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## Climate Change And Humans & Environmental Health

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Received: 24 Oct 2024 Accepted & Reviewed: 25 Oct 2024, Published : 31 Dec 2024

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### Abstract

Climate change is a pressing issue that is affecting not only our environment, but also our health as humans. The rise in global temperatures has resulted in a variety of consequences, from extreme weather events to the spread of diseases. It is imperative that we understand the connection between climate change and human and environmental health in order to take action and mitigate its impact. One of the most alarming effects of climate change on human health is the increase in extreme weather events. Heatwaves, hurricanes, and wildfires are becoming more frequent and severe due to rising temperatures. These extreme weather events can lead to physical injuries, displacement, and even death. In addition, they can also have long-term impacts on mental health, such as post-traumatic stress disorder and anxiety. It is crucial that we take steps to reduce our carbon footprint and combat climate change to prevent further damage to our health. Moreover, climate change is also contributing to the spread of diseases. As temperatures rise, disease-carrying organisms such as mosquitoes and ticks are able to survive and thrive in areas where they previously could not. This has led to an increase in vector-borne diseases, such as Lyme disease and malaria. Additionally, warming oceans and changing precipitation patterns have resulted in an increase in water-related illnesses, such as cholera and diarrheal diseases. These diseases can have devastating effects on human health and can also have a significant economic impact. Not only is climate change affecting human health, but it is also having a major impact on our environment. As temperatures continue to rise, ecosystems are being disrupted, causing species to become extinct or migrate to new areas. This can have a ripple effect on the entire ecosystem, impacting food sources and disrupting the delicate balance of our planet. Furthermore, air and water pollution, largely caused by human activities that contribute to climate change, are also detrimental to both human and environmental health. So, what can we do to combat climate change and protect our health? The most important step is to reduce our carbon footprint by transitioning to clean, renewable energy sources and promoting sustainable practices. Additionally, we can support organizations and policies that aim to combat climate change and protect our environment. It is also crucial to educate ourselves and others about the issue and its impact on our health.

**Keywords-** our environment, Climate Change, Humans, Environmental Health

### Introduction

Climate change is one of the most pressing challenges facing humanity today. It refers to significant changes in global temperatures and weather patterns over time. While climate change is a natural phenomenon, human activities, particularly the burning of fossil fuels, deforestation, and industrial processes, have accelerated its pace. The consequences of climate change are profound, affecting not only the environment but also human health. This article explores the intricate relationship between climate change and human and environmental health, examining the direct and indirect impacts, vulnerable populations, and potential solutions.

**Review of Literature:-** Numerous studies have documented the health impacts of climate change. According to the World Health Organization (WHO), climate change is expected to cause approximately 250,000

additional deaths per year between 2030 and 2050 due to malnutrition, malaria, diarrhoea, and heat stress (WHO, 2018). Research indicates that extreme weather events, such as hurricanes and floods, lead to immediate injuries and long-term mental health issues (Cox et al., 2017). Furthermore, air pollution exacerbated by climate change is linked to respiratory diseases and cardiovascular conditions (Pope et al., 2015).

The literature also highlights the indirect effects of climate change on health, such as food security and water availability. Changes in climate patterns can disrupt agricultural productivity, leading to malnutrition and foodborne illnesses (Myers et al., 2017). Additionally, the spread of vector-borne diseases, such as malaria and dengue fever, is influenced by changing climate conditions, which affect the habitats of disease-carrying organisms (Githeko et al., 2000).

**Objective of Study:-** The primary objective of this study is to analyze the multifaceted impacts of climate change on human health and the environment. By synthesizing existing research, this article aims to identify critical areas where climate change poses risks to health and to propose strategies for mitigating these risks.

**Understanding Climate Change:-** Climate change is primarily driven by the increase of greenhouse gases (GHGs) in the atmosphere, such as carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O). These gases trap heat from the sun, leading to a rise in global temperatures. The Intergovernmental Panel on Climate Change (IPCC) has reported that the Earth's average surface temperature has increased by approximately 1.1 degrees Celsius since the late 19th century, with significant implications for weather patterns, sea levels, and ecosystems.

