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Identifying Disparities and Promoting Environmental Justice for Vulnerable Populations in India

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Abstract: This article touched upon various issues regarding vulnerability, disparities amongst community settings, and the effect of air pollution on the populace (low-income communities). Furthermore, the paper emphasized environmental ethics approaches like anthropocentric, nature-centric, and deep-ecological approaches. More so, it addresses the importance of handling these disparities, particularly from the geopolitical dimension, and recommends cross-border cooperation and accountability in promoting environmental justice in India.

Keywords: ecological backdrop; environmental justice; pollution's toll; human-nature nexus and generational burden

Introduction

India is a culturally diversified society located in the southern part of Asia, with great geographical terrain, landscape, and natural settings such as grassland, deserts, coastal lands, and wetlands, amongst others. [1] All of nature's gifts play a vital role in the lives of millions of Indians. The climate varies from tropical in the southern part to temperate in the northern part of India, with unique seasons that bring rain during certain times of the year. Because of its biodiversity, the country hosts millions of plant and animal species, many of which are endemic to the region. Nevertheless, India's distinct ecological backdrop leaves her vulnerable to an array of environmental predicaments, with atmospheric contamination (air pollution) representing a particularly significant obstacle, given the country's populace.

Air pollution poses an issue that greatly affects both personal and societal well-being, as well as entire ecosystems. [2] In India, the detrimental effects of air pollution are especially noticeable due to factors such as the encroachment of industries in regions and the subsequent emission of substantial amounts of harmful substances into the air. The growing number of vehicles, often running on outdated technologies, releases significant pollutants into the air. Traditional practises such as crop residue burning and the use of solid fuels for cooking contribute to air pollution. Construction sites generate dust and pollutants that add to the overall pollution burden and the overuse of chemically-based fertilisers in agricultural farming. [3] India's geographical setting contributes to the trapping of pollutants, especially during certain weather conditions, exacerbating pollution levels. Weak enforcement of environmental regulations and standards further exacerbates the pollution problem, amongst others.

One important aspect to consider when discussing air pollution is its impact on populations. Vulnerable groups, such as low-income communities, children, the elderly, and individuals with existing health conditions, are affected at a higher rate. [4] These communities often lack access to healthcare. Reside in areas with poor air quality due to socio-economic limitations. Rural areas, where practises like burning biomass are common, also face challenges in terms of air quality. Marginalized communities living near zones and busy roads experience exposure to pollutants, which can lead to

respiratory diseases, cardiovascular issues, cancer, and even premature death. Air pollution is a concern not only in India but worldwide as well due to its severe impacts on human health and the environment. Therefore, this article examines the issue of air pollution in India with a focus on addressing the disparities that affect vulnerable communities. Its aim is to advocate for justice. A comprehensive approach to tackle air pollution

Human-Centric vs. Nature-Centric Approach

Humans are at the centre of ethical considerations in the human centric approach to environmental ethics emphasising the wellbeing of human populations as the primary concern in addressing air pollution this perspective often leads to discussions about health and economic impacts on human beings low income communities children and the elderly face a higher risk of adverse health effects due to air pollution exposure their limited access to healthcare and resources exacerbates the challenges they face alternatively the nature centric approach places equal value on all elements of the ecosystem recognising the interconnectedness of all life forms air pollution not only harms human health but also damages ecosystems disrupts biodiversity and impacts the wellbeing of other species vulnerable plant and animal populations which contribute to ecosystem stability are also affected by air pollution this perspective calls for a broader consideration of the ethical implications of pollution for all living entities.[5]

Anthropocentric vs. Deep Ecology Approach

The anthropocentric approach prioritises human interests and wellbeing while acknowledging the importance of preserving the environment for future generations. This approach recognises the importance of addressing air pollution's impact on vulnerable human populations, but it often underplays the interconnectedness of the environment and the ethical responsibilities towards non-human entities. On the other hand, the deep ecology approach advocates for a profound shift in perspective, viewing humans as one of many equal components of the ecosystem. The deep ecology perspective emphasises the need to recognise the intrinsic value of all life forms and ecosystems. Emphasizing the need for a more harmonious relationship with nature, the deep ecology approach compels one to consider the wellbeing of all beings affected by pollution, including vulnerable populations and ecosystems. [6]

Geopolitical Approach

Air pollution transcends geographical boundaries often originating in one area and affecting regions far away[7] this raises complex ethical questions about responsibility and justice while some regions bear a disproportionate burden of pollution due to industrialization and urbanization others may reap economic benefits at the expense of environmental degradation. vulnerable communities in economically disadvantaged regions are more likely to suffer the brunt of such externalities highlighting the importance of a geopolitical approach that promotes cooperation accountability and a fair distribution of the environmental costs and benefits.

