

Factors of Global Warming and its Effects on the Environment

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ABSTRACT

Scientists are concerned that the Earth has warmed unnaturally by 0.74 degrees Celsius during the last century. A number of academics feel that the last few decades of the 20th century were among the hottest in the last 400 years. Reports indicate that from 1990 to 2007, 10 of the world's warmest years were recorded, the greatest level in the last 150 years. This problem appears to be a direct result of industrial activity, which has made a significant impact to global warming. There has been a rise in the Earth's temperature and ocean surface due to global warming.

Keywords- global warming, environment, climate change, greenhouse gases

I. INTRODUCTION

Because climate is such a crucial role in determining the ecosystem's traits, even modest shifts can have a significant impact on its numerous components. Human activities and the industrialization of countries are causing an increase in greenhouse gases, which in turn is causing global temperatures to rise and an increase in natural disasters. One of the most pressing environmental issues of the last two decades has been global warming and climate change driven by human activity. Climate change is a long-term indicator of a region's current state. The Earth's 4.5 billion-year history has seen a wide range of climates. In this study, a review of authoritative scientific books, scientific publications, and authoritative internet sites is used to identify distinct elements that contribute to global warming. The usage of greenhouse gases, which causes the ozone layer to be depleted and affects many ecosystem components, is one of the biggest environmental challenges and the primary cause of heating and climate change discussion.

1.1 Climate Change

Average outward illness of the Earth has been greater than before by 1 degree Celsius since 1880, according to NASA data. However, the temperature rose by 0.15 degrees Celsius between 1750 and 1880. To put it another way, global warming is certainly being driven by human activities. Long term intensifications in Earth's average illness are a result of human-caused global warming. In the early twentieth century, after the Industrial Revolution, the phenomena that we now call Global Warming began. It has escalated since the 1970s and continues to this day. You may believe that a single degree Celsius is little, but NASA is referring to the average temperature of the entire planet.

1.2 Warming of the Earth's Surface

The earth's rise has reached a tipping point due to human activity, which has removed it from natural regulation. The sun is constantly illuminating and energising our planet (through solar radiation). Normally, a portion of this energy is dispersed across the surrounding space. As a result of these pollutants, some heat is trapped in Earth's atmosphere, allowing it to progressively warm. The Greenhouse Effect is the name given to this phenomena. Essentially, the premise is that the greenhouse effect is a natural phenomenon that regulates our planet's temperature and allows us to exist on it.

There is widespread agreement among scientists that this phenomenon and the harm it does to human life may be curbed by raising public awareness, ensuring efficient fuel and energy usage, protecting forests, reforestation, and the use of clean fossil fuel alternatives like wind and solar power. More than 190 countries signed an agreement at the Cancun Climate Summit of 2010 in Mexico to establish a \$ 100 billion fund to aid developing countries combat global warming. Since 1880, temperature observations have been taking place on the Earth's surface. Severe drought is blamed on global warming in 2100. Theories abound concerning global warming and its connection to greenhouse gases, while others point to mechanisms like volcanoes, geothermal energy, and solar activity. The frequency of hot and cold episodes throughout life is cited by these scientists as support for their claims.

II. REASON OF GLOBAL WARMING

In the opinion of the Transnational Panel on Climate Change, human causes are the most likely cause of global climate change. It explains why this is happening. Scientists have drawn this result after studying samples taken from plants,

glaciers, and other natural resources. They feel this study proves beyond a doubt that human actions have an impact on the climate. Solar activity and radiation may be to blame for the rise in global temperatures in recent years, according to some experts. Carbon dioxide and other greenhouse gases are rising at an insignificant rate, according to the environmental group. Human activity has unquestionably contributed to what is now known as global warming.

