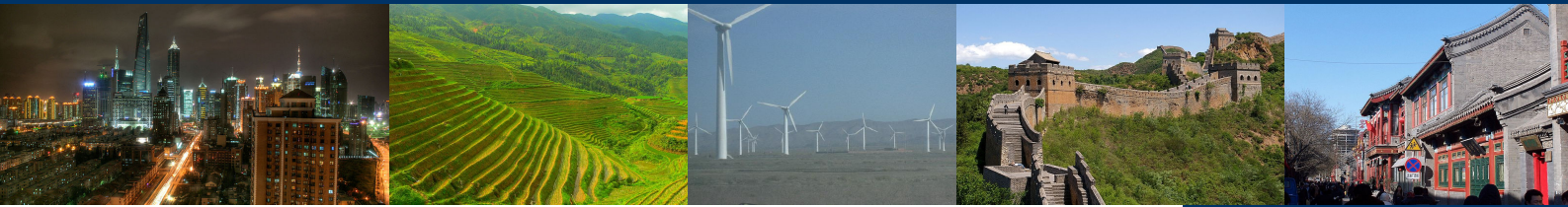


Climate Adaptation to Protect Human Health

CHINA



A Global Pilot

The climate change and human health adaptation project is a unique global initiative jointly implemented by WHO and UNDP. This novel project, piloted in seven countries, seeks to identify and share solutions to address health risks caused and exacerbated by climate change.

China Project Objective

To strengthen the national capacity to respond to the increased health risks due to heat waves in China.

Climate Change in China

China is located in the eastern part of Asia, on the west coast of the Pacific Ocean. It is the third largest country in the world. China has a prominent monsoon climate and experiences various other climate patterns as it covers a large landmass and has complex topography and changes in elevation. It has a range of temperature belts from south to north including equatorial, tropical, subtropical, warm temperate, temperate, and frigid-temperate zone. The subtropical, warm temperate and temperate zones occupy 70% of the mainland.

Climate change is projected to increase the frequency and intensity of heat waves, as well as the number of hot days during the summer, increasing morbidity and mortality unless effective adaptation measures are implemented to prepare the population.

Key Health Concerns and Vulnerability

China, with its fragile ecological environment, is vulnerable to the negative impacts of climate change. In recent years, China has experienced more frequent and higher intensity extreme weather events. Floods, heat waves, droughts and dust storms, which were once rare, now happen on a regular basis causing great harm to health and society. The largest direct impact of climate change on health in China is likely to be through heat; particularly in urban environments which have a substantial urban heat island effect, and where heat and cold are strongly related to morbidity and mortality.

China experienced extremely hot summers in 1988, 1990, 1994, 1998, 1999, 2002 to 2008, resulting in thousands of excess deaths. Mortality was particularly high among those 60 years of age and older, and heat waves present serious risks to infants. It is estimated that the number of deaths caused by the recorded heat waves is 2-3 times above normal summer periods.

Heat waves can specifically increase the morbidity and mortality due to cerebro-cardiovascular and respiratory system diseases, which are already higher in China than in any other country of the world. 45% of all deaths in China, are due to cerebro-cardiovascular diseases, and the associated health care cost and labour force loss are estimated to exceed US\$2,500 million per year. In the absence of protective measures, this burden is likely to increase with climate change and rising temperatures. However, effective early warning systems could both save lives now, and greatly reduce the influence of future climate change.

Project Structure

The Institute for Environmental Health and Related Product Safety, CDC China, WHO, and UNDP will guide and supervise the project progress. The Ministry of Health (MoH) will head a steering committee that will include experts from the Ministry of Finance, the Environmental Protection Bureau, and the National Meteorological Bureau as well as relevant experts from agriculture, water conservation, and other sectors.

China is one of seven countries taking part in this Global Pilot. The seven countries, Barbados, Bhutan, China, Fiji, Jordan, Kenya and Uzbekistan, together represent four distinct environments (Highlands, Small Islands, Arid Countries and Urban environments,) and their related health risks. For more information visit the website at www.who.int/globalchange/projects/en

Project Facts

Donor: GEF Special Climate Change Fund (SCCF)

Funding: 550,000 USD

Time frame: 2010—2014

Location: Three large cities in China, each with a population over 6 million:

- ◆ Harbin
- ◆ Nanjing
- ◆ Guangzhou

Key Stakeholders:

- ◆ Ministry of Health of the People's Republic of China
- ◆ China Centre for Disease Control and Prevention
- ◆ Local governments, including health, meteorological, education, transportation, finance departments
- ◆ Pilot communities

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World Health Organization



BARBADOS

BHUTAN

CHINA

FIJI

JORDAN

KENYA

UZBEKISTAN

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Project Scope

The project will focus on reducing the impacts of climate change on cerebro-cardiovascular diseases in the three project cities through the implementation of heat wave forecasting and early warning systems designed to protect human health. The project will do this with a focus on the following areas of capacity development:

- ◆ **Data collection** - Additional data collection and research is needed to quantify the health risks of climate change and to identify effective and efficient adaptation options.
- ◆ **Data sharing** - There are still some gaps in data sharing among environmental, meteorological and health agencies. Therefore a scientific research database will be created using national and international meteorological and disease data; this database will provide accurate, prompt, and authoritative disease monitoring and will produce products relevant for disease prevention.
- ◆ **Communication and Cooperation** - The project will strengthen communication between decision-makers and the public health system. It also will encourage and support Chinese scientists to participate in international activities to reduce the health impacts of climate change.
- ◆ **Public awareness** - The project will address the current limited public knowledge of the health impacts of climate change, and the actions individuals should take to protect themselves, particularly during heat waves.

Expected Benefits

The most significant benefit of implementing effective adaptive measures will be the reduction of the incidence and mortality of the cerebro-cardiovascular diseases, thus improving people's quality of life and greatly reducing the social-economic burden.

Other benefits include:

- ◆ Facilitating the harmonization of health issues with economic development.
- ◆ Strengthening health education and training on the impacts of climatic change on the environment and human health.
- ◆ Increase awareness of the potential impacts climatic change across various media.

Project Outcomes and Outputs

Outcome 1: An early warning system is established for impending heat waves to protect people at risk of cerebro- and cardiovascular diseases

1.1: Establishment of a multi-sectoral cooperation mechanism of health sector, meteorological bureau and environmental protection bureau.

1.2: Collection and analysis of information on the relationship between meteorological and health data to establish a model to forecast health risks for vulnerable groups.

1.3: Design of a system for “early forecast, early prevention and early treatment”, providing graded forecasts of the severity of health risks in the project community.

Outcome 2: Systemic and institutional capacity of health sector will be improved to respond to climate-sensitive health risks

2.1: Setting up a steering committee for actions during heat waves, and implementing resource sharing, information and skill exchange.

2.2: Community medical consulting personnel trained with respect to health risks during climate extremes, necessary health consultations and services, and self-protection measures.

Outcome 3: Improve the adaptation capacities and emergency medical plans implemented for cases of cerebro- and cardiovascular diseases during heat waves.

3.1: Emergency plan and support system established for high risk people in the project sites.

3.2: Public awareness raised through a coordinated media campaign, including video-casts with health education lectures, and regular update of health education and consulting services in communities and schools.

3.3: Communication and education provided to Government and other decision makers on health risks associated with extreme heat, and effective behavioural responses.

3.4: Strengthened bilateral and multilateral cooperation through the participation and communication of decision-makers, government officers and researchers in international exchange.