



Public Health Threats in the 21st Century — Climate Change

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The local, regional, or global climatic conditions alter atmospheric compositions and chemical processes are implicated in increasing frequencies of extreme weather, which can also be intensified through varying urbanization, economic development, and human activities. Adverse health consequences related to such exposures are often of crucial concerns.

The number of reported weather-related natural disasters around the world has more than tripled since the 1960s, resulting in significant size of casualties. Meanwhile, several determinants of human health, such as clean air, safe drinking water, sufficient food and secure shelter, are highly evidenced for their linkage to the level of climate change. Cardiovascular and respiratory mortality are directly associated with extreme high air temperatures, in particular elderly people, while levels of ozone and other air pollutants will also increase, contributing to exacerbation of the above-mentioned diseases. In addition, water scarcity leads to drought and famine. Floods often contaminate freshwater supplies, elevate the risk of water-borne diseases and create breeding reservoirs for disease-carrying insects such as mosquitoes. Furthermore, based on the WHO estimation, climate change is expected to cause approximately 250,000 additional deaths per year between 2030 and 2050, from malnutrition, malaria, diarrhea and heat stress.

In terms of susceptibility, climate change will affect most the vulnerable populations, including children, pregnant women, elderly people, low-income families and people with chronic disease as they are considered to have higher propensity or predisposition. Areas lack with health infrastructure, predominantly in developing countries, will be the least able to cope without support to prepare and respond.

Reducing greenhouse gases emissions by better transport, food and energy-use options can result in better health, particularly through lower air pollution. Implementations of adaptation strategies, the effective preventive measure, and re-design the public health education programs accordingly will also be among top priority.