



Expert Group Meeting: Population Dynamics and Climate Change

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Population, Climate and Health

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Abstract

Global climate change is a remarkable and fundamental source of risks to human health. Climate change does not exist, and affect health, as a separate, single, exposure, but will exacerbate many key environmental determinants of the global burden of disease. Climate change should also be seen as one of an emerging set of global environmental changes occurring in response to the now-excessive pressures by the human population on Earth that are affecting human population health.

Some climate and weather factors act directly and predictably – such as the health effects of heat waves, or the physical and mental consequences of floods. Other health effects are mediated by climate-sensitive biological processes, such as changes in infectious disease transmission or changes to crop yields. Climate is ultimately the determinant of food and water availability. Decreases in food and water availability are potentially responsible for the largest burden of disease due climate change but are also the most uncertain because they are contingent on future social, economic, political and population factors.

This paper will briefly review the evidence of the impacts of climate change on population health, and the methods for estimating the scenario-driven quantitative estimates health and health-related outcomes. Assumptions regarding population growth and population distribution are important for many outcomes, including:

- Projections of future population size and distribution are important for the climate-change attributable burden of malnutrition
- Projections of future urbanization are important for estimates of the burden due to coastal flooding.
- Projections of population ageing are important for estimating future heat-related mortality as older persons are much more sensitive to environmental temperatures.

The implications of population assumptions for estimating future health effects will be discussed in detail.