One thing is certain: humankind's constant meddling and alteration of the natural world has brought about enormous change. However, this is not the first time the blue planet has grown extremely hot in the history of human habitation. Deforestation and forest fires are other contributing factors to climate change. In truth, plants take carbon dioxide and release it as a byproduct of photosynthesis. This means that the intensification into the carbon dioxide on to the atmosphere and global warming can be attributed to forest fires. From the core of our globe to the edge of space, there are several reasons why the Earth experiences unusually hot or cold periods. In addition to periods of high solar activity, eruptions of volcanoes, earth movement and the rotation of ocean salinity, comets and global warming are all natural causes of global warming. Reflection and absorption of solar radiation are both processes that take place on Earth.

During this procedure, the light's wavelength alters. Radiation from the sun can be absorbed by the gases in mountain cedar fruit. The majority of this radiation is in the Marwai range of purple. Unlike other gases, greenhouse gas molecules are able to absorb more red light. As the molecule moves and gains energy, it absorbs more energy from the surrounding environment. It's as if we've blanketed the ground with a blanket when this happens in vast numbers. There is a rise in the entire area of the Earth. Known as the greenhouse effect, these gases are also known as greenhouse pollutants.

III. GREENHOUSE GAS EFFECTS

According to studies, the increase in the full of character concentrations of greenhouse gases should be a contributing factor to the planet's warming trend. Reflection and absorption of solar radiation are both processes that take place on Earth. During this procedure, the light's wavelength alters. Radiation from the sun can be absorbed by the gases in mountain cedar fruit. The majority of this radiation is in the Marwai range of purple. Unlike other gases, greenhouse gas molecules are able to absorb more red light. As the molecule moves and gains energy, it absorbs more energy from the surrounding environment. It's as if we've blanketed the ground with a blanket when this happens in vast numbers. There is a rise in the entire area of the Earth. Known as the greenhouse effect, these gases are also known as greenhouse pollutants.

livestock used in industrial processes

One-eighth of all pollutants and greenhouse gas emissions are attributed to livestock production for human consumption, according to a 2006 research by the Food and Agriculture Organization of the United Nations (FAO). This figure is greater than the global proportion of automobile pollution and greenhouse gas emissions.

Deforestation

Many of the carbon dioxide emissions from people were transformed into oxygen by forests in the past. However, deforestation and deforestation have now reached their peak carbon dioxide production. Between 1990 to 2000, 16 million hectares of plantation were lost per year, and between 2000 and 2010, 13 million hectares of forest were lost each year, according to FAO statistics. Deforestation accounts for 20% of greenhouse gas emissions, according to data from the same agency. 20% of the world's emissions of greenhouse gases could be turned to oxygen if trees weren't cut down.) Change in agriculture and livestock is the primary driver of deforestation by humans.

3.1 What is Climate Change?

Global warming, increasing sea levels, and the melting of icebergs in Greenland (the Arctic Ocean), Antarctica, and the North Pole are all part of this phenomenon set, which scientists believe is interconnected. Extreme weather occurrences like dust storms, floods, and so on, as well as plant growth. Here's how NASA describes climate change: In general, the burning of fossil fuels and the emission of numerous gases into Earth's atmosphere are to blame for climate change, which encompasses many different worldwide occurrences. As a result, these gases keep the atmosphere warm.

IV. NEGATIVE EFFECTS OF CLIMATE CHANGE IN RECENT YEARS

Climate change is causing unprecedented temperatures, extended droughts, massive rains in a short period of time, and catastrophic storms in various parts of the planet. Massive and uncontrollable fires, lengthier droughts, more severe drinking water crisis and flooding of islands and beaches could become more common if present trends continue. Agricultural pests and illnesses are becoming more prevalent. More than 60 percent of all animal species (including mammals, fish, reptiles, and birds) went extinct between 1970 and 2014, according to data from the World Wildlife Fund.

Countries that Pollute the Air

According to the Global Carbon Project's study from May of this year

1. United States No. 1 with 5414 million tonnes of CO2 emissions.

2. China is the world's largest source of air pollution, emitting 10,357 million metric tonnes of carbon monoxide annually.
3. India is the third-highest emitter, emitting 2274 million metric tonnes of carbon dioxide annually.
4. 4th place goes to Russia, which emitted 1617 million metric tonnes of carbon dioxide in 2012.
5. In the fifth quarter, Germany produced 798 million tonnes of carbon dioxide.
6. In the sixth row, Japan emits 1237 million tonnes of carbon dioxide.
7. Iran, with a carbon dioxide output of 658 in the seventh row.

V. EFFECTS OF GLOBAL WARMING

Some scientists believe that global warming has resulted in an increase in hurricanes and high winds. Experts predict that this tendency could lead to droughts, floods, high winds, and more violent storms. They also argue that some of these incidents aren't an indicator of global warming because this type of turbulence is a normal part of our environment. Coastal areas and submerged islands will be affected by rising sea levels, as well as thinning oceans, which will lead to an increase in global rainfall (2: 94-95). Melting glaciers in China, the north, and the southern hemispheres has been caused by rising glacier temperatures as a result of global warming. Since the world's drinking water supply is largely made up of glaciers, the decrease in safe drinking water means an increase in the spread of disease due to unsanitary water. With the World Health Organization projecting that climate change-related diseases kill 80,000 Asians year, global warming also has a substantial impact on the number of penguin chicks. In the past, UN officials have warned about the dire repercussions of global warming and have urged prompt action by UN members to prevent it (8: 376-377).

5.1 This was the Hottest Year on Record

The World Meteorological Organization already pronounced 2022 to be the warmest year ever, and June to be the warmest month ever. In nine countries, this year saw the greatest temperature decline. It has been determined that June 2015 was the hottest month on record since air temperature monitors were first introduced in the late 19th century, based on data made public by NASA and JMA. Also, polar ice caps and islands in the oceans have proven that the Earth is at its warmest point in the last 4,000 years, with 2010. As predicted by the World Meteorological Organization (WMO), 2016 was the hottest year on Earth, and this trend is anticipated to continue in 2017. As a result of the El Nio phenomena, 1880 was the hottest year on average worldwide. Since four million years ago, the Earth hasn't witnessed such a high concentration of carbon dioxide in its atmosphere, according to scientific studies.

5.2 Economic Losses of Global Warming

Furthermore, the economic consequences of climate change are clear, with seawater in port facilities, a decrease in water quality, an increase in flooding, and so on all having a significant impact on the economy. Rising heat and water constraints, for example, have led to the replacement of water-based refrigeration systems with gas-based ones. Because gas refrigeration systems use more electricity, new power plants require greater investment. Global temperatures rise as the number of power plants grows, which increases the amount of greenhouse gases emitted into the atmosphere. The findings of their study show that, despite the fact that industrialised countries emit the most greenhouse gases, developing countries suffer the most from global warming's economic consequences. Economic losses due to climate change have been the subject of some discussion among economists. More than a hundred studies have been conducted to date in this area, but no clear conclusion has been reached. A tonne of carbon dioxide emitted into the atmosphere has an economic impact of between \$ 3 and \$ 95.

VI. THE EFFECTS OF WEATHER CONVERSION ON BIODIVERSITY

However, as a result of climate change, plant species have experienced a shift in the timing of their flowering and growth cycles. As a result of climate change, many animal and plant species have gone extinct or have been forced to relocate, damaging the ecosystem as a whole. More than half of Earth's species have gone extinct at least three times, and each time it took hundreds of thousands of years for the world to recover. Another effect of rising global temperatures is a reduction in biodiversity and harm to plant and animal species. Drought and water scarcity cause animal migration and vegetation change, which alters the food chain and has negative consequences on the region's environment. This problem also alters the marine ecosystem's biodiversity.

