Global Warming Causes and Their Impacts on the Environment

Dr. Hanumant Singh Chouhan
Associate Professor, Department of Chemistry, S.M.C.C. Govt. College, Abubroad- 307026, Rajasthan, INDIA
Corresponding Author: draburoad@gmail.com

ABSTRACT

The name assigned to a process that has contributed to an overall spike in the temperature of the Earth and the surface of the ocean is global warming. The Planet has been abnormally colder by about 0.74 degrees Celsius over the last 100 years, which has worried scientists. Some researchers claim that the warmest years of the past 400 years were the last decades of the twentieth century. Reports suggest that from 1990 to 2008 alone, 10 of the warmest years in the world were registered, the highest amount in 150 years. In developing this issue, industrial practices seem to be very successful and make a valuable contribution to global warming.

Keywords— Climate Change, Global Warming, Water Vapor (H₂O), Carbon Dioxide (CO₂), Methane (CH₄), Nitrous Oxide (N₂O), Ozone (O₃), Environment

I. INTRODUCTION

One of the big environmental issues that have drawn the interest of both science and political circles around the world in the last two decades is global warming and the question of climate change caused by human activity. In the long term, climate change represents the average state of a region. During its lifetime of at least 4.5 billion years, the Planet has undergone a number of temperatures. One of the key and most important factors influencing the ecosystem's characteristics is temperature, because minor variations impact the different components of the ecosystem. Climate change is caused by a rise in greenhouse gas emissions due to human activity and countries' industrialization, leading to an increase in world temperatures and natural disasters. This thesis is a summary of one of the authoritative science books, scientific journals and websites that are authoritative, and the aim of this analysis is to recognize different global warming causes. Discussion on climate change and finding ways to mitigate global warming and climate change the use of greenhouse gases, resulting in the loss of the ozone layer and different elements of the affected ecosystem, is one of the biggest environmental issues and the primary source of heating.

What is warming globally?

Global warming means a rise in the long-term temperature for the World. The phenomena we know today as Global Warming (after the Industrial Revolution) started in the early twentieth century, has escalated since the 1970s, and persists to this day. The average temperature of the Earth's surface has increased by one degree Celsius since 1880, according to the National Aeronautics and Space Administration (NASA). The temperature rise from 1750 to 1880 was however, 0.15 degrees Celsius. That is, it has obviously increased human activity and aims to intensify global warming. You might assume there is nothing unique about one degree Celsius, but the average temperature NASA is talking about is the entire surface of the planet.

Why does it warm the earth?

The sun still sends light and warmth to the ground (through solar radiation). Normally, part of this energy is that it needs to be distributed in vacuum. But these impurities in the Earth's atmosphere hinder the sun from escaping and warming the Earth steadily. This is considered the Greenhouse Effect theory. The argument is that a natural process that controls the temperature of the planet and makes it live able is the greenhouse effect. But it was removed from control by human interference and brought the growth of the planet to a crucial level.

Figure 1: The average difference due to the warming phenomenon of the temperature of various areas of the world from its natural state.

Since 1880, earth temperature observations have begun and continue to this day. Burning heat and terrible storms will be the basis for a series of theories about global warming and the impact of greenhouse gases on this process in 2100, with others citing processes such as volcanoes, geothermal and solar activity. Global warming is said to have caused severe drought. These scientists'
citation for their claims is the phenomenon of hot and cold cycles across the life cycle (6: 178-179).

According to many scientists, this phenomenon and its negative effects on human life can be controlled by increasing public awareness, optimal fuel and energy consumption, increasing the level of green space and preventing the destruction of forests, reconstruction and the use of alternative energy sources from fossil fuels such as wind and solar. In December 2010, 193 participating countries decided at the Cancun Climate Summit in Mexico to set up a $100 billion fund to help developing countries fight global warming (7: 38-39).

II. ORIGIN OF GLOBAL WARMING

The Intergovernmental Panel on Climate Change (IPCC) states that climate change is most likely caused by human activities worldwide. Introduces the primary cause of the phenomenon. Scientists have come to this conclusion using evidence obtained from trees, glaciers and other samples and conclude that this study conclusively demonstrates that human actions influence the environment. But some scientists assume that solar activity and radiation may be attributed to rising temperatures in recent years. In order to explain the amendments, the organization argues the growth in carbon dioxide and other greenhouse gases is too small.

