Building health systems resilience to climate change

Health is sensitive to climate change. The risks to health from climate change include mortality and morbidity due to extreme heat, injuries and mortality due to extreme weather events, vector- and waterborne diseases due to changes in the ecosystem, respiratory diseases due to increased emissions, and mental health and nutritional issues. Health-care facilities are also vulnerable to climate change and extreme weather events.

A well-prepared and responsive health system is crucial for preventing and minimizing the health risks posed by climate change. Member States have recognized these risks and have initiated advocacy and capacity-building efforts, developed health national adaptation plans and conducted a few research studies. The level of response varies in countries based on the availability of funds. Much remains to be done to ensure that climate change is mainstreamed in overall health policy, planning and programming.

An informal consultation to prepare for the Ministerial Roundtable on building health systems’ resilience to climate change was held in Male’, Maldives on 14–15 May 2017. All Member States of the WHO South-East Asia Region participated in the consultation. The consultation proposed for a draft Ministerial Declaration and a Framework for Action on Building Health Systems Resilience to Climate Change. The Minister of Health, Maldives circulated the drafts to the other Health Ministers of Health of SEAR for their review and feedback on 20 June 2017.

The drafts were presented to the High-Level Preparatory (HLP) for review and recommendations. The recommendations made by the HLP to finalise the Declaration and Framework for Action were:

Actions by Member States


3) Prepare talking points for health ministers for the Ministerial Roundtable at the Seventieth Session of the Regional Committee, taking into account the meeting format and issues to be addressed by the honourable ministers.

**Actions by WHO**

1) Support the Ministry of Health of Maldives in collating feedback and finalizing the Declaration and Framework for Action.

2) Coordinate and communicate with Member States on the final preparations for the Ministerial Roundtable.

The Male’ Declaration and Framework for Action for building health systems resilience to climate change are submitted to the Seventieth Regional Committee for its consideration and endorsement.
Introduction

1. There is growing body of evidence demonstrating that climate change has affected some aspects of human health. This is the result of increased atmospheric concentrations of greenhouse gases generated by human activity. More effects are likely to occur in the future, especially in developing countries. The Fifth Assessment Report of the Inter-Governmental Panel on Climate Change (IPCC AR5) suggests that climate change can affect health in three ways:

   - directