects on water resources, biodiversity, food quality and human health. There has been increase in the average temperature of the earth due to the increase in the concentration of greenhouse gases. As a result in temperature not only the rate of respiration increases in the plants but also there is increase in the number of various types of diseases and pests. If something is not done in time to check them, we would lose everything in future and will become helpless to do anything even if we would wish to do.

Keywords: Biodiversity, Global warming, Environment, Greenhouse, Impact, Natural resources

I. Introduction

Earth is composed of interlinked spherical layers of air, water, soil, and minerals. There is also a layer in the atmosphere that extends 17 km above sea level. Above that is the troposphere layer, which is made up primarily of gases such as oxygen, hydrogen, carbon dioxide, nitrogen, and others. These layers are located between 17 and 48 km. It is a stratospheric layer. It contains ozone, which protects the world from the sun's damaging UV radiation, while the hydrosphere is another layer that contains the earth's water. The biosphere is the earth's life zone, and the soil has various strata. Biosphere is a thin film on the surface of an aeroplane that reaches 5 to 10 km above sea level and a few meters into the soil.

The term 'environment' is commonly used and has numerous definitions, meanings, and interpretations. What exactly does the term 'environment' mean? For some individuals, the term 'environment' simply implies 'nature', which refers to the natural landscape and all of its non-human aspects, qualities, and processes. To those people, the environment is frequently associated with ideas of wildness and pure landscapes that have not been impacted - or very little influenced - by human activities.

The sun is a primary source of energy for the earth. Every year, Earth receives 1024 calories of energy from the sun, of which approximately half is reflected or seen by the atmosphere and half reaches the earth's surface. 20 percent of sunrays are scattered and reflected by clouds, 12 percent are absorbed by the atmosphere and clouds, and 4 percent are scattered from the atmosphere and reflected by the earth's surface. After many years, the earth's surface becomes increasingly hot, as does the atmospheric temperature. In the background, we see that Svante Arrhenius (1859-1927) was a Swedish physicist who initially claimed in 1896 that fossil fuel burning would eventually result in increased global warming. However, for a long period, this topic was forgotten. Gilbert Plass's work on infrared spectroscopy in 1955 revealed that higher levels of carbon dioxide resulted in greater absorption of infrared radiation, and that water vapours absorbed a completely different sort of radiation than carbon dioxide, leading him to believe that the world was warming. However, in 1960, Charles Keeling employed a contemporary technology for concentrating atmospheric carbon dioxide in Antarctica and Mauna Loa. These treatments have become major symbols of global warming. Stephan Schneider initially predicted global warming in 1976.

During a lunar trip to the moon on Apollo 14 in 1971, Edgar Mitchell captured a view of Earth filled with ecstasy and sent it to the NASA ground station in Houston. It resembles a sparkling blue and white diamond laced with whirling white, like a little pearl amid a thick sea of mystery. After three decades, Mitchell returned with special equipment to invite him to glimpse the invisible gases of the earth's atmosphere. His feelings would have been very different. Instead of sparkling blue and white jewels, he noticed a massive puncture in the protective barrier that sheltered Antarctica and North America, making it harmful to Earth's survival. Stephan Schneider predicted that these would have an effect on global warming back in 1976. Global

warming has caused the average temperature to rise at the quickest rate in recorded history during the last 50 years, and scientists believe the trend is now accelerating.

Changes in average temperature range from 1.8 to 4 °C for biological communities, and we may get a feel of what such temperature change might signify by comparing it to climate variance linked with elimination. A shift in average temperature of 2.9 °C has an influence on the entire global ecosystem. Then the entire world came together to discuss these issues and work on them, as well as their causes and consequences. Global warming is also known as the greenhouse gas effect. The effects of global warming on the water include rising sea levels, increased human mortality, conflict with wildlife, flora, and rainfall.

After 1950 4.2 million hectare forest destroyed since 1980 every year about 1.5 million hectare forest is either destroyed or converted into agriculture land or used for other purpose. Climate change effect directly occurs on earth life. It is infused by air current, ocean current, snow cover and on large water bodies. Human and environment is very close relationship from period of human history. Environment strongly disfurnished lives and activities of people. They are very close to forest and natural sources for all needs like shelter, food, clothes and medicine like different needs. Forest are the dominant terrestrial ecosystem of earth and are distributed across the globe. The first known forest of earth arises in the late Devonian approximately 350 million years ago with evolution of archaopteryx. Late Latin phrase 'forests' meaning outer wood, other term is latinization of fromkish word for forest wood country and silva means wood land.

Objectives-

- To study the impact of global warming on environment
- To give awareness about the global warming
- To know the effect of environment change
- To study the issues of global warming
- To focus the movement related global warming

Hypothesis-

- Global warming is man made problem related to environment.
- Global warming is effect of human being modern life style and nature over use.

Importance of study-

This study is very important to future of human beings and living world. Global warming is burning subject last decades in all over world. 1.8 to 4 °C changes in average temperature change occur during last few years. It is harmful to biological communities and we get sense of what such temperature change might mean by comparing it to climate variation associated with elimination in global warming. Form the increase in green house gases has become a major scientific and political issue during the past decades. Human in modern style use more vehicle which burn more fuel and increase in carbon dioxide level. Chlorofluorocarbon is also increase global warming it is liquid used coolant in refrigerator and air conditioners. It is also used in disposal products like cups and plates it is solvent show effect on ozone layer. All these awareness in this research is useful to society.

Analysis And Result-

M K. Ghandhi says that 'nature has for every man's need but for no one's greed. The earth is first becoming unsafe for human habitation the impact of deforestation on loss of biodiversity, increasing population, industrialization, need of land for development of expanding cities has leads to cut down forest selfishly.'

But it shows many effects like Decrease rainfall, Global warming, Frequency extension drought, Possibility severe flood, Expansions of deserts, Lowering of underground water tables, Soil degradation, Soil erosion, Loss of fertile soil, Destruction of natural habitat, Destruction of an important sink for pollutants of this environment, Lack of fuel wood, Loss of medicinal plants, Disturbance of forest ecosystem and many economic losses. Trees are part of water cycle its roots prevent soil erosion; the global forest cover has shrunk to half its area in the last 11,000 years. Its alarming rate has been cause of constant worry of the environmentalists all over the world. Deforestation also global warming agent climate change creates global problem of earth temperature is warmer than average temperature it melts glaciers and polar ice caps and raising sea level putting coastal areas at greater risk of flooding pollution also one of major problem related to deforestation. The global problem industrialization has been hallmark of human progress in the world. These all problems affect environment and all life of earth. On 10 December 1948 United Nations general assembly adopted Universal declaration of human rights but today deforestation made world's major problem. For the facing these problem environmental awareness is necessary. So every person of earth save environment and save life for well future of all humanbeings.

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Atmosphere consist different gases combination like oxygen, hydrogen, nitrogen, carbon dioxide and other gases. Global warming is related to carbon dioxide concentration in air it rises by above 25 percentages in past century. Its effect results of extra burning of fossil fuel like petroleum, natural gas and coal in order to meet the energy need. In global warming share of CO₂ is 50 percentage other contribution is methane 19 percentage, chlorofluorocarbon is 17 percentage, ozone 08 percentage, nitrous oxide 04 percentage and water vapors 02 percentage. One molecule of CF₂Cl₂ has show global warming effect as 25000 CO₂ molecules. Green house gases that gases with is atmospheric that absorb and emits radiant energy combustion the thermal infrared rays. This process is fundamental causes of green house effect.

Forest is Latin word desired form forsis meaning outside. It is renewable natural recourses, which play significant role in maintains of ecological balance. Forest are important sources of timber, fuel woods it also gives canes, resins, honey and lac which are of economic values to the tribes. The forest is serving as repositories of the wild status of cultivable crops and medicinal plants. Scientific studies have revealed that deforestation in particular the destruction of humid tropical forest in an entrance problem with local, regions and global consequences. It also causes climatologically changes it adversely affects the heat balance, water budgets and ecological balance on the variety of scales. Besides the change in radiation balance, deforestation also brings dramatic change in individual energy balance. It also associated with dust loading changes, it leads to increased runoff, decreased soil moisture storage and increased soil desiccation periodic dust storms increasing dust veil effect reduce in coming solar radiation and accentuates, suffer cooling, contact chilling, in the lower troposphere increase anticyclone subsidence and aridity.

In world industrial revolution occurs near about 1750 at that time of CO₂ produced 280ppm but in 2017 its concentration is 406ppm in air so that industry having a major cause of global warming. From 1970 to 2004 gases increase rate 1.6% per year of CO₂ from fossil fuel rate is 1.9% per year. In air of CO₂ from industry and fossil fuel evolved 65% nitrous oxide 06% F gases 02% methane 16% of CO₂ from forestry and use 11% other energy 10% electrical and heat production 25% industry 21% transportation 14% building 06% agricultural forestry and other land use 24% green gases emitted. In 2014 of CO₂ emission from fossil fuel combustion and some industrial process in world China contribute 30% Europe 09%, Russian federation 05%, United States 15%, India 07%, Japan 04% and other countries 30%. Green house gases discharges by some sources is as follows.

