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The Danger of Global Warming in Our Society: Studying the Remedial Strategies for Human Convenience

Udoibeh, Nsikak John
Urban and Regional Planning Department, Faculty of Environmental Science, Niger Delta University, Wilberforce Island, Bayelsa State, Nigeria

Abstract
Global warming represents a major environmental crisis threatening human existence, biodiversity, and economic stability across the world. Driven largely by industrial emissions, deforestation, and fossil fuel usage, rising global temperatures have led to increased heat waves, flooding, food insecurity, and health complications. This paper examines the dangers of global warming in society and explores remedial strategies that enhance human convenience and sustainability. It emphasizes the importance of renewable energy, environmental education, climate policies, and community participation in mitigating climate change effects and protecting public welfare. The study concluded that a collective effort from governments, industries, and individuals is essential in addressing the dangers of climate change and ensuring a livable environment for human convenience and long-term survival. One of the recommendations was government should enforce strict environmental regulations, introduce carbon taxes, and monitor industrial emissions to reduce greenhouse gas output.

Keywords: Danger, Global Warming, Society, Human Convenience.

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INTRODUCTION

Global warming has become a major worldwide issue with far-reaching effects on both natural ecosystems and human cultures. It is primarily caused by the accumulation of greenhouse gases such as carbon dioxide, methane, and nitrous oxide in the atmosphere due to human activities like industrialization and fossil fuel combustion (IPCC, 2022).The continuous rise in global temperatures has intensified climate instability, leading to unpredictable weather conditions, frequent natural disasters, and environmental degradation (Adebayo & Ojo, 2021). In recent decades, the effects of global warming have been more apparent, particularly in developing nations where vulnerabilities are higher.Rising sea levels, severe droughts, desertification, and heat waves threaten food security, livelihoods, and public health (Nwankwo & Eze, 2023). According to the United Nations (2023), millions of people are currently at risk due to climate-related disasters, and rural communities dependent on agriculture face heightened challenges from soil depletion and water scarcity.

Human health is also significantly threatened by global warming. Extreme heat exposure, vector-borne diseases, respiratory infections, and mental stress have risen globally as temperatures increase (WHO, 2022). Vulnerable populations, including children, elderly people, and low-income communities, are disproportionately affected due to limited access to healthcare, climate-resilient infrastructure, and environmental protection resources (Okorie & Musa, 2021).Strong legislative frameworks, technological advancement, and public involvement are necessary to combat the threats posed by global warming. Countries must adopt renewable energy systems, improve waste management, strengthen environmental laws, and promote carbon-reduction strategies (Olawale & Shittu, 2022). The development of green technologies, like solar energy, electric cars, and sustainable agriculture, offers a great deal of promise for lowering emissions and improving human ease.In order to lessen the effects of global warming, public awareness and education are also essential. Individuals and communities need to develop environmentally conscious behaviors such as recycling, tree planting, reduced energy consumption, and supporting eco-friendly initiatives (Adekunle & Ibrahim, 2023). Societies can lower climate risks and create a sustainable, climate-resilient future for everybody by combining policy, technology, and community activities.

Concept of Global Warming

"Global warming" is the term used to describe the gradual rise in the average temperature of the earth. It is caused by the release of greenhouse gases into the atmosphere, including carbon dioxide, methane, CFCs, and others. According to NASA (2025), global warming refers to the long-term rise in the Earth’s average surface temperature caused by increasing concentrations of greenhouse gases such as carbon dioxide, methane, and nitrous oxide in the atmosphere. According to the EPA, the primary drivers of this increase are the burning of fossil fuels, industrial output, and deforestation. Global warming has also been linked to an increase in the average surface temperature of the planet since pre-industrial times, which is mostly caused by greenhouse gas emissions from human activity. The panel highlights that because of human activity, global warming has already increased by around 1.1°C over pre-industrial levels and is still getting worse (The Intergovernmental Panel on Climate Change IPCC, 2023).

