Climate Change and Health

This document was submitted to the Meeting of the Advisory Committee (ACM) held in SEARO, 30 June – 3 July 2008 for its review and comments for consideration by the Twenty-sixth Meeting of Ministers of Health.

The warming of the planet will be gradual but the frequency and severity of extreme weather events, such as intense storms, heat waves, droughts and floods could be abrupt – the consequences for health will be dramatic.

Populations of Member countries in the South-East Asia (SEA) Region are disproportionately more vulnerable to the impacts of climate change. The Sixty-first World Health Assembly adopted a resolution requesting WHO and Member States to take urgent action on climate change. The SEA Region has developed a regional action plan to protect human health from the effects of climate change. The goal of the plan is to build capacity and strengthen health systems. Mitigating the effects of climate change can have direct and immediate health benefits. Adaptation is needed: failure to respond will be costly in terms of disease, health-care expenditure and lost productivity.

The ACM made the following recommendations:

**Action by Member States**

(1) Increase financial support to strengthen health programmes that are already addressing climate-sensitive diseases and environmental health;

(2) Develop and ensure swift implementation of integrated national action plans focussing on concrete public health interventions that would mitigate the impacts of climate change on health; and

(3) Collaborate with other sectors and stakeholders and actively participate in ongoing processes that are addressing climate change issues to streamline health concerns at national, regional and global levels, including the United Nations Framework Convention on Climate Change.

**Action by WHO/SEARO**

(1) Support countries of the SEA Region in increasing awareness and collecting evidence-based data of the health consequences of climate change;
Background

1. Climate change will affect, in profoundly adverse ways, some of the most fundamental pillars of health: food, air and water. The warming of the planet will be gradual but the frequency and severity of extreme weather events, such as intense storms, heat waves, droughts, floods could be abrupt, and the consequences will be dramatically felt. The most severe threats are to developing countries, with direct negative implications for the achievement of the health-related Millennium Development Goals, and for health equity.

2. The health sector, at international, national and subnational levels, has the responsibility, political leverage and staff with many of the necessary skills to protect the public from climate-related threats to health. Health professionals bring an understanding on how to reduce and prevent climate-related disease, injury and death.

3. During the last 100 years, human activities, particularly related to burning of fossil fuels, deforestation and agriculture, have led to a 30% increase in the carbon dioxide (CO$_2$) levels in the atmosphere causing trapping of more heat. The Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC)\(^1\) states:

   - “Most of the observed increase in globally-averaged temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations;
   - Eleven of the last 12 years (1995–2006) rank among the 12 warmest years in the instrumental record of global surface temperature; and
   - The global average sea level rose at an average rate of 1.8 mm per year from 1961 to 2003. The total rise in the sea level during the 20th century is estimated to be 0.17 m.

4. The AR4 report also draws on projections of future changes in climate:

   - “The projected globally-averaged surface warming for the end of the 21st century (2090–2099) will vary between 1.1 and 6.4 degrees Celsius. The projected rate of warming is greater than anything humans have experienced in the last 10 000 years;

\(^1\) More at: [http://www.ipcc.ch/](http://www.ipcc.ch/)
• The global mean sea level is projected to rise by 9.88 cm by the year 2100;
• It is very likely that hot extremes, heat waves and heavy precipitation events will continue to become more frequent; and
• It is likely that future tropical cyclones (typhoons and hurricanes) will become more intense, with larger peak wind speeds and heavier precipitation”.

5. At the 5663rd meeting of the United Nations Security Council held at New York, on 17 April 2007, Mr Ban Ki-Moon, United Nations Secretary-General, said that, according to the most recent assessments of the IPCC, the planet’s warming was unequivocal, its impact was clearly noticeable and it was beyond doubt that human activities had been contributing considerably to it.

6. WHO estimated that the warming and precipitation trends due to anthropogenic climate change of the past 30 years claimed over 150,000 lives annually. In 2000, of the 154,000 deaths occurring globally that were attributable to climate change, about 77,000 occurred in countries of the South-East Asia (SEA) Region.

7. Populations within the SEA Region remain highly vulnerable to a wide variety of health effects from climate change; the Region is also a fast growing contributor to greenhouse gases (GHG).

8. WHO’s Executive Board at its 122nd session in January 2008 reviewed the Secretariat’s report and recommended to the 61st World Health Assembly the adoption of a resolution requesting the Director-General to take action on a number of issues for addressing the direct and indirect effects of climate change on health.

Regional perspective and recent actions

9. The health risks posted by climate change are global, and difficult to reverse. Recent changes in climate in the South-East Asia Region have had diverse impacts on health.

10. The WHO Regional Office for South-East Asia, in collaboration with WHO headquarters, started addressing the issue of climate change and health by co-convening a global meeting in Maldives in 2003. This event was oriented towards the urgent needs of Small Island States.

11. Together with the same partners, namely, the World Meteorological Organization, the United Nations Environment Programme and the United Nations Development Programme, the WHO Regional Offices for South-East Asia and the Eastern Mediterranean organized an inter-regional workshop on Human Health Impacts from Climate Variability and Climate Change in the Hindu Kush–Himalaya Region”, in India in October 2005. This event was oriented towards the needs of Himalayan countries in the regions.