Table: 1 Green house gases discharges by some sources

SR.NO.	Gas	Sources	Percentage
01	CO ₂	Burning of fossil fuel	81%
		Destruction of forest	17%
		Cement	02%
02	Methane	Rice cultivation	30%
		Domestic animals	20%
		Burning of vegetation	17%
		Coal mines	07%
		Natural gases	12%
		Land fills	12%
03	Nitrous oxide	Burning of fossil fuel	43%
		Use of fertilizer	25%
		Burning of vegetation	25%
		Cultivated lands	07%
04	Chlorofluorocarbon	Industrial activity	100%

Also the CO₂ emission data per year is increase by increasing number of industry it is as follows

Table: 3 CO₂ Emission data-

Sr. No.	Year	CO ₂ emission (million metric tons)
01	1751	11
02	1781	18
03	1811	40
04	1841	125
05	1871	572
06	1901	2823
07	1931	3444
08	1961	3453
09	1991	22592
10	2001	25553

(Source- Statics 2013)

It shows that the CO₂ emission is increase day by day. In these increase of CO₂ emission following countries contributes their share in world.

Table: 4 Country wise CO₂ Emission data

Sr.No.	Country	CO ₂ emission share
01	China	28.21
02	US	15.99
03	India	06.24
04	Russia	04.53
05	Japan	03.67
06	Germany	02.23
07	Korea	01.75
08	Irena	01.72
09	Canada	01.71
10	Saudi Arabia	01.56

(Source- Statics 2013)

These increase of CO₂ effect Arctic sea and Antarctica ice area melting of ice is increase in September months it affect many area in world.

When carbon (CO₂ or carbon dioxide) and other heat-trapping emissions are released into the air, they act like a blanket, holding heat in our atmosphere and warming the planet. Overloading our atmosphere with carbon has far-reaching effects for people all around the world, including rising sea levels, increasing wildfires, more extreme weather, deadly heat waves, and more severe droughts. The primary cause of global warming is human activity that releases carbon into the atmosphere, most significantly the burning of fossil fuels to drive cars, generate electricity, and operate our homes and businesses.

Table: 5 CO₂ effect on ice melting

Sr.No.	Year	Ice melting (million sq.km)
01	2007	4.17
02	2008	4.59
03	2009	5.13
04	2010	4.63
05	2011	4.33
06	2012	3.41
07	2013	05.1
08	2014	5.02
09	2015	4.41
10	2016	4.14

Like CO₂ CFC gas also effective for global warming it is generally known as ferrous synthesized in 1930. It shows different forms like CFC13 (Ferron-11), CF2Cl2 (Ferron-12), C2F2Cl3 (Ferron-113) and C2F2Cl2 (Ferron-114) because of these compound are readily liquefied relatively inert non toxic non combustion and volatile they used as coolant in refrigerator and air conditioner large quality of these gas used as solvent to clean newly soldered electronic circuits. In atmosphere CFC12 occurs and its atmospheric life is 139 years, CFC11 shows its atmospheric life is 76 years. Thus CFC113 has its atmospheric life is 92 years, CCl3 atmospheric life is 67 years and Methyl chloroform has its atmospheric life is eight years.

These gases evolved from different sources and its concentration shows in depletion refrigeration fomes evolved 45%, Air conditioner 26% Fame solvent 12% fire echinquishes 04%. Methane also one green house gas show effect of global warming it evolved from agricultural field, natural gas and animal. Other nitrous oxide gas evolved from vehicles these all affect to environment and human being so that all rules following social awareness is necessary for future of earth and human life.

II. Conclusion

Impact of global warming is big problem of world it shows impact overall world. It also show impact on forest, forest type change, loss of forest, loss of forest habits and also extension of some species of plant and animal occurs. It also effect on water resource, decrease in water quality, prolonged drought occurred at some places also more flood at other place occurs. Global warming also shows impact on human being by death of worms shortage of food and water. Agriculture impact show change in crops more pest and disease increase. At costal area a flood occurs so city and islands affected mixing of salty water with fresh water occur. Other climate changes also occurs prolonged heat directly affected on living world. So everyone help to decrease the global warming and his effect is necessary.

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