The Relationship Between Climate Change, Air Pollution, and Human Health Risks: Literature Review

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Abstract

Climate change has emerged as one of the primary global challenges of this century, with significant impacts on the environment and human health. One of the critical consequences of climate change is the exacerbation of air pollution, which directly contributes to various health issues such as respiratory and cardiovascular diseases, along with other health impacts. This article aims to examine the relationship between climate change, air pollution, and human health risks by employing the Systematic Literature Review (SLR) method. The study analyzes 30 scientific articles published between 2020 and 2025 from journals ranked in quartiles Q1, Q2, Q3, and Q4, using the support of the Prisma Watase Uake framework. The review identifies mechanisms of interaction between climate change and air pollution. The findings reveal that climate change worsens air quality, particularly in urban areas, thereby heightening health risks for vulnerable groups such as children, the elderly, and individuals with chronic illnesses. The study underscores the importance of mitigation policies, such as transitioning to clean energy and managing air quality, in reducing the combined impacts of climate change and air pollution on human health. This article provides recommendations for future multidisciplinary research and emphasizes the need for collaborative efforts to understand and mitigate health risks associated with climate change and air pollution.

Keywords: air pollution; climate change; health risks; human health, Systematic Literature Review (SLR).