

Piloting climate change adaptation to protect human health

A joint WHO/UNDP project, funded by the Global Environment Facility

The problem:

Climate change, including climate variability, has multiple influences on human health. Direct impacts resulting include the effects of rising temperatures and more intense heat waves and floods. These are often very dramatic, such as the 2003 summer heat wave which resulted in over 44,000 thousand excess deaths across Europe¹. However, potentially larger impacts may arise from indirect mechanisms. Warmer temperatures and a more variable climate can impact agricultural production and food availability, the availability of clean water and sanitation, and the transmission of vector and water-borne diseases. The World Health Organization (WHO) estimates that climate change may already be causing over 150,000 deaths per year and these risks are expected to increase substantially in the future^{2,3}. These health threats are overwhelmingly concentrated in the poorest regions of the world, who have contributed least to global climate change. Health infrastructures in many developing countries are already stretched beyond their capacity to supply even basic health protection. Unless adaptation mechanisms are implemented, climate change is likely to result in further demands on health services, and an increasing burden of disease.

While there is an increasing awareness that climate change poses significant health threats, health practitioners have historically concentrated on responses that deal reactively with climate-sensitive diseases, for example through curative treatment. Consequently, little attention has been paid to defining exactly what vulnerable and resource-poor developing countries can do differently, to implement a preventive strategy that minimizes adverse health impacts of climate change in a cost-effective manner, while at the same time helping to address current health problems.

The goal:

The goal of the project is to '*implement a range of strategies, policies, and measures that will decrease health vulnerability to current climate variability and future climate change*' in a range of countries with different health risks. This is the first global project that works directly with developing countries to design and implement practical measures to protect health under a rapidly changing climate.

The project:

The project will work initially with seven countries with different health vulnerabilities to climate change, from highland areas (Bhutan and Kenya), water-stressed areas (Jordan and

¹ Kosatsky, T., 2005. The 2003 European heat waves. *Euro Surveill*, 10(7).

² WHO World Health Report, 2002.

³ Climate change and human health- risks and responses. WHO/WMO/UNEP.

Uzbekistan), low-lying developing areas (Barbados and Fiji), and China, which encompasses a broad range of health vulnerabilities.

The project is currently in a one-year design phase. Implementation of the full project will run over three to five years, with a planned budget (direct funding and co-financing), of US\$24 million. The project will first focus on selecting and prioritizing long-term cost-effective adaptation strategies, secondly implementing these adaptations in the field, and finally synthesizing and sharing the lessons learnt. The project aims to bring about measurable changes in adaptive capacity of the pilot countries, including:

- Reduction in the burden of climate sensitive diseases;
- Reduction of the effect of climate change on human health;
- Integration of planning and implementation of practice across sectors; and
- Identification and application of short-term incentives to change behaviours to reduce long term vulnerability to health impacts.

The partners:

A wide range of stakeholders can contribute to protecting health from climate change. In each country, the project design is carried out by an intersectoral group of national actors. This is led by the health sector, but includes representatives of other Government Ministries and Agencies (e.g. Meteorology, Environment, Agriculture, or Water), as well as NGOs, researchers, health practitioners, and representatives of community groups that are most likely to suffer health impacts from climate changes.

At the global level, the project is supported by the United Nations Development Programme (UNDP), and the World Health Organization (WHO), with funding from the Global Environment Facility (GEF). UNDP acts as the GEF agency, and provides broad expertise in enhancing capacity to adapt to climate change. WHO acts as the executing agency for the project design phase, and supports the design, selection and implementation of actions to protect health under a changing climate. Other international and bilateral agencies are to be invited to become partners at an early stage in project development.

The future:

Adaptation to climate change, and particularly health adaptation to climate change, is at an early stage of development. This project is explicitly designed to pilot adaptation in a limited number of developing countries, that are subject to the broadest possible range of health vulnerabilities to climate change, but which have both commitment and capacity to respond. Once these adaptation approaches are better defined, the project has the long-term aim of rolling out these methods to other countries facing similar stresses, but with fewer resources.

Only nationally and locally driven actions, supported by a broad and coherent international strategy, can protect global public health from the multiple threats of a rapidly changing climate. This project is a first step towards this aim.