Climate Change: An Existential Threat to Human Life

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Abstract- Climate change is a critical issue that the world is currently facing, and India, being one of the largest and fastest-growing economies globally, is actively tackling this challenge. The escalating levels of greenhouse gases in the atmosphere are causing a rise in global temperatures, resulting in various adverse effects on the environment and human society. These effects include more frequent and severe natural disasters, melting ice caps, rising sea levels, and alterations in weather patterns. Over the years, there have been influential figures that have played a significant role in addressing climate change and advocating for sustainability. These individuals have been instrumental in raising awareness about the impact of climate change, implementing policies to reduce greenhouse gas emissions, and promoting the use of renewable energy sources. The objectives of this study is to investigate the present state of climate change and its effects on human existence, as well as to explore influential individuals who have made significant contributions towards tackling this urgent matter.

Keywords: Climate change, sustainability, renewable energy, greenhouse gases, human existence.

INTRODUCTION

The phenomenon of climate change is a natural occurrence that has existed long before the existence of humans. However, in the past, these processes were more harmonious and aided in maintaining a stable equilibrium in the atmosphere.

Climate change refers to the change in the environmental conditions of the earth. This happens due to many internal and external factors. The concept of climate change has been a part of Earth's natural history for millions of years. The Earth's climate has undergone significant changes over time, driven by various factors such as volcanic eruptions, changes in the Earth's orbit, and fluctuations in solar radiation. However, in recent decades, human activities have become the primary driver of climate change. The increase in greenhouse gas emissions and human activities such as deforestation, has led to a rise in global temperatures.

Climate change awareness has roots in the early 19th century when scientists noticed shifts in the Earth's climate caused by industrialization and fossil fuel consumption. It wasn't until the late 20th century that climate change became a major global concern. The United Nations Framework Convention on Climate Change (UNFCCC) was formed in the 1990s to organize worldwide actions against climate change, culminating in the Kyoto Protocol in 1997.

OBJECTIVES OF THE STUDY

1. The study aims to analyze the current status of climate change and its impact on human life.
2. To explore key figures who have played a crucial role in addressing the climate change crisis.

PRESENT STATE OF CLIMATE CHANGE AND ITS EFFECTS ON HUMAN EXISTENCE

The current scenario of climate change is grim. The world is experiencing more frequent and severe heat waves, droughts, floods, and wildfires. The rapid melting of the polar ice caps is causing a concerning increase in sea levels and the destruction of various habitats for numerous species. Additionally, the acidity levels in our oceans are rising, posing a significant threat to marine life and the delicate coral reefs. These transformations are already significantly affecting human existence, as communities worldwide are grappling with scarcities of food and water, as well as heightened susceptibility to natural calamities.

The 2023 IPCC Synthesis Report highlights the escalating impacts of climate change and the urgent need for action. Current global temperatures are above pre-industrial levels, resulting in more frequent and severe extreme weather events, which disproportionately affect vulnerable populations and

eco systems. These impacts are projected to worsen with further warming, leading to increased health challenges. The report emphasizes that limiting global warming to 1.5 degree Celsius remains achievable but requires immediate and sustainable reductions in greenhouse gas emissions. Achieving this goal involves transitioning to renewable energy and adopting low-carbon technologies across sectors such as transport, industry and agriculture. This report serves as a critical call to action, urging coordinated efforts to mitigate and adapt to climate change to ensure a livable future for all.

The World Health Organization (WHO) emphasizes that the impacts of climate change on health are not evenly distributed. It is the impoverished and marginalized communities, especially in low-income countries and small island developing states, that bear the brunt of these effects. Despite contributing the least to global greenhouse gas emissions, these regions face substantial health risks.

