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The Intersection Between Climate Change and Human Inequality: A Narrative Review

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Introduction:

Climate change impacts have progressed dramatically over the last few decades and has become one of the largest threats to human and environmental health around the world. High concentrations of greenhouse gasses (GHGs) are causing weather instability, increased rainfall, droughts etc.¹ Developed countries such as the United States, Australia, and various European countries contribute the most to climate change through increased greenhouse gas emissions. However, low-income countries suffer greater adverse effects from climate change due to limitations in resources, exposure to high temperatures, weather variability, heavy reliance on agriculture, and inadequate health infrastructures. ¹This unequal balance of power has introduced the “free-rider” and “forced rider” concept into climate change discussions. Free rider countries contribute the highest GHG emissions but face limited repercussions. Forced rider countries contribute the least GHG emissions but are the most vulnerable to climate change.²

Purpose:

This narrative literature review examines the environmental and health impacts of climate change, as it compares its effects in low-income countries to developed countries.

Methods:

A narrative literature review was conducted using a web-based search from scientific databases. The databases utilized were: United National Library of Medicine, JSTOR, and SpringerLink. The reviewer assessed the following inclusion criteria:

- Peer-reviewed publications from 2012 – 2022
- The availability of the publication in English
- The categorization as original research, reviews, meta-analyses or systematic reviews.

The following search terms were used: “climate change, climate justice, health disparities, agriculture, and low income.”

Results:

A study conducted by Wei et al. revealed that developed countries contribute the highest to climate change, yet they continue to grow economically and face the least consequences from climate change.³

Low-income countries, on the other hand, are placed at disadvantage due to its heavy reliance on agriculture and lack of resources to combat the physical and health effects of climate change.⁴ In many African countries agriculture accounts for two thirds of the workforce and half of household dependency for income and food.⁵ As a result, reoccurring droughts in countries such as Somalia, Kenya, and Ethiopia have led to famine and malnutrition due to loss of livestock and farmland.⁶ These negative effects are expected to increase across African countries by 2100.⁶

Along with the agricultural effects, rising temperatures and increased rainfall also amplify the spread of infectious diseases and increases the rates of morbidity and mortality.⁷ Infectious diseases such as dengue, malaria, and cholera are easily transmitted by insects through food, water, and soil due to the sensitivity of various pathogens to weather variability.⁷

While developed countries possess the technological advances to delay the effects of climate change, developing countries lack the finances, resource, and healthcare infrastructures required to prevent and contain the consequences.

Discussion:

International climate change policies such as The Paris Agreement (which provides 192 participating countries plus the European union with set targets and goals to reach in order to reduce GHG emissions) can be effective if properly enforced.⁸ The transparency and cooperation of participating countries are crucial in reaching these set targets. Therefore, national/regional governments in participating countries must focus on creating policies which reduce GHG and energy emissions, increase sustainability, and focus on health. While The Paris Agreement provides the basis for decreasing climate change impacts, it’s rendered ineffective if participating countries lack the ambition to implement these policies.

Conclusion:

Ultimately, the only effective approach in diminishing consequences of climate change in low-income countries relies on the joint efforts of every nation. It’s imperative that every country creates and executes plans which will reduce GHG emissions, create eco-friendly alternatives, and fosters climate research. Though climate change is a global concern, addressing its disproportionate effects on low-income countries highlights the urgency to create climate solutions that can mitigate and adapt to this crisis.

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