12. The members of the WHO/UNEP regional Thematic Working Group (TWG) on climate change, ozone depletion and ecosystem change took part in a WHO biregional “Workshop on Climate Change and Health in South-East and East Asian Countries”, which was held in Kuala Lumpur, Malaysia from 2 to 5 July 2007. The participants, the TWG members and others reviewed the methodologies for country vulnerability assessment and mitigation, and developed a regional response to reduce the burden of disease from climate change in Asia. Participants felt the need to strengthen capacity for assessment, research and communication on climate-sensitive health risks. They recommended that awareness on health impacts of climate variability and change needed to be raised among political, financial and community leaders, health practitioners, nongovernmental organizations, other sectors and the general public.

13. At the 25th Meeting of Ministers of Health (1 August 2007, Thimphu, Bhutan) it was concluded that climate change posed a major threat to health security in the SEA Region. The Ministers called upon WHO to, inter alia, “support the formulation of a regional strategy to combat the adverse health impacts of climate change”. The Health Ministers also requested WHO to select “climate change and health” as the topic for World Health Day.

14. At its 58th session in September 2007, the Regional Committee for the Western Pacific deliberated on the issue of climate change and health, following a keynote speech on the subject, and decided that a regional strategy would be discussed at the 59th session in September 2008.
15. Subsequently, the Director-General of WHO decided that “Protecting Health from Climate Change” would be the topic for World Health Day 2008. All the Member countries of WHO’s South-East Asia Region observed and celebrated World Health Day in a truly befitting manner.

16. In November and December 2007, the WHO Regional Office for South-East Asia supported four national workshops on human health and climate change in Bangladesh, India, Indonesia and Nepal.

17. Taking all these aspects into consideration, the WHO regional offices for South-East Asia and the Western Pacific, in December 2007, organized a regional workshop of representatives of all the Member countries of the Region in Bali, Indonesia, which prepared a regional action plan to protect human health from the effects of climate change. The goal of the regional action plan is to build capacity and strengthen health systems. The first step will be to increase awareness of health consequences of climate change.

18. Most countries in the South-East Asia Region have set up national expert committees, often under the direct supervision of prime ministers, to formulate national plans for mitigation and adaptation to climate change. The active participation of the health sector, however, needs to be improved.

19. Bhutan aims to strengthen existing health programmes that are already addressing climate-sensitive health outcomes by 2009. Bhutan’s National Adaptation Programme of Action is now accessible and available in the public domain.

20. In Indonesia, the National Climate Change Intersectoral Committee, led by the Ministry of Environment with the Ministries of Forestry, Energy, Industry, Agriculture, Health, Planning Board, Public Work and Universities as co-members, is currently incorporating health concerns and actions related to health implications from climate change into the new Five-Year National Development Plan. At provincial and district levels, these concerns are being streamlined into the Healthy Cities Programme.

21. Currently, Sri Lanka is focusing on a series of activities that will benefit human health in the long run. The Ministry of Environment has formulated a High Level Committee, including health professionals to study the situation and make recommendations.
22. Thailand is taking action to reduce GHG emissions in absolute terms by incorporating state-of-the-art technologies and a careful adoption of energy-efficiency measures. The Ministry of Natural Resources and Environment (MONRE) has developed Thailand’s Strategic Plan on Climate Change (2008–2012) and has six strategies: (1) Build capacity to adapt and reduce vulnerabilities to climate change; (2) Promote greenhouse gas mitigation activities based on sustainable development; (3) Support research and development to better understand climate change, its impacts and adaptation and mitigation options; (4) Raise awareness and promote public participation; (5) Build capacity of relevant personnel and institutions and establish a framework of coordination and integration; (6) support international cooperation to achieve the common goal of climate change mitigation and sustainable development. WHO is working closely with MONRE on climate change and its effect on human health.

Perspectives

23. Health impacts will be disproportionately greater in vulnerable populations. In the SEA Region, people at greatest risk include the very young, the elderly, and the medically frail. Low-income countries and areas where malnutrition is widespread, education is poor and infrastructures are weak will have most difficulty adapting to climate change and related health hazards. Vulnerability is also determined by geography, and is higher in areas with a high endemicity of climate-sensitive diseases, water stress, low food production and isolated populations. The populations considered to be at greatest risk are those living on islands, mountainous regions, water-stressed areas, megacities and the coastal areas.

24. Mitigating the effects of climate change can have direct and immediate health benefits. A number of proposed mitigation strategies may improve health. For example, reducing the reliance on coal-fired generation of power will reduce air pollution and associated respiratory and cardiopulmonary disease and death. Providing opportunities for the use of mass transport (bus, metro) can also reduce levels of ambient air pollution, traffic-related injury and death, and active transport (bicycling and walking) would bring down obesity rates. Production and transport of food are major emitters of greenhouse gases.

25. Adaptation is needed because some degree of climate change is inevitable, even if greenhouse gas emissions were abruptly capped. Failure to respond will be
costly in terms of disease, health-care expenditure and lost productivity. Estimated direct and indirect health-care costs and lost income due to several environmental illnesses (e.g. those caused by air pollution) often match or exceed the expenditure needed to tackle the environmental hazard itself.