

Brief Note on Climate Diseases

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Abstract

Global climate change has had a considerable impact on infectious disease transmission in a number of ways. As with other climate change consequences on human health, climate change exacerbates existing inequities and challenges in controlling infectious diseases. Additionally, it increases the likelihood of several developing infectious disease concerns. Climate change may impact the spread of infectious diseases like dengue fever, malaria, tick-borne infections, leishmaniasis, and Ebola. There is no conclusive evidence that COVID-19 is getting worse or that climate change is to cause, despite continuous study. Global climate change has increased the number of instances of malaria and dengue, and this tendency is expected to continue as temperatures rise and more extreme weather events take place.

Keywords: Meteorological drought • Meteorological drought indices • Climate change • Changes in precipitation • Epidemics • Breeding and maturation

Introduction

New infectious diseases are anticipated to emerge as a result of climate change, and current diseases epidemiologies may shift as well. Infections are defined as the invasion of tissues by pathogens, their proliferation, and the host tissues reaction to the infectious agent and the toxins they release. Ailment brought on by an infection is referred to as an infectious disease. It is sometimes referred to as a communicable or transmissible sickness. Although there are other pathogens that can cause infections, bacteria and viruses are the most frequent ones. The immune systems of hosts can aid them in fighting disease. Mammalian hosts undergo an adaptive reaction after passing through an innate response, which commonly involves inflammation, in response to infections. Antibiotics, antivirals, antifungals, antiprotozoals, and antihelminthics in particular are employed. In 2013, 9.2 million persons, or 17% of all deaths, were caused by infectious diseases. The area of medicine that focuses on infections called infectious disease. Due to a lack of information addressing the health effects of global climate change, the world health organisation and United Nations environment programme established the Intergovernmental Panel on Climate Change (IPCC) in 1988. The intergovernmental panel on climate change has presented three assessment reports. The intergovernmental panel on climate change has released three assessment reports. The effects of climate change on potential health issues as well as early signs of actual health effects were all included in the IPCC's first assessment report, second assessment report, and third assessment report. The IPCC and other policy related assessments at the regional and national levels stimulated scientific study to understand the connections between climate and health.

Description

The increase in temperature is one clear effect of global climate change. Since the United States began keeping temperature records in 1895, the average temperature has increased by 1.3°F. Rising greenhouse gas concentrations are to blame for this. On the basis of this information, it is predicted that the United States yearly average temperature would climb. Extremes of heat or cold have an effect on the body by reducing its ability to regulate internal temperature and by escalating long term conditions including cardiovascular and respiratory diseases. Furthermore, respiratory issues are exacerbated by the air quality. Air quality declines as a result of climate change, which raises CO₂ levels, raises temperatures, and alters precipitation patterns. Climate change causes the beginning or length of the growth season to be extended, and it also causes an increase in pollen quantity, allergen city, and spatial dispersion. The growing season and the pollen are both impacted by these changes. Vector borne diseases are impacted by the survival, dispersal, and behaviour of vectors like mosquitoes, ticks, and rodents. These vectors transport bacteria, viruses, and protozoa from one carrier to another. Depending on vector host interactions, host immunity, and pathogen evolution, vectors and pathogens can shift and broaden their geographic ranges in response to climatic changes, which can change the rate at which new cases of the disease emerge. This means that the length of the transmission season and the geographic spread of infectious diseases are both impacted by climate change. Because they have influenced the development and fall of civilizations throughout history, vector borne diseases are a reason for concern. The world health organization takes climate change into account because of this. A significant study on the relationship between climate change and zoonotic disease was released in 2022. According to the study, there is a direct correlation between climate change and the outbreak of diseases in the last 15 years because it drives widespread species migration to new habitats and, as a result, fosters interactions between species that have never interacted before. In the following decades, 15,000 viruses will spread to new hosts, even in the case of negligible environmental changes. The hilly tropical regions of Africa and Southeast Asia have the greatest potential for overflow. Due to the vast number of bat species that are typically found there, Southeast Asia is the particularly vulnerable. The social and environmental determinants of health, such as clean air, safe drinking water, enough food, and adequate shelter, are impacted by climate change. According to predictions, between 2030 and 2050, climate change will result in an additional 250000 fatalities year from starvation, malaria, diarrhea, and heat stress. Our climate risk studies examine a wide range of carbon risk management and exposure measures, including stranded assets, clean technology investments, and scenario analysis. The deadliest effects of waterborne infections will be felt by age, financial resources, and location is significant factors. Disturbances of physical, biological, and ecological systems, including disturbances originating both domestically and abroad, can have an impact on public health in the United States. Increased respiratory and cardiovascular disease, injuries and premature deaths brought on by extreme weather events, changes in the prevalence and geographic distribution of food and water borne illnesses and other infectious diseases, and threats to mental health are some of the health effects of these disruptions. Youngsters as temperatures rise and water supplies become scarcer. Today, 160 million children reside in high drought severity zones, while more than half a billion live in places with extremely high flood incidence. As a result of their reliance on agriculture, grazing, and fishing, areas like the Sahel are particularly susceptible to the effects of climate change. Rains are expected to become even shorter and less regular in this desert region in the future, and unfortunately, it is warming at a rate 1.5 times faster than the global average. Armed organizations frequently take

advantage of social unrest in the Sahel as the weather becomes hotter and the impoverished increasingly poorer. The ability of coastal communities to adapt to the impacts of climate change and the hazards it poses to the shore is becoming more and more important. Urban coastal lowlands face a serious worldwide danger to their environment, economy, and health: Climate change.

Conclusion

One of the most dangerous effects of climate change is thought to be the increased risk of flooding brought on by both increasing sea levels and an increase in the frequency and intensity of storm surges.

This study's objective was to determine how well low lying urbanized towns in Malta were prepared socio-economically for the effects of coastal flooding by enlisting the help of stakeholders from three different sectors: The business community, local councils, and specialized experts from the public and private sectors. Additionally, the project involved gathering field elevation data for each urban shoreline in proportion to their height above sea level, the study also involved the field collecting of elevation data for each community.