Global Warming: Effect on Living Organisms, Causes and its Solutions

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ABSTRACT

In the present scenario many scientists, researchers and environmentalists are expressing their deep concerns about the overall changes. For continuous production of Electricity Fossil and Fuels are being used. The burning of these fuels produces gases like carbon dioxide, methane and nitrous oxides which lead to global warming. The main cause of global warming can be unsustainable human activities that increase the accumulation of greenhouse gases. The hazard of global warming is continuously causing major damage to the Earth's environment. Most human beings are still unaware of global warming and do not consider it to be a big problem in the future. Living Organisms have to make efforts to maintain health by recognizing and resolving abnormal situations such as the presence of invading microorganisms. Here we outline the effect on living organisms, causes and how we can overcome it.

Keywords— Climate Change, Global Warming, Greenhouse Gases, Bioclimatic Envelopes, Chlorofluorocarbons (CFCs)

I. INTRODUCTION

In today's era, the temperature of the planet earth is increasing day by day with a great extent which is very dangerous and highly disturbing. Global warming and climate change can be used transportable, but the term climate change includes all the reality of global warming and its effects like change in precipitation, adverse impacts that differ by regions. Many scientific discoveries have proven that the effect of climate change meticulously shown that past literature misjudges climate damages by failing to allow for adaptation and climate benefits. The technological proofs have shown that climate change presents very serious global risks and needs a quick global response The path of global warming is that when the sun rays reach the Earth. The Clouds, Surface of oceans and atmospheric particles about 30% send back to space, while the rest is absorbed by air, land, oceans and seas. Global warming heats the surface of the Earth.

Global warming generally refers to the anthropogenic component of climate change alone and only the surface warming associated with it. Earth is surrounded by various gases primarily Nitrogen and Oxygen and is 149,600,000 Km from the Sun. It consists of Carbon Dioxide (CO₂), Methane(CH₄), Nitrous Oxide(N₂O). The term which defines this process is called as greenhouse effects. It is now feared that the warming effect is being undesirably increased, causing climatic changes and melting Polar Icecaps.

Figure 1: Percentage of greenhouse gases in the atmosphere

II. CAUSES

The majority of the world's scientific community agrees that our planet is getting hotter and that human activity is one of the primary causes of global warming. Scientists agree that it is accountable for releasing gases that stop ground thermal dissipation into space—a phenomenon known as the greenhouse effect. Water vapour, carbon dioxide, methane, nitrous oxide and chlorofluorocarbons (CFCs) are the main gases responsible for global warming. By burning fossil fuels and engaging in different agricultural and industrial activities, humans produce them. Also, the Earth itself adds to natural procedures that produce greenhouse gases and accelerate the trend of heating.

The main reasons for global warming are greenhouse gases:

Despite receiving the most pressed carbon dioxide as the culprit responsible for global warming, water vapour is effectively the most abundant greenhouse gas in the atmosphere. However, carbon dioxide still deserves to be known. It may be a small element of the atmosphere, but
according to NASA, its enhanced abundance contributes to the warming trend. Human beings exacerbate the issue by cutting trees that absorb this gas and adding other greenhouse gasses to the blend above and beyond natural procedures. Furthermore, one of the causes of global warming may be astronomical.

**Reason 1: Variations in the Intensity of the Sun**

The Earth gets its warmth from the sun, so it is sensible to assume that one of the causes of global warming may be our home star. While the quantity of energy coming from the sun varies and may have been liable for warming in the past, this has been ruled out by NASA and the Intergovernmental Panel on Climate Change (IPCC) as a cause of the present trend in warming.

**Reason 2: Industrial Activity**

Human beings have been burning fossil fuels like coal and petroleum for energy since the Industrial Revolution, releasing carbon dioxide into the atmosphere. The release of the gases in the atmosphere causes a rise in the level of greenhouses emission resulting in rising of temperature and high trend of global warming.

**Reason 3: Agricultural Activity**

Another of the human causes of climate change is the agricultural practices that generate food for individuals on earth. Using commercial as well as organic fertilizers releases a strong greenhouse gas, nitrous oxide. Methane, another significant greenhouse gas, comes from many natural sources, but also animal digestive systems have grown for meat manufacturing as well as landfill waste decomposition and biomass burning.

**Reason 4: Deforestation**

The enhanced demand for meat and dairy cattle has resulted in lots of feed being created in otherwise wooded regions. Logging for wood and paper and clearing for crop manufacturing also involves, sometimes illegal, cutting of trees. Deforestation accounts for 15% of atmospheric greenhouse gases.

**Reason 5: Earths on a Feedback Loop**

It can hold more water, which is already the most abundant greenhouse gas, as the atmosphere warms. This generates a loop of feedback that speeds up global warming. It also produces more clouds, rainstorms and other climate change symptoms. At the poles, the atmosphere's warming melts the ice cover, exposing less reflective water than ice. The water absorbs the heat of the sun, which also makes the oceans hotter.