Similarly, the World Meteorological Organization (WMO, 2025) describes global warming as the long-term heating of the climate system observed over the past century, particularly since the 1970s, mainly caused by human-induced greenhouse gas emissions. The organization claims that 2024 was the warmest year ever recorded which important evidence of the ongoing warming trend is. Stern (2023) views global warming as both an environmental and economic challenge arising from the accumulation of greenhouse gases that alter the Earth’s climate system. He argues that global warming poses a major threat to human well-being, economic growth, and natural ecosystems, and he calls for quick international cooperation to reduce emissions. Because of the industrial age's reliance on fossil fuels, the Earth's climate has undergone a significant change known as global warming. They stress that because the effects of the phenomenon are not equally divided between rich and poor countries, it is not simply a scientific problem but also a moral and social one (Anderson and Bows, 2024). It also refers to the consistent rise in the average global surface temperature brought on by high atmospheric concentrations of greenhouse gases. The organization highlights that concentrations of CO_2, CH_4, and N_2O reached an all-time high in 2024, indicating the increasing influence of human activities on climate systems (The American Meteorological Society AMS, 2025).

Causes of Global Warming in our Society

Fossil Fuel Combustion: The main cause of global warming is still the combustion of fossil fuels like coal, oil, and natural gas. Significant amounts of carbon dioxide (CO_2) and other greenhouse gases (GHGs) are released into the atmosphere as a result of this process, trapping heat and raising global temperatures. Despite breakthroughs in renewable energy, industrialization and energy

consumption continue to exacerbate CO_2 emissions. According to Zhang et al. (2023), fossil fuel-related CO_2 emissions accounted for over 75% of total anthropogenic GHG emissions in 2023, with coal consumption rising in emerging economies. Decarbonization of the energy sector is essential for keeping warming below 1.5°C, according to the Intergovernmental Panel on Climate Change (IPCC).

Deforestation: Deforestation lowers the planet's capacity to absorb atmospheric CO_2, which significantly contributes to global warming. As natural carbon sinks, trees release stored carbon when they are burned or chopped down, exacerbating the greenhouse impact. Nguyen et al. (2024) found that tropical deforestation emitted approximately 2.7 gigatons of CO_2 in 2023, primarily due to agricultural expansion and illegal logging in the Amazon and Southeast Asia. This process not only increases carbon emissions but also disrupts local climatic and hydrological cycles.

Industrial Emissions: Along with aerosols and black carbon, industrial operations release CO_2, methane (CH_4), and nitrous oxide (N_2O), all of which contribute to global warming. Particularly large emitters include the steel, chemical, and cement industries. Kumar & Li (2024) reported that industrial GHG emissions grew by 3.8% in 2024, with notable contributions from developing economies undergoing rapid urbanization. Innovations in low-carbon technologies remain insufficient to offset these increases.

Agricultural Activities: Methane emissions from cattle, rice production, and nitrous oxide from fertilizers are some of the ways that agriculture contributes to global warming. Smith et al. (2023) noted that methane from enteric fermentation remains the largest single agricultural emission source. This problem is made worse by contemporary intensive farming methods, such as monocropping and excessive fertilizer use, which reduce the soil's ability to store carbon.

Waste Management and Landfills: Through anaerobic decomposition, poor waste management and the buildup of organic waste in landfills release methane, a powerful greenhouse gas. Rodriguez et al. (2024) revealed that landfill methane accounted for nearly 11% of total anthropogenic CH_4 emissions in 2024. Inefficient recycling and the continued use of open dumpsites in developing countries exacerbate the situation.

Transportation Sector: CO_2 and NO_2 emissions are largely caused by the transportation sector, which is dominated by the burning of fossil fuels in cars, airplanes, and ships. Anderson & Lopez (2023) highlight that transportation emissions rebounded to pre-pandemic levels in 2023, with aviation alone responsible for 2.5% of total global CO_2 output. The transition to electric mobility is progressing but remains uneven globally.

Urbanization and Energy Consumption: Energy demand for housing, transportation, and industry is driven by rapid urbanization and is frequently fueled by fossil fuels. Chen et al. (2023) observed that urban areas account for over 70% of global CO emissions. Energy-intensive infrastructure and the urban heat island effect amplify local warming, while limited green spaces reduce carbon absorption.

