



“A Study of Global Warming and its Impacts on Human Beings”

Dr. Mahfooz Alam,

Assistant Professor, Dept. of Education, Aligarh Muslim University Centre, Murshidabad, West Bengal.

ABSTRACT

The present research study titled “A Study of Global Warming and its Impact on Human Beings” aimed to analyze causes, mechanisms of global warming and its impacts on human health, livelihood, and the worldwide economy. Global warming is a precarious environmental challenge and menace of the 21st century, due to reckless increasing greenhouse gas emissions and rising temperatures globally. The study also reviews potential mitigation strategies and adaptation measures necessary to combat this phenomenon effectively. Global warming is the long-term heating of the Earth’s surface observed since the pre-industrial period (between 1850 and 1900) due to human irrational activities, mainly fossil fuel burning, deforestation etc., which increases heat-trapping greenhouse gas levels in Earth’s atmosphere. As greenhouse gas emissions blanket the Earth, they trap the sun’s heat and leads to global warming and climate change. The world climate is now warming faster than at any point in the past. The current warming trend is explicitly the result of human absurd activities since the 1950s and is proceeding at an unprecedented rate over eras. The methodology involved in conducting the present research study is analytical in nature. Secondary data has been collected from various sources such as books, journals, magazines, online articles etc. The researcher has reviewed existing literature on the subject while conducting the study to expedite an in-depth understanding of the cause and effect of global warming.

KEYWORDS

Global Warming, Climate Change, Greenhouse Gases

INTRODUCTION

“The world must come together to confront global warming. There is little scientific dispute that if we do nothing, we will face more drought, famine and mass displacement that will fuel more conflict for decades”

Mr. Barack Obama

Global warming means the long-term increase in Earth's average surface temperature due to human irrational and absurd activities. This phenomenon happens because of the emission of greenhouse gases like carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). These



greenhouse gases trap heat in the atmosphere, a phenomenon known as the greenhouse effect, which further leads to rising temperatures, melting ice caps, and unstable weather patterns. Since the Industrial Revolution, human selfish activities such as burning fossil fuels, deforestation, and industrial processes have significantly increased greenhouse gas absorptions. We can observe that global warming is increasing rapidly. During the last few decades there has been record-breaking temperature escalation. This has resulted in a discernible acceleration of global warming. The impacts of global warming are extensive, making adverse impact on our ecosystems, agriculture, and human health. Polar ice is melting at an upsetting rate, further causing increase in sea levels which is a big threat for coastal communities. Changing climate patterns also disturb biodiversity, increase the frequency of extreme weather variations, and endanger food and water security. There is a dire need to mitigate global warming and focus on reducing greenhouse gas emissions through renewable energy, reforestation, energy efficacy, and international agreements. Moreover, approaches and strategies must be designed to prepare communities for inevitable changes in climate. Global warming is not just an environmental menace but a socio-economic and moral challenge, prerequisites a collective global actions to ensure a sustainable development and make this world a better place to live.

OPERATIONAL DEFINITIONS OF KEYWORDS

Global Warming:

Global Warming can be defined as “the measurable increase in the Earth’s average surface temperature over a specific time period, as indicated by instrumental temperature records (e.g., thermometers, satellites), caused primarily by elevated levels of greenhouse gases in the atmosphere due to human activities like fossil fuel combustion and deforestation.”

Climate Change:

Climate Change means “the observable alteration in long-term weather patterns, including temperature, precipitation, and wind, assessed over decades or longer, resulting from both natural factors (e.g., volcanic activity, solar radiation) and human activities such as greenhouse gas emissions and land-use changes.”

Greenhouse Gases:

Greenhouse Gases can be defined as “the atmospheric gases, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases, that can be quantified based on their concentration in parts per million (ppm) or parts per billion (ppb) and are responsible for trapping heat within Earth’s atmosphere, contributing to the greenhouse effect and warming of the planet.”



Objectives of the Study

- To find out the primary causes of global warming.
- To evaluate the global warming's direct and indirect impacts on human beings.
- To propose feasible solutions to mitigate its effects.