### III. EFFECTS

Global warming has diversely affected the wildlife in various aspects such as a change in the geographical range of fauna and potential effects of global warming on different wildlife regions of the world.

In respect to its geographical location or vegetation, Wildlife geography is extremely affected by climate regimes, often through species-specific physiological thresholds of temperature, rainfall, ambient humidity, and moisture regimes. These ‘bioclimatic envelopes’ migrate to poles or greater altitudes with continuing warming trends. Besides, Habitat fauna occupancy may be extremely affected by the presence of their preferred group of vegetation, which may alter in reaction to climate change. Therefore, within the boundaries of their dispersal ability and resource, wild fauna will monitor changing climatic envelopes as well as their preferred community of vegetation and change their variety towards latitude and altitude. For example, Birds and butterflies have moved north in North America and Europe over the previous 50 years with a warm climate. Hence, elevated abundance or broad distribution of species does not indicate that owing to global warming they are resistant to climate change. The potential effects of global warming can be seen on waterfowl population breeding in the northern greater plains in North America or the decrease in population of the quails in America. Both of their population have declined due to an increase in the level of carbon dioxide and a rise in high temperature. Global warming by suppressing reproduction could be associated with declining quail populations; it could also worsen the effects of habitat loss and segmentation.

### IV. SOLUTIONS

Climate change is motivated mainly by the use of fossil fuels and secondly by greenhouse gas emissions through deforestation, agriculture and other causes that are less prominent.

The main way of solving global warming is to eliminate wherever possible the position of fossil fuels in contemporary culture. This implies transitioning to renewable and carbon-free power sources such as solar, wind, and hydro, resulting in less than 3% of fossil fuel power greenhouse gas emissions.

Secondly, with sustainable forestry and land-use methods, deforestation should be avoided and substituted. Because crops breathe in and store carbon dioxide, they effectively remove atmospheric carbon dioxide. There are therefore two methods to fix climate change in the easy sense.

Firstly, reduce and prevent greenhouse gas emissions including carbon dioxide, methane and nitrous oxide. Secondly, remove carbon dioxide from the environment by enabling trees, oceans and other natural structures to behave as sinks of carbon—which is what they do naturally. By ending deforestation, ocean habitat destruction and encouraging sustainable forestry, we can...
encourage this removal of greenhouse gases from the atmosphere.

V. CONCLUSION

Global warming has become a well-conversed topic among scientists and peoples in the world today. Some extremists do everything possible to stop contributing to the warming, but the average person does little to alleviate the issue and, in many cases, refuses to acknowledge that there is a problem at all. This paper provides all the information about global warming its causes, effects and how we can overcome this problem in the present era. In this century the environmental problems are increasing day by day this paper provides some easy solutions for it.

REFERENCES

[1] Hoffman, A. A. & P. A. Parsons. (1997). Extreme environmental change and evolution. Cambridge: Cambridge University Press.
[2] Pearson, R. G. & T. P. Dawson. (2003). Predicting the impacts of climate change on the distribution of species: Are bioclimatic envelope models useful?. Global Ecology & Biogeography, 12, 361–371.
[3] Parmesan, C., T. L. Root, & M. Wiling. (2000). Impacts of extreme weather and climate on terrestrial biota. Bulletin of the American Meteorological Society, 81, 443–450.
[4] Surasinghe, T. (2011). The effects of climate change on global wildlife and terrestrial ecosystems. TAPROBANICA: The Journal Of Asian Biodiversity, 2(1), 30-47.
[5] Graham M-EX. (2018). How to solve global warming. Available at: https://sites.middlebury.edu/climatechange/2018/05/02/how-to-solve-global-warming.
[6] Chris Denzel. (2018). 5 causes of global warming. Available at: https://sciencing.com/5-causes-global-warming-8232444.html
[7] IPCC AR5 SYR Glossary. (2014). Global warming refers to the gradual increase, observed or projected, in global surface temperature, as one of the consequences of radiative forcing caused by anthropogenic emissions. {WGIII}, pp. 124.
[8] IPCC SR15 Ch1. (2018). Global warming is defined in this report as an increase in combined surface air and sea surface temperatures averaged over the globe and 30 years. Unless otherwise specified, warming is expressed relative to the period 1850–1900, used as an approximation of pre-industrial temperatures in AR5, pp. 51.
[9] Shaftel. (2016). "'Climate change' and 'global warming' are often used interchangeably but have distinct meanings. Global warming refers to the upward temperature trend across the entire Earth since the early 20th-century Climate change refers to a broad range of global phenomena include the increased temperature trends described by global warming". Available at: https://en.wikipedia.org/wiki/Global_warming.