Environmental Sanitation Among Vulnerable Populations

Environmental sanitation can often be seen as a costly and challenging endeavor. Many of these communities face economic constraints that make it difficult to invest in sanitation infrastructure and technologies. The lack of access to proper sanitation facilities, including clean water and sanitation services, can have severe health implications, leading to the spread of waterborne diseases and other health issues. In some cases, the focus on immediate survival and basic needs might overshadow concerns about environmental sanitation, especially when there are limited resources available.

Pollution's Impact on Health

Industrial growth, urbanization, and insufficient waste management have led to contamination of water sources, affecting both the environment and the health of local communities [8]. The pollutants

released into the air and water have been associated with a higher incidence of health issues, including respiratory diseases, cardiovascular problems and cancer. Long-term exposure to air and water pollutants increases the risk of developing cancer and other chronic illnesses, particularly among vulnerable populations residing in these regions. Navigating the journey of pollution and health in India is the cancer express [9], which runs from Bhatinda, located in Punjab, to Ajmer, situated in the state of Rajasthan. It is a poignant reminder of the growing concern about pollution-induced health issues and the urgent need for environmental awareness and action. This train journey covers a significant distance, passing through towns and cities that have over time witnessed a rise in cancer cases. The connection between this train and the alarming rise in cancer diagnoses highlights the potential link between pollution, environmental degradation, and adverse health outcomes.

Paying for Pollution: Who Bears the Cost?

The cost of pollution is borne by both society at large and the vulnerable populations that suffer its most immediate consequences. The health impacts of pollution, such as respiratory diseases, cancer, and developmental issues, can lead to increased medical expenses for individuals and families. Vulnerable communities often lack access to quality healthcare making them more susceptible to the health burdens caused by pollution. Moreover, the economic costs of pollution-related health issues can indirectly impact the overall productivity of communities and the nation. Absenteeism from work or school due to illness along with increased healthcare costs can contribute to a cycle of poverty and limited opportunities for upward mobility while the industries contributing to pollution might benefit economically. The environmental and health costs are distributed widely, disproportionately affecting marginalised communities. This imbalance raises ethical concerns about environmental justice and underscores the need for a fair distribution of the costs and benefits of development.

Challenges for the Next Generation

The challenges that the next generation in India will face due to rising pollution levels are significant and alarming. The rise in pollution, particularly air pollution, has been linked to a range of health issues, including respiratory diseases, cardiovascular problems, and even cancer. The example of the cancer express [10] from Bhatinda to Ajmer highlights the gravity of the situation. Air pollution contains harmful particulate matter and pollutants that can penetrate deep into the lungs and enter the bloodstream. Prolonged exposure to such pollutants increases the risk of developing chronic diseases. The likelihood of future generations facing these challenges is high unless drastic measures are taken to mitigate pollution and promote sustainable practices. Children growing up in polluted environments are particularly vulnerable; their developing bodies are more susceptible to the adverse effects of pollution, which can have lifelong impacts on their health and wellbeing. The rise in cancer rates and other pollution-related health issues among young people and women highlights the urgency of addressing pollution to safeguard the health and future of the next generation.

Are We Playing with Nature? The Need to Shift Narration

The prevailing narrative around development often prioritises economic growth and technological advancement over environmental concerns. This narrative, which perpetuates anthropocentrism and short-term gains, contributes to the marginalisation of vulnerable populations. To address the disparities exacerbated by air pollution, a fundamental shift in narrative is necessary. This shift involves acknowledging the relationships within ecosystems, the significance of environmental justice, and the long-term consequences of unchecked pollution. Addressing these challenges entails strengthening and enforcing air quality standards, emissions regulations, and vehicle norms, which are crucial steps. Promoting renewable energy sources and cleaner technologies to reduce dependency on fossil fuels and mitigate emissions; sustainable urban planning to reduce congestion; encourage public transport; and limit emissions from construction and industries. Educating the public about the impacts of air pollution and ways to protect themselves is essential. Involving local communities in decision-making processes related to industrial activities and urban planning can help safeguard their health and wellbeing.

Adopting a holistic approach that prioritises long-term sustainability over short-term gains is essential to prevent further degradation of the environment and protect human health. Policies must be designed with a focus on environmental justice to ensure that vulnerable populations are not disproportionately affected. Collaboration with neighbouring countries to address transboundary pollution and develop joint solutions is also essential.

Conclusion

The Cancer Express serves as a powerful reminder, urging us to reflect on the connection between pollution, health, and the wellbeing of communities. It emphasises the importance of recognising the environmental costs of unchecked industrialization, urban development, and unsustainable agricultural practices. The train journey serves as a stark reminder that environmental degradation can have far reaching consequences that extend beyond geographical boundaries hence there is an urgent need for comprehensive policies that address environmental justice promote sustainable practises and prioritise the wellbeing of all citizens mitigating disparities especially among the vulnerable populations that are most affected furthermore adopting a nature centric perspective and embracing the principles of deep ecology will build a future where all beings including vulnerable populations thrive in a cleaner and healthier environment ethical responsibilities and collective effort must be recognised to ensure a just and sustainable world for all.

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