Methodology

The methodology used in conducting the present research study is analytical in nature. For this study secondary data has been collected from various sources such as books, journals, magazines, online articles and websites. The researcher has reviewed existing literature on the subject while conducting this study in order to expedite an in-depth understanding of the issues and challenges.

Main Causes of Global Warming

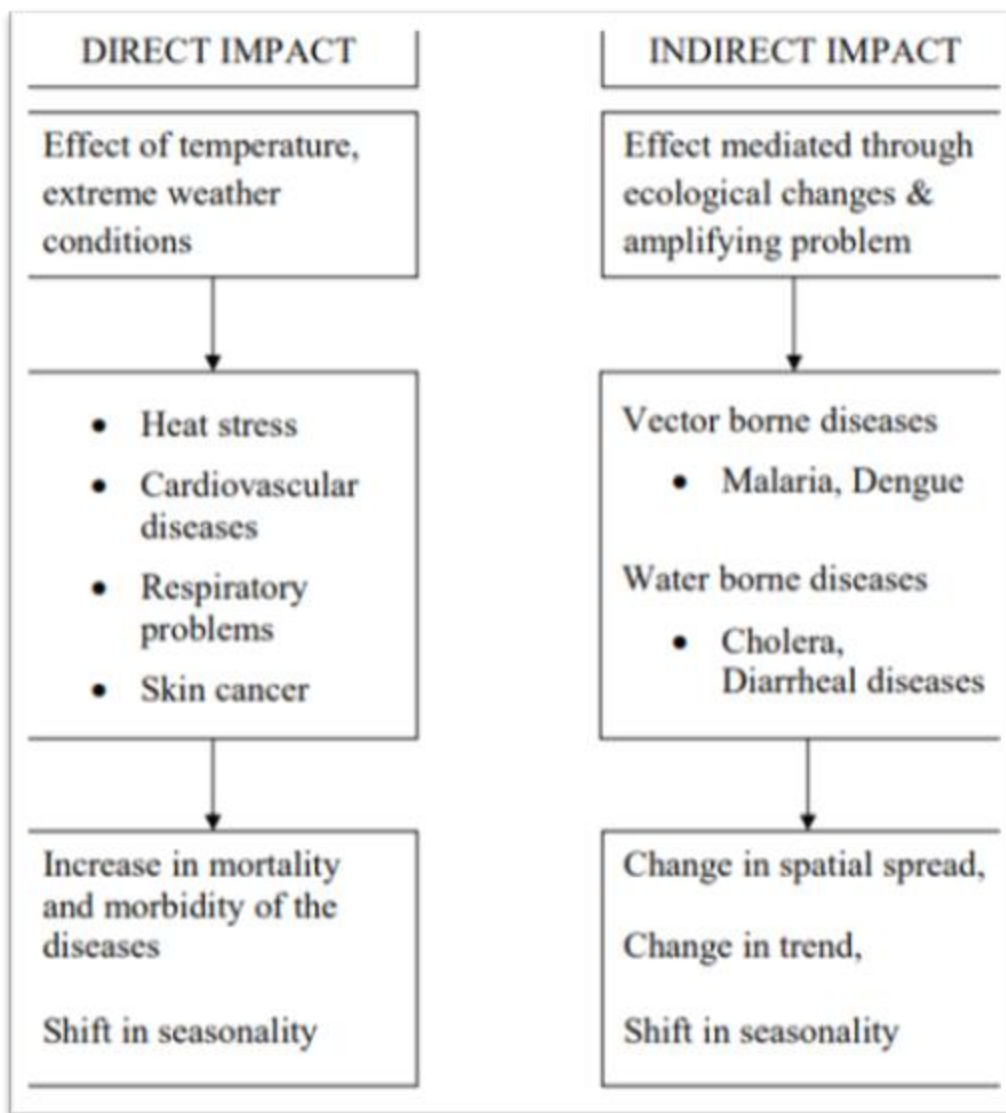
- Burning of fossil fuels: Due to rapid population growth and advancement more and more energy is needed to meet the demands. Therefore, energy production and transportation sectors discharge the largest quantities of CO₂ and other greenhouse gases.
- Deforestation: Human's irrational and selfish activities lead to deforestation. Hence, decrease in forest cover diminishes Earth's capacity to absorb CO₂ and lessens the Oxygen release.
- Chemicals, Fertilizers, Pesticides: Many types of fertilizers, pesticides and chemicals are being used to multiply the production. Subsequently, methane emissions from livestock and rice paddies, as well as N₂O from fertilizers, pesticides increase global warming significantly.
- Industrial Processes: Industries, such as cement production, discharge large amounts of CO₂ as a by-product. Manufacturing processes, including refrigeration and foam production, release synthetic greenhouse gases like chlorofluorocarbons (CFCs) and hydrofluorocarbons (HFCs).



