|  |  |  |  |
| --- | --- | --- | --- |
| Title | MATHEMATICAL AND STATISTICAL INSIGHTS INTO CLIMATE-INDUCED HEALTH CONSEQUENCES IN BANGLADESH | | |
| Author(s) Name | Ibrar Amin, Md. Shahab Uddin, Shraboni Biswas, Md. Mostakin Ali, Arifur Rahman, Md. Mortuza Ahmmed | | |
| Contact Email(s) | mortuza@aiub.edu | | |
| Published Journal Name | ICCESD 2024 Proceedings | | |
| Type of Publication | Conference Paper | | |
| Volume | NA | Issue | NA |
| Publisher | Dept. of Civil Engineering, KUET | | |
| Publication Date | February 2024 | | |
| ISSN | **978-984-35-5704-9 (ISBN)** | | |
| DOI | NA | | |
| URL | http://www.iccesd.com/proc\_2024/Papers/1046.pdf | | |
| Other Related Info. | NA | | |
|  | | | |
|  | | | |

|  |  |
| --- | --- |
| Abstract |  |
| This study offers a comprehensive exploration of the consequences of climate alteration on people’s health in Bangladesh, employing mathematical and statistical analyses. The global concern of climate alteration and its profound effects on public health are becoming increasingly urgent. Bangladesh, due to its vulnerability to a variety of climate-related challenges, serves as a crucial focal point for assessing the physiological and psychological health implications brought about by a shifting climate. By leveraging a robust dataset and employing rigorous mathematical and statistical methodologies, we investigate the intricate connections between climate-related variables and health outcomes in Bangladesh. We assess various aspects of physiological health, including heat-related illnesses, vectorborne diseases, and malnutrition, in conjunction with the evaluation of psychological well-being, which encompasses stress, anxiety, and mental health disorders. Our study uncovers persuasive evidence of climate alteration's adverse effects on the overall health of the Bangladeshi population. Elevated temperatures are associated with a rise in heat-related illnesses, and alterations in rainfall patterns are linked to the proliferation of vector-borne diseases. Furthermore, shifts in food security and access to clean water have far-reaching consequences for malnutrition rates. On the psychological front, our analysis highlights a significant correlation between climate-induced stressors and the prevalence of mental health disorders. This underscores the intricate interplay between environmental stressors and psychological well-being. The findings from this research lay the groundwork for a quantitative understanding of the multifaceted implications of climate alteration on health in Bangladesh. As climate alteration continues to exacerbate health challenges, the insights presented herein provide indispensable guidance for policymakers and public health professionals, aiding them in devising adaptive strategies and interventions aimed at safeguarding the well-being of the Bangladeshi population amidst an evolving climate landscape. | |