Climate change has made a significant impact to health. It is estimated that between 2030 to 2050, climate change will cause an additional 250,000 deaths annually. High temperatures raise the levels of ozone and other pollutants leading to 1.2 million deaths due to cardiovascular and respiratory disease annually. https://www.who.int/docs/default-source/wpro---documents/hae---regional-forum-(2016)/climatechange-factsheet-rfhe.pdf?sfvrsn=75d570fd_2

The State of the Global Climate 2023 report shows that records were once again broken, and in some cases smashed, for greenhouse gas levels, surface temperatures, ocean heat and acidification, sea level rise, Antarctic sea ice cover and glacier retreat. The World Meteorological Organization report confirmed that 2023 was the warmest year on record, with the global average near-surface temperature at 1.45 °Celsius (with a margin of uncertainty of ± 0.12 °C) above the pre-industrial baseline. It was the warmest ten-year period on record. https://wmo.int/publication-series/state-of-global-climate-2023

The threat posed by climate change to human existence on earth is a topic of intense debate and concern among scientists, policymakers, and the general public. India, the third largest emitter of greenhouse gases, was positioned among the countries with the lowest rankings in air quality, projected emissions, and biodiversity and habitat in the 2024 Environment Performance Index (EPI). India was placed 176th out of 180 countries, ranking higher than only Pakistan, Vietnam, Laos, and Myanmar in the overall index. This information was disclosed on 5 June by the Yale Center for Environmental Law and Policy and the Columbia Center for International Earth Science Information Network. The 2024 EPI consists of 58 indicators, covering aspects such as biodiversity, air pollution, air and water quality, waste management, emission growth rates, projected emissions, and more, categorized under ecosystem vitality, environmental health, and climate change. India managed to avoid being among the bottom ten countries only in the climate change category. The country showed relatively better performance in areas like solid waste management, forests, and agriculture. Nevertheless, its dismal scores in air quality, emissions, and biodiversity dragged down its overall ranking.https://theprint.in/environment/india-ranks-5th-from-bottom-in-environment-performance-index-2024

Indians are grappling with a significant challenge in the form of water scarcity due to climate change. India, already a water-stressed nation, witnesses numerous regions suffering from water shortages and depletion of groundwater. The issue is further aggravated by climate change, as altered rainfall patterns and rising temperatures contribute to a decline in water availability. The consequences of this predicament are extensive, affecting agriculture, the supply of drinking water, and sanitation, thereby impacting the population at large. Moreover, water scarcity can also give rise to conflicts over water resources, both domestically and with neighboring countries. Furthermore, a significant obstacle lies in the insufficient funding and resources allocated for initiatives aimed at adapting to and mitigating climate change, especially for at-risk populations like small-scale farmers and marginalized communities.

THE CONTRIBUTION AND IMPACT OF INFLUENTIAL INDIVIDUALS

In response to these challenges, there have been growing efforts to address climate change and develop solutions for a more sustainable future. One of the key figures in this field is former US Vice President Al Gore, who has been a leading advocate for climate

action through his work on the documentary 'An Inconvenient Truth' and the Climate Reality Project. Gore's efforts have helped to raise awareness about the urgency of addressing climate change and mobilize public support for action. One of the key figures in this field research is James Hansen, a former NASA Scientist who first brought global attention to the issue in the 1980s.

Bill Mckibben, along with others, established 350.org as a worldwide initiative that spans 188 countries. Their goal is to combat the development of new coal, oil and gas projects in favour of cleaner energy solutions. In addition to his activism, he is a successful writer with his book THE END OF NATURE being considered the mainstream work on climate change.

Other key figures in the field include scientists like Dr. James Hansen, who was one of the first to warn about the dangers of climate change, and organizations like the Intergovernmental Panel on Climate Change (IPCC), which provides policymakers with the most up-to-date scientific information on climate change.

Another influential figure in the field of climate change is Swedish environmental activist Greta Thunberg. Thunberg gained international attention for her school strike for climate movement, in which she called on world leaders to take urgent action to reduce greenhouse gas emissions. Thunberg's passionate advocacy has inspired millions of young people around the world to demand action on climate change from their governments and institutions.

David Attenborough is also a well known British figure and naturist in this field. His shows bring attention to how human society affects the natural world. His acclaimed series Blue Planet II raised public awareness about plastic recycling. In addition to raising awareness, business leaders such as Elon Musk, the CEO of Tesla Inc. have been at the forefront of developing renewable energy technologies. His vision has led to the widespread adoption of electric vehicles and solar power, helping to reduce dependence on fossil fuels.