Global warming, relating to the long-term spike in the planet's temperatures, is a component of climate change. It is caused by elevated atmospheric greenhouse gas emissions, primarily from human activities such as fossil fuel combustion, deforestation and farming.

Deforestation and forest fires have now been one of the global warming factors. In reality, by absorbing carbon dioxide, trees store it and emit it as a result of burning light. Forest fires should also be viewed as one of the explanations for the rise in atmospheric carbon dioxide levels and as an effect of global warming. Undoubtedly, with what is now referred to as global warming, man has played an important part. A big transition that cannot be ignored has been triggered by the endless intervention and interpretation of human beings in nature. Yet this is not the first time that the blue planet has been incredibly hot in the history of Earth's habitation. The direct or indirect effect of many causes that originate from the centre of the earth and go deep into space are the incredibly hot or cold cycles of the earth. Normal causes of global warming include cycles of solar activity, massive volcanic eruptions, and motions of the earth, ocean salinity rotation, and comet effects.

III. IMPACT OF GREENHOUSE GASES

Analysis indicates that there is a strong relation between the rise in atmospheric greenhouse emissions and global warming. The planet retains part of the energy of the sun and the balance is mirrored. The wavelength of light varies during this process. This radiation is absorbed by some of the gases in Mountain Cedar fruits. This radiation is predominantly in the Marwari violet spectrum. Molecules in greenhouse gases consume far more red light than other gases. Energy absorption of gas molecules allows the molecule to be transferred and its energy to rise. It is as if we have enclosed the ground with a shield when this occurs on a broad scale. The proportion of total areas of the Planet is rising. The greenhouse effect is known as this phenomenon and the gases in which it is activated are called greenhouse gases (3: 178-180).
IV. INDUSTRIAL CATTLE

In 2006, the United Nations Food and Agriculture Organization (FAO) issued a study entitled Long Livestock Shadow, claiming that 18 percent of gross impurities and greenhouse gases are accounted for by growing livestock for human consumption. This number reflects more than the share of automobiles in the production of emissions and greenhouse gases worldwide.

Both in physical and economic terms, the modern development mechanism is free. This relies on the external availability of fuel, electricity and other inputs. The criteria for technology, resources and infrastructure are focused on broad economies of scale and as a result, production productivity is high in terms of output per feed unit or per man-hour, but less so in terms of energy unit measurements.

V. DESERTIFICATION

Forests have soaked up most of the carbon dioxide produced by humans in the past and converted it into oxygen. But now, not only has the production of carbon dioxide increased, but erosion and deforestation have peaked. According to figures published by the FAO, 16 million hectares were destroyed annually between 1990 and 2000, and 13 million hectares of woodland were lost annually between 2000 and 2010. 20 per cent of greenhouse gases have entered the atmosphere due to deforestation, according to other figures from the same group. (If trees were not burned down, 20% of the greenhouse gases produced would be converted to oxygen.) Transition is applied to agriculture and animals, the primary cause for deforestation by humans.

Figure 3: View of deforestation

VI. CLIMATE CHANGE'S NEGATIVE CONSEQUENCES IN RECENT YEARS

Climate change is a large range of environmental trends, primarily due to the use of carbon fuels and the emission of different chemicals into the Earth's atmosphere. This is how NASA describes climate change. These molecules capture heat and block the ozone from escaping from it.

Climate warming, rising sea levels, melting icebergs in the Greenland (Arctic Ocean), Antarctica, the North Pole and other areas of the globe are part of this collection of phenomena. Planting and flowering plants, such as dust clouds, rains, dust and so on and extreme weather activities.

Any of the impacts of climate change on various areas of the world include unprecedented temperatures, lengthy droughts, and intense rainfall for short periods of time, and intense storms. These early results could turn into major and uncontrollable fires, longer droughts, more serious drinking water shortages, greater floods that submerge islands and beaches, and the disappearance of different types of plants if the current Ron persists. The birth of new crop pests, the propagation of different diseases. Statistics published by the World Wildlife Fund...
indicate that over 60% of all animal species (including mammals, fish, reptiles and birds) have become extinct from 1970 to 2014, a pattern that has accelerated if climate change is not managed will also discover (1: 245-247).

