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Editorial

Climate Change: A Rising Menace to Public Health

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With rising surface temperatures, melting ice and snow, rising sea levels, and growing climate unpredictability, there is scientific consensus that the global climate is changing. The rise in Earth's global average temperature acts as an indicator for global warming. The atmospheric heating and disruption induced by greenhouse gases significantly enhance the unpredictability of the weather and climate, as well as the severity, magnitude, and frequency of storms, droughts, floods, and extreme temperatures [1], thereby affecting human health. Infectious diseases would likely spread from animals to humans as a result of the thousands of new viruses that may emerge as a result of climate change by the year 2070. The likelihood of an increase in animal-to-human transmission of infectious diseases such as influenza, HIV, Ebola, and cirrhosis, which have all been transmitted from humans to animals over the previous few decades, is greatest on the Asian and African continents [2].

Although not all viruses will transmit to people or cause pandemics like the coronavirus, the number of cross-species viruses raises the likelihood of human infection. If the world warms by 2 degrees Celsius, over 3,000 animal species may migrate and spread viruses over the next 50 years. Bats account for the majority of novel viral sharing due to their unique dispersal capacity, and they are likely to share viruses along evolutionary pathways that may enable future emergence in humans Within mammals alone, cross-species virus transmission will occur over 4,000 times [2,3].

Nearly every country in the globe has seen an increase in the prevalence of chronic non-communicable diseases (NCDs), such as heart and circulatory diseases, stroke, cancer, type II diabetes, and chronic obstructive pulmonary disease. In both low- and high-income countries, more and more people are being affected by these diseases. Smoking, a high-fat, high-salt, and high-sugar diet that contribute to hypertension and obesity, as well as a lack of physical activity [4], are the primary risk factors for many of these diseases. Industrialization, urbanization, and globalization all contribute to changes in climatic conditions and other aspects of the environment. These changes, in turn, significantly increase the likelihood of these pre-existing risk factors for chronic diseases [5].

Climate change is bringing food and nutrition security at risk all around the world. The present food system needs to be completely reconstructed to produce healthy and sustainable diets if global temperatures are not to rise more than 1.5 degrees Celsius [6]. The raising of livestock has a greater impact on the environment than crop production; consequently, reducing meat consumption is recommended. Simply consuming less meat does not imply that a diet is healthier or more environmentally friendly. The types, quantities, and nutritional value of food that can be produced will be altered as a result of climate change [7].

In low-income countries, higher temperatures and CO_2 levels have been proven to impair the nutritional density of some basic crops. Although significant progress has been made in understanding healthy and sustainable diets for nutrition security, achieving the correct balance between climate change, nutrition, and society remains a challenge [8]. Climate change is a global issue that may affect physical and mental health of mankind. Rising temperatures may increase drought-induced farmer suicides and violent suicides. Drought can cause stress and mental illness. Increased frequency and intensity of disasters due to global warming might cause depression and Post-traumatic stress disorder (PTSD) [9]. Climate change and global warming may cause people to migrate, resulting in acculturation stress. It can also lead to a rise in the number of medical ailments, which is linked to psychological discomfort [10].

Injuries and deaths attributable to extreme weather events and heat waves; infectious diseases linked to changes in vector behaviour and water quality, and food contamination; allergic symptoms attributable

to increased allergen production; respiratory and cardiovascular disease attributable to worsening air pollution; and nutritional shortages attributable to changes in food production have been identified as potential health effects due to climate change [11]. Other obstacles include issues for mental status, and population dislocation. Changes in pests, parasites, and diseases that impact animals, livestock, crops, forests, and coastal marine species can alter the working mechanism of ecosystems, hence impacting human health [12,13]. There is broad agreement among scientists that the climate is changing. Extreme weather events, floods, and heat exposure may harm human health, as may a rise in allergies, respiratory, vector-borne, and waterborne illnesses, and dangers to food and water sources. People may suffer from stress and sadness due to mass migration and regional conflicts [13]. These phenomena pose a severe threat for public health. Despite contributing only a small proportion of the world's total greenhouse gas emissions, Nepal is now and will continue to bear the consequences of the effects of global warming. Climate change in Nepal poses a number of significant hazards, including rising temperatures, changes in the rainfall cycle, and the impact of glacial lake outburst floods and landslides induced by extreme weather. Although Nepal has developed a National Adaptation Plan for Health titled Climate Change and Health Strategy and Action Plan (2016–2020), it is predicted that millions of Nepalese are at danger from the effects of climate change, such as decreases in agricultural productivity, food poverty, strained water supplies, loss of forests and biodiversity, and infrastructural damage [14]. Therefore, a well-coordinated public health action to climate change is necessary for preventing or treating accidents or diseases, strengthening preparedness and risk reduction, managing uncertainty and optimizing environmental conditions, and promoting health outcomes globally as well as in Nepal.

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