The bleaching of corals in the Persian Gulf is a visible illustration of this. Scientists say that when sea temperatures rise, corals will die sooner and turn white. As a result of the importance of climate change, a number of intriguing studies have been undertaken on avian life. Changing weather patterns affect birds in a variety of ways, some of which can have drastic consequences for their natural life cycles. So, for example, birds will migrate northwards as the temperature warms and will make their homes there. As a result, weaker species may become extinct as a result of birds travelling longer detachments than in the past. In an interesting study released by the University of Michigan in the country of United States, it was revealed that

the number of birds in certain locations declined dramatically and in some areas were not found at all as quantity of carbon dioxide into the troposphere gathered. Depending on the bird species, the birds migrate a week or two early or a week or two later. When this occurs, the birds are more likely to perish on the way back or even while travelling, which results in a steady decline in their population.

VII. HOW TO PREVENT GLOBAL WARMING?

6.1 Ways to Deal with Global Warming

Though the average person may not think they have much to do with global warming, their actions, as well as the actions of their neighbours, have a significant impact. The global temperature has been reduced by two degrees Celsius because of the efforts of several countries who have banded together to battle global warming. When oil, coal, and other fossil fuels are used for energy, carbon dioxide gas is discharged into the atmosphere. We can both lessen our contribution to climate change and lower our energy expenses by limiting the amount of energy we use in our homes, cars, and even on our cell phones. Come on, relax. Non-Renewable Energy should be used at home

Renewable energy providers with international certifications should be your first choice for supplying your home with electricity. If you're unable to do so, have a peek at your utility bill. Many electricity companies now have sections of their websites devoted to providing information on the benefits of using renewable energy sources.

6.2 Keep the Door and Gate Insulated

It saves a lot of energy by sealing and insulating the doors and windows of the house, which accounts for the majority of the energy we use.

6.3 Utilize Low-Cost Appliances

When purchasing refrigerators, washing machines, and other appliances, look at their energy labels to discover which one is most efficient.

The pumping, heating, and purification of water consumes a significant amount of energy, therefore conserving water can also help to reduce carbon pollution. To save 100 million kilowatt hours of electricity annually, just one out of every 100 households should cut back on their bath time and turn off the faucet when brushing their teeth. The fact that 80,000 tonnes of air pollution can be prevented with a simple action is intriguing.

6.4 Consume as much Food as Possible and Leaped Meat

Producing, processing, packaging, and transporting food uses around 10% of a country like the United States' total energy consumption. However, 40% of the food produced is thrown away, resulting in less fuel being utilised. Foods that aren't made from animal products save a lot of energy because raising cattle takes a lot of resources.

Because they use 80 percent less energy, low-consumption groups (or LIDs) save money as well as resources.

6.5 Electrical Appliances should be Unplugged from the Wall Socket

Even if the number of appliances in the average home isn't immediately apparent, there are likely more than ten: Appliances such as televisions, refrigerators, vacuum cleaners, washing machines, and even water are all part of our daily lives. Picking fruit, etc. Unplugging these devices as soon as you are finished with them is an easy way to help reduce the amount of heat in the air.

6.6 Consider Flying or Taking a Train?

If you want to live in a city where people are used to walking and public transportation saves you money and keeps the air clean, you should look for a city that has both. Air travel is one of the leading contributors of air pollution, therefore reduce the number of flights you take.

VIII. CONCLUSION

To achieve this purpose, nature is essential. For a longer period of time than forest trees in non-marine settings, trees submerged in fresh water can remove enormous quantities of carbon from the atmosphere. The ability of aquatic trees to store carbon for an average of 2,000 years outweighs the ability of trees in forests to store carbon for about 20 years. Using white roofs and roads around the world can also reduce carbon dioxide emissions by 44 billion metric tonnes or a year's worth of greenhouse gas emissions. One of the most serious environmental issues is global warming, which is causing a depletion of drinking water and resulting in the extinction of humans, animals, and plants, as well as an increase in the usage of carbon dioxide. Sunlight that penetrates the atmosphere can cause skin cancer, dehydration, and loss of wildlife, as well as damage to the ozone layer. Are the most critical solutions that have the potential to have significant positive effects on the environment.

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