VII. COUNTRIES FOR POLLUTION POLLUTING

In May 2018, according to the Global Carbon Project’s report,

1. With an annual production of 10.357 million tons of carbon monoxide, China is the world's biggest air polluter.
2. The United States, on the second row, had 5414 million tons of carbon dioxide.
3. India, with an annual production in the third row of 2274 million tons of carbon dioxide.
4. Russia is in the fourth row, with 1617 million tons of carbon dioxide.
5. In the fifth row, Japan emits 1237 million tons of carbon dioxide.
6. Within the sixth drift, Germany created 798 million tons of carbon dioxide.
7. Iran, with 658 carbon dioxide emitted in the seventh panel.

VIII. GLOBAL WARMING'S CONSEQUENCES

Any experts claim that one of the consequences of global warming is the rise in hurricanes and strong winds. This pattern will lead to droughts, flooding, hot winds and more extreme hurricanes, most climate scientists say. Yet others still claim that some of these events are not a result of global warming, since the atmosphere is a natural characteristic of this tumult. Other effects are raising sea levels, resulting in coastal regions and submerged islands, and thinning seas, resulting in increased rainfall worldwide (2: 94-95).

Climate warming has caused the interior temperature of glaciers in various parts of the globe, including glaciers in the north, south, and China, to increase, melting vast amounts of the glacier's deposits. This is critical because the majority of the world's drinking water supply is made up of these glaciers, thereby decreasing the supply of good drinking water and increasing the risk of diseases circulating by unhealthy drinking water. With the World Health Organization reporting that diseases caused by climate change and global warming kill 80,000 people per year in Asian countries, global warming is already having a major effect on reducing the number of penguin chicks. UN officials have consistently warned of the implications of global warming and called on UN representatives to take urgent measures to mitigate it (8: 376-377).

IX. THE HOTTEST YEAR IN EARTH’S HISTORY

2016 was the warmest year on Earth, according to the World Meteorological Agency, and in 2018 this heat is predicted to persist, with 1880 being the warmest
year on record worldwide, has added to this heat wave. Scientific evidence indicates that the Climate was last too warm 115,000 years ago, and that since four million years ago, the earth has not seen such a significant volume of carbon dioxide in the Earth's atmosphere (9: 55-56).

Earlier, 2015 was declared the warmest year in world history by the World Meteorological Organization and June was the warmest month in history. Nine countries have undergone the biggest temperature recession this year. June 2015 has been named as the hottest month since the invention of air temperature gauges in the late 19th century, according to data released by NASA and the Japan Meteorological Agency (JMA). Polar ice caps and Sea Islands have also demonstrated that the Planet has been at the hottest point in the past 4,000 years, with 2010 being the hottest year in the history of the Earth (11).

Figure 5: Global warming between 1999 and 2008

X. GLOBAL WARMING ECONOMIC GAINS

Also quite apparent are the economic consequences of global warming, the advancement of seawater in port facilities, the decline in the quality of drinking water, the growth of flooding, etc., all causing a great deal of economic harm. Increasing heat and water shortages, for example, are replacing gas refrigeration systems with water. The need for investment in power plant construction is growing due to the fact that gas refrigeration systems use more energy. The quantity of greenhouse gases is now rising as a result of the rise in power plants, and this contributes to an increase in global temperatures. During the global warming issue, some analysts have sought to quantify economic gains from global warming. More than 100 experiments in this area have been performed so far but the same and definitive outcome has not yet been obtained. The report predicts that the global economic effect of global warming ranges from about $3 per ton of carbon dioxide to $95 per ton of carbon dioxide.

One argument is emphasized by the findings of their research: while developed countries have the highest levels of greenhouse gas emissions, developing countries experience the greatest economic harm from global warming.