Dangers of Global Warming in our Society

Global warming is one of the most serious environmental challenges confronting modern society. It refers to the gradual rise in the Earth’s average surface temperature caused by increased levels of greenhouse gases (GHGs) such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). These gases are largely released through human activities, including fossil fuel combustion, deforestation, and industrial processes. The consequences of global warming extend far beyond higher temperatures, posing severe risks to ecosystems, public health, food systems, economic development, and global stability. Since the early 21st century, scientists have warned that human activities—like burning fossil fuels, deforestation, and industrial production are the main drivers of this phenomenon (Gahlawat& Lakra, 2020).

One of the most critical dangers of global warming is the disturbance of global climate systems, which has led to more frequent and intense extreme weather events such as heatwaves, droughts, floods, and hurricanes. The Intergovernmental Panel on Climate Change (IPCC, 2021) reports a sharp rise in both the frequency and severity of these events due to increasing global temperatures. Extended heatwaves raise death rates and cause heat-related illnesses, particularly among elderly and vulnerable groups. For example, prolonged heat waves contribute to increased mortality rates, dehydration, and heatstroke, especially among the elderly and vulnerable populations. Similarly, severe droughts reduce water availability, threaten agricultural productivity, and increase the risk of wildfires, while intense rainfall and storms lead to flooding, displacement, and destruction of property (Deffenbaugh et al., 2020). Examples of climate-related disasters that damage medical facilities and worsen air pollution, which can lead to respiratory problems, are floods and wildfires. These effects put pressure on public health systems, particularly in developing nations with limited resources for adaptation. Global warming-related economic challenges also jeopardize livelihoods and national growth.

Another major threat associated with global warming is rising sea levels caused by the accelerated melting of glaciers and polar ice caps. As global temperatures rise, ice in the Arctic and Antarctic regions melts more rapidly, leading to coastal flooding, erosion, and the contamination of freshwater sources with saltwater. Coastal communities and low-lying island nations such as the Maldives and Tuvalu face the risk of submergence, potentially creating large numbers of environmental migrants (Nicholls et al., 2021). This suggests that global inequality is made worse by the economic and environmental effects of global warming. Another important impact of climate change is migration and relocation. Droughts, floods, and deserts have driven millions of people to flee their homes (Rowe, 2020).

Global warming also poses a serious threat to ecosystems and biodiversity. Rising temperatures disrupt natural habitats, placing immense pressure on plant and animal species. According to the World Wildlife Fund (WWF, 2022), nearly one million species are currently at risk of extinction as a result of climate change. Damage to forests, wetlands, and marine ecosystems reduces biodiversity and weakens essential ecosystem services such as air purification, water regulation, and pollination. As species migrate to cooler regions, ecological imbalances occur, often increasing competition between humans and wildlife for limited resources.

The impact of global warming on human health is equally alarming. Warmer climates expand the range of disease vectors like mosquitoes, increasing the spread of illnesses such as malaria, dengue fever, and cholera (Ebi & Hess, 2020). Heat stress affects heart health and reduces work productivity, while climate-related air pollution worsens respiratory conditions. Additionally, climate disasters that cause displacement and loss of income are linked to mental health challenges, including anxiety and depression. These health burdens disproportionately affect low-income and vulnerable populations, highlighting existing global inequalities.

Agricultural productivity is another sector heavily affected by global warming. Changing rainfall patterns, extreme temperatures, and frequent droughts reduce crop yields and threaten food security. Staple crops such as rice, wheat, and maize are particularly sensitive to temperature changes, leading to reduced food availability and rising prices (Lobell et al., 2011). This situation increases the risk of hunger, poverty, and social instability, especially in developing countries where agriculture is a key source of livelihood. Economically, global warming results in substantial financial losses due to damaged infrastructure, reduced farm output, and rising healthcare costs. The World Bank (2022) warns that without urgent intervention, climate-related disasters could push an additional 130 million people into poverty by 2030, making the cost of inaction far greater than the cost of mitigation.