Impacts of Global Warming on Human Beings

Impacts on Human Health:

- Ailments due to excessive heatstroke: Intensified temperatures cause heatstroke and cardiovascular diseases.
- Blowout of Vector-Borne Diseases: Warmer climates multiply the chance of diseases like malaria and dengue.
- Respiratory illness due to polluted air: Smog and pollution aggravates respiratory illnesses, including asthma.





Impacts on Economy:

- **Agriculture:** Unstable weather patterns lead to flood and draught, subsequently drop crop yields, jeopardize food security.
- **Escalation of Energy Costs:** Increased cooling demands strain energy resources and raise utility costs.
- **Destruction of Property:** Flooding, cyclones, and wildfires destroy property and infrastructure.

Strategies and Adaptations Used for Mitigation:

- **Shifting towards Renewable Energy:** Adoption of solar, wind, and hydroelectric power.
- **Plantation and stop to cutting trees:** Initiatives should be taken to restore green cover.
- **Carbon Seizure Technologies:** Major level deployment of carbon capturing devices and storage system should be designed.
- **Agriculture independency:** Drought-resistant crops and precision farming techniques should be used.
- **Public transportation:** Public transport should be the first priority.
- **Weather forecast Systems:** Improved forecasting for extreme weather conditions.

Conclusion

The study of global warming and its impacts on human beings exposes that global warming is not merely an environmental issue but a multidimensional disaster affecting every aspect of human life. Compelled primarily by anthropogenic activities, the rising levels of greenhouse gases have caused significant changes in Earth's climate condition, with profound consequences for human health, livelihoods, and social stability.

The findings accentuate the following key points:

- **Adverse Health Impacts:** Global warming intensifies heatwaves, spreads vector-borne diseases, and aggravates respiratory and cardiovascular conditions due to increased air pollution.
- **Economic Challenges:** Sectors such as agriculture, fisheries, and infrastructure are under peril, leading to economic instability, job losses, and heightened costs of disaster recovery.



- **Social Disruptions:** Vulnerable populations, particularly in developing countries, face displacement, loss of cultural heritage, and widening inequalities due to climate-induced stressors.
- **Environmental Concerns:** The degradation of ecosystems, loss of biodiversity, and rising sea levels pose existential threats to communities and intensify global challenges.

Suggestions

Based on the findings from the study, the following suggestions are proposed to address global warming and mitigate its impacts on human beings:

- **Shifting towards Renewable Energy:** Promote the adoption of solar, wind, and hydroelectric power to reduce dependence on fossil fuels.
- **Energy Efficacy:** Advance technologies and policies to enhance energy efficiency in transportation, industries, and households.
- **Plantation:** Invest in large-scale tree-planting initiatives and restoration of degraded ecosystems to increase carbon sinks.
- **Prompt Warning Systems:** Install advanced systems to monitor and predict climate-related disasters, ensuring timely alerts to public.
- **Promote Public Awareness and Education:** through multi-media and educational programs to inform the public about the causes and consequences of global warming.
- **Encourage individuals to adopt sustainable practices,** such as reducing waste, conserving energy, and using public transport.
- **Develop the attitude of Reduce, Reuse, Recycle**

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