XI. THE IMPACTS ON BIODIVERSITY OF CLIMATE CHANGE

Other implications of increasing global temperatures include reduced biodiversity and detrimental impacts on plant and animal habitats. Changes in animal migration and vegetation due to drought and water scarcity result in changes in the food chain and detrimental impacts on the region’s environment. The biodiversity of the aquatic environment in the sea is also altered by this issue. The whitening of the corals on the coasts of the Persian Gulf is a simple and tangible indication of this. Corals die sooner and become white due to the annual rise in water temperature, according to scientists. Different experiments on bird life have been carried out owing to the importance of climate change and important findings have been obtained. In addition, climate change impacts the lives of birds actively and indirectly, which can seriously interrupt their life cycle. Birds travel to the northern latitudes and settle there for instance, as the weather warms. In this way, when migrating, birds fly greater distances than in the past, which may result in the loss of poorer organisms. A fascinating research released by the University of Michigan USA reveals that as the atmospheric emission of carbon dioxide doubled and more global warming occurred, the number of birds that lived in certain areas declined dramatically and were not present at all in certain areas. Around a week or two ago, different birds hatch, which makes the birds about a week or two older before migrating. In such situations, the birds are more likely to die upon arriving or after the journey and their population declines day by day. In the other hand, the time for flowering and development of plant species has increased relative to the past due to global warming. Many animal and plant populations are now extinct because of climatic impacts, and many animal species are forced to relocate, damaging the biodiversity of the whole earth. In the history of the world, more than half of all living creatures have died out many times, but their regeneration has taken hundreds of thousands of years (10).

XII. FORMS WITH GLOBAL WARMING TO COPE

You may think we average people have no part in global warming, but from the same parking lots, kitchens and even the dining table, global warming
begins. In order to fight global warming, several nations have joined hands and partnered together to push down global temperatures by two degrees Celsius. Carbon dioxide is the climate's greatest enemy and is emitted as energy is consumed from gasoline, coal and other fossil fuels. We will also minimise our position in climate change and reduce electricity prices by minimising energy usage, the same energy we use for houses, vehicle fuel, and also keeping our mobile phones on. Let's slow down.

Using in-home non-renewable electricity

Go to businesses that produce at least half of their energy from wind or solar that has globally recognized certifications in order to supply your home with electricity. If you can't do that, look at the energy bill as well. In today's world, there are several utility providers listing ways to promote green energies on their websites.

Insulate the door and gate

Much of the energy we use is to heat the house or cool it so sealing doors and windows and insulating them saves a lot of energy.

Use Low-Cost Appliances

Low energy prices are the best way to cut emissions, so look at their energy labels when purchasing refrigerators, washing machines and other appliances to see which one is more efficient.

Do not limit water

When a lot of energy is spent pumping, heating and purifying water, saving water will also decrease carbon emissions. Where only one out of every 100 houses saves water use so nearly 100 million kilowatt hours of energy will be saved per year, thereby minimizing bathing time and turning off the tap while cleaning. It is noteworthy that 80,000 tones of air emissions would be avoided by this easy mission.

Eat as much as you can and less meat

About 10% of the energy produced by a nation like the United States is expended on food production, distribution, storage and transport, but approximately 40% of this food is left wasted and converted into waste, so fuel consumption is avoided by not wasting food. Meatless diets play an important part in saving resources since a lot of energy is needed to grow animals.

Use low-consumption

Groups using LIDs use 80 percent less electricity than regular groups, as they often minimize prices, on the other hand.

Unplug electrical appliances

The number of appliances found in homes might not be apparent, but there are definitely even more than 10 if you start listing them: TVs, fridges, vacuum cleaners, washing machines, water. Picking berries, etc. Unplug it as soon as you are finished with these units, if you want to play a part in minimizing air heat.

XIII. CONCLUSION

Global warming, particularly with global warming, is one of the most significant issues in the ecosystem, mainly drinking water is degraded and causes the depletion of humans, animals and plants, as well as the rise of agricultural plants and the general use of carbon. Due to the depletion of the ozone layer and the ultraviolet ray, the atmosphere (above the environment usually has detrimental effects on humans. They are the most important solutions that can have very important implications for the climate. In achieving this purpose, nature plays a major part. Trees that are underwater for a longer period of time in fresh water retain carbon than forest trees in non-marine areas and can be efficient in extracting significant volumes of carbon from the atmosphere from the air. An average of 2,000 years of carbon is retained by marine trees, while the capacity of trees to hold atmospheric carbon is limited to 20 years in forests. Using white roofs and roads around the world will also reduce 44 billion metric tons of greenhouse gas emissions or one year of global carbon output and be successful in reducing potential carbon dioxide emissions.

REFERENCES

[10] Livestock’s long shadow: environmental issues and options
[11] Deforestation and climate change, earth day .org
[12] Dovid Shukman We have too many fossil-fuel power plants to meet, climate goals. National Geographic