Another influential individual in addressing climate change in India is Sunita Narain, the director general of the Centre for Science and Environment (CSE), a leading environmental research and advocacy organization based in New Delhi. Ms. Narain has been a vocal advocate for sustainable development and environmental justice in India, pushing for stronger regulations on air and water pollution, promotion of renewable energy sources, and conservation of natural habitats. Her work has helped to raise awareness about the health impacts of pollution and the urgent need for action to address climate change.

Similarly the policymakers such as former U.S. Secretary of State John Kerry have played a key role in negotiating international agreements on climate change. https://www.nytimes.com/interactive/projects/cp/climate/2015-paris-climate-talks

In addition to this, other influential individuals in addressing climate change include scientists, policymakers, business leaders, and activists who have worked tirelessly to raise awareness, drive innovation, and advocate for policy changes to address climate change. For example, Dr. Katharine Hayhoe, a climate scientist and communicator, has been a leading voice in bridging the gap between climate science and public understanding.

The Prime Minister Sh. Narendra Modi has consistently advocated for renewable energy and has established ambitious goals for the growth of solar and wind power capacity in India. Additionally, his administration has introduced numerous initiatives to encourage energy efficiency, decrease emissions from industries, and enhance forest coverage throughout the nation.

Overall, influential individuals have played a crucial role in advancing climate action, shaping public discourse, and driving innovation to address the urgent challenges posed by climate change. Their efforts have helped to raise awareness, mobilize action, and influence policy decisions at the local, national, and international levels, making a tangible difference in the fight against climate change.

PROGRESS IN COMBATING CLIMATE CHANGE IN THE YEARS AHEAD

There have been significant developments in the field of climate science and technology that offer hope for a more sustainable future. Renewable energy sources such as solar and wind power are becoming increasingly cost-effective and practical, reducing the reliance on fossil fuels and decreasing greenhouse gas emissions. Advances in energy efficiency,

transportation, and agriculture are also contributing to efforts to mitigate climate change and adapt to its impacts. From a positive prospective, addressing climate change has the potential to create new opportunities for innovation and job creation.

Despite these positive developments, there are still significant challenges to overcome in addressing climate change. The political and economic interests that benefit from the status quo continue to resist efforts to transition to a low-carbon economy. International cooperation on climate action has been hampered by geopolitical tensions and the lack of binding agreements that hold nations accountable for their emissions. Inequality and poverty also exacerbate the impacts of climate change, with marginalized communities bearing the brunt of environmental degradation and climate-related disasters.

It is evident that immediate and well-coordinated action is essential to combat the increasing threat of climate change. Nations worldwide need to intensify their endeavors to cut down on greenhouse gas emissions and shift towards sustainable energy sources. It is imperative to invest in climate adaptation and resilience strategies to safeguard vulnerable communities from the adverse effects of climate change. Technological advancements and policy innovations, such as carbon pricing and green finance mechanisms, will be pivotal in driving the shift towards a low-carbon future. Ultimately, addressing climate change will necessitate a united and determined effort from governments, businesses, and individuals to secure a sustainable and habitable future for everyone.

Looking to the future, there exist possibilities for advancements in addressing climate change which may result in a more sustainable and adaptable worldwide community. The increasing support for the climate cause, spearheaded by youth, indigenous groups, and grassroots entities, is a potent catalyst for transformation. With the ongoing rise in public consciousness, there is an opportunity to transition towards a fairer and more sustainable future that places emphasis on the well-being of individuals and the environment rather than financial gain.

CONCLUSION

Climate change poses an undeniable threat to both humanity and the planet. The historical background, notable figures, and impact on human life all emphasize the urgent need for action. By examining different perspectives and potential future developments, we can gain a deeper understanding of the complex and interconnected nature of the climate crisis. Only through collective and continuous efforts can we hope to mitigate the effects of climate change and ensure a sustainable future for future generations. Additionally, it is crucial to raise awareness about the significance of climate change and encourage individuals to adopt environmentally conscious choices in their daily lives. This can be achieved through education, outreach programs, and policy initiatives that promote sustainable living practices. Adopting measures like shifting to renewable energy sources, advocating for sustainable practices, and increasing awareness, we can strive towards a future that is more environmentally sustainable. It is important to emphasize that tackling climate issues cannot be simplified into a binary evaluation of success or failure.

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