Beyond environmental and economic consequences, global warming also threatens international peace and political stability. Scarcity of vital resources such as water and fertile land may fuel

conflicts and increase the number of climate refugees. The United Nations (UN, 2021) identifies regions such as Sub-Saharan Africa and South Asia as particularly vulnerable to climate-related instability. Such challenges could strain diplomatic relations and hinder global cooperation, global warming presents wide-ranging and interconnected dangers to society, affecting ecosystems, human health, food security, economic growth, and global peace. Rising temperatures have already triggered harmful effects that threaten the foundations of human civilization.

Remedial Strategies to Global warming in our Society for Human Convenience

Global warming needs to be tackled in order to safeguard human health, economic stability, and overall quality of life. Numerous scientifically proven strategies can be used to lower greenhouse gas emissions, increase environmental resilience, and enhance social well-being.

- **Transition to Renewable Energy**

Carbon emissions are greatly decreased when fossil fuels are replaced by renewable energy sources, including solar, wind, hydro, and geothermal. Renewable technologies can sustainably supply the world's energy needs and are becoming more and more economical. Large-scale adoption of renewable energy might reduce global CO_2 emissions by more than 70% by 2050, according to recent research (IRENA, 2022; Jacobson et al., 2021).

- **Afforestation, Reforestation, and Forest Conservation**

Tree-based techniques are essential for mitigating climate change because forests absorb significant amounts of CO_2. One of the most practical natural climate solutions is the possibility for global forest regeneration to collect more than 200 gigatons of carbon over the next few decades (Bastin et al., 2019).

- **Climate-Smart Agriculture (CSA)**

Climate-smart farming practices preserve food production while lowering emissions. Conservation tillage, organic soil additives, precision irrigation, and improved crop types are ways to reduce agricultural methane and nitrous oxide emissions. According to Smith et al. (2020), CSA can reduce greenhouse gas emissions from agriculture by 20–40%.

- **Sustainable Transportation Systems**

The transportation sector is responsible for over 25% of global energy-related emissions. Promoting electric cars, expanding public transportation, and encouraging walking and bicycling can all help reduce urban pollution and dependency on fossil fuels. By 2050, electric mobility alone can cut emissions from the transportation sector by as much as 72% (IEA, 2022).

- **Improved Waste Management**

Methane emissions from landfills are increased by inadequate waste management. Methane recovery technologies, composting, and recycling greatly reduce emissions. According to the World Bank, proper global waste management practices could reduce methane emissions by more than 60% (Kaza et al., 2021).

- **Energy Efficiency in Buildings**

A significant amount of the world's electricity is used in buildings. Building-related emissions can be reduced by up to 30% by implementing green architectural designs, smart HVAC systems, efficient lighting, and improved insulation (Ürge-Vorsatz et al., 2020).

- **Environmental Education, Policy, and Behavioral Change**

Communities are empowered to embrace low-carbon lifestyles through public involvement, climate literacy, and robust environmental policies. Long-term sustainability results are better and emissions trajectories are lower in nations with well-structured climate laws (Hölne et al., 2021).

➢ **Circular Economy Practices**

A circular economy strategy lowers emissions from industrial production and the demand for raw materials by emphasizing recycling, reusing, and minimizing trash. According to the Ellen MacArthur Foundation (2022), this concept could cut industrial emissions worldwide by about 45%.

CONCLUSION

Global warming poses serious risks to human health, economies, and environmental stability. Rising temperatures, extreme weather events, and resource shortages continue to disrupt daily life and threaten future generations. However, sustainable solutions such as renewable energy, environmental policies, public education, and technological innovation can significantly reduce its effects. A collective effort from governments, industries, and individuals is essential in addressing the dangers of climate change and ensuring a livable environment for human convenience and long-term survival.

RECOMMENDATIONS

1. Government should enforce strict environmental regulations, introduce carbon taxes, and monitor industrial emissions to reduce greenhouse gas output
2. Nations and communities should invest in clean energy technologies such as solar, wind, hydro and bioenergy to reduce dependence on fossils fuels and lower carbon emission
3. Schools, media and community organization should teach climate- conscious habits like recycling, energy conservation, tree-planting and sustainable consumption

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