Climate Change threatens the fundamental determinants of health:

**Air:** Over 70,000 excess deaths were recorded in the extreme heat of summer 2003 in Europe. By the second half of this century, such temperatures will be the norm in the region.

**Water:** Climate change, combined with population and economic growth, is likely to increase the number of people living in water-stressed water basins from about 1.5 billion in 1990 to 3–6 billion by 2050, and bring a 10–30-fold increase in the land area in extreme drought.

**Food:** In some African countries, yields from rain-fed agriculture are expected to be reduced by up to 50% by 2020, increasing the 3.5 million deaths each year attributable to undernutrition.

**Shelter:** Unless protection is improved, by 2080 sea level rise is expected to lead to a 10-fold increase in the number of people exposed to coastal flooding, to more than 100 million people a year, and increase the frequency of inland floods several times.

**Freedom from disease:** Climate change is projected to increase the population at risk of malaria in Africa by 170 million by 2030, and the global population at risk of dengue by 2 billion by the 2080s.
Protecting Health from Climate Change

Objectives

Health protection is identified by the general public, the health community, and now by climate negotiators, as a critical dimension of climate change. Damages to human health is identified as one of the three sets of "adverse effects" that the UNFCCC is designed to avoid. The work of the UN agencies in this area is guided by the UNFCCC, and by a 2008 World Health Assembly Resolution, in which countries requested support to assess and address the health consequences of climate change.

Activities

Although almost all Least Developed Countries identify health as a priority for climate change adaptation, less than 30% are considered to have an adequate health assessment or response plan. WHO, UNFCCC and the World Bank estimate that climate change will add at least US$ 2-12 billion in annual health costs in developing countries by 2020, but international funding for health adaptation is currently less than 1% of this figure. The IPCC has documented that well designed measures to mitigate climate change could bring significant public health benefits, offsetting much of the investment cost, but health is rarely considered in mitigation decisions.

UN agencies, led by WHO, provide policy, technical and practical support for countries to scale up health protection from climate change.

Recent achievements include:

- Design of regional frameworks to support health adaptation planning at the national level and definition of a "minimum package" of protective health interventions;
- Production and dissemination of technical guidance, covering issues from vulnerability and adaptation assessment, to protection directed towards specific climate-sensitive disease risks;
- Support for health vulnerability assessments in over 30 countries and for large-scale pilot projects on health adaptation to climate change in 18 countries;
- Assessment of potential health co-benefits from climate change mitigation measures in the energy, transport, housing, agriculture and health sectors.

Moving Forward

The necessary next steps are to translate the political mandate, strategic frameworks, and pilot projects into comprehensive programmes. UN agencies are therefore working to support:

- Planning and implementation of national health adaptation plans, with a focus on Least Developed Countries and Small Island Developing States;
- Definition of monitoring and evaluation frameworks, assessment of national baselines and monitoring of sustained impact in terms of improved health and poverty alleviation;
- Technical support including guidance, capacity building, and applied research on comparative cost-effectiveness and sustainability of protective interventions, and on designing mitigation measures that can also enhance health;
- Coherence across international climate and health objectives, by ensuring health representation on climate change policy bodies, and representation of climate and environment actors in health policy bodies.

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