### **Direct Impacts of Climate Change on Human Health-**

1. **Heat-Related Illnesses:** Rising temperatures contribute to an increase in heat-related illnesses, such as heat exhaustion and heat stroke. Vulnerable populations, including the elderly, children, and those with pre-existing health conditions, are at greater risk.
2. **Air Quality:** Climate change exacerbates air pollution, particularly in urban areas. Higher temperatures can increase the formation of ground-level ozone, a harmful air pollutant that can lead to respiratory issues, cardiovascular diseases, and premature death.
3. **Vector-Borne Diseases:** Changes in climate affect the distribution and behaviour of disease-carrying vectors, such as mosquitoes and ticks. Warmer temperatures and altered precipitation patterns can expand the range of diseases like malaria, dengue fever, and Lyme disease.
4. **Extreme Weather Events:** Climate change increases the frequency and intensity of extreme weather events, including hurricanes, floods, and droughts. These events can lead to injuries, fatalities, and mental health issues, as well as disrupt healthcare services.

### **Indirect Impacts of Climate Change on Human Health-**

1. **Food Security:** Climate change affects agricultural productivity through altered rainfall patterns, increased pests, and extreme weather events. Food insecurity can lead to malnutrition, particularly in vulnerable populations, and increase the risk of foodborne illnesses.
2. **Water Quality and Availability:** Changes in precipitation and temperature can impact water supply and quality. Contaminated water sources can lead to waterborne diseases, while droughts can limit access to clean water, exacerbating health issues.

3. **Mental Health:** The psychological impacts of climate change, including anxiety, depression, and post-traumatic stress disorder (PTSD), are increasingly recognized. Communities affected by extreme weather events may experience long-term mental health challenges.

4. **Displacement and Migration:** Climate change can force populations to migrate due to sea-level rise, extreme weather, and resource scarcity. Displaced individuals often face health challenges, including limited access to healthcare and increased exposure to violence and exploitation.

**Vulnerable Populations-** Certain populations are more vulnerable to the health impacts of climate change. These include:

1. **Low-Income Communities:** Economic disparities can limit access to resources, healthcare, and adaptive measures, making low-income communities more susceptible to climate-related health risks.

2. **Indigenous Peoples:** Indigenous communities often rely on natural resources for their livelihoods and cultural practices. Climate change threatens their traditional ways of life, leading to health disparities.

3. **Children and the Elderly:** Children are particularly vulnerable to the effects of climate change due to their developing bodies and immune systems. The elderly may have pre-existing health conditions that make them more susceptible to heat and other climate-related health issues.

4. **People with Pre-existing Health Conditions:** Individuals with chronic illnesses, such as asthma or cardiovascular disease, may experience exacerbated symptoms due to climate change-related factors like air pollution and heat.

### **Environmental Health Impacts of Climate Change-**

1. **Biodiversity Loss:** Climate change poses a significant threat to biodiversity, leading to habitat loss and species extinction. The loss of biodiversity can disrupt ecosystems and the services they provide, such as clean air and water, pollination, and disease regulation.

2. **Ecosystem Services:** Healthy ecosystems are vital for human health, providing clean air, water, and food. Climate change can degrade these services, leading to negative health outcomes.

3. **Soil Degradation:** Changes in climate can lead to soil erosion, nutrient depletion, and reduced agricultural productivity. Healthy soil is essential for food production and ecosystem health.

4. **Ocean Health:** Climate change affects ocean temperatures, acidity, and sea levels, impacting marine ecosystems and fisheries. Overfishing and habitat destruction further exacerbate these challenges, threatening food security and livelihoods.

### **Mitigation and Adaptation Strategies-**

Addressing the health impacts of climate change requires a multifaceted approach that includes both mitigation and adaptation strategies.

1. **Mitigation:** Reducing greenhouse gas emissions is crucial to slowing the pace of climate change. This can be achieved through transitioning to renewable energy sources, improving energy efficiency, and promoting sustainable transportation.

2Adaptation: Communities must adapt to the changes already occurring due to climate change. This includes developing early warning systems for extreme weather events, improving infrastructure resilience, and enhancing public health systems to respond to climate-related health issues.

3. Public Health Interventions: Strengthening public health systems to address climate-related health risks is essential. This includes increasing access to healthcare, improving disease surveillance, and promoting mental health support.

4. Community Engagement: Engaging communities in climate action and health promotion is vital. Local knowledge and participation can enhance resilience and ensure that interventions are culturally appropriate and effective.

5. Policy and Advocacy: Policymakers must prioritize climate change and health in their agendas. This includes integrating health considerations into climate policies, investing in research, and promoting international cooperation to address global challenges.

**Conclusion:-** Climate change poses significant threats to human and environmental health, with far-reaching consequences for individuals and communities worldwide. Understanding the complex interplay between climate change and health is essential for developing effective strategies to mitigate its impacts and adapt to a changing world. By prioritizing public health, engaging communities, and implementing sustainable practices, we can work towards a healthier future for both people and the planet. Addressing climate change is not only an environmental imperative but also a critical public health challenge that requires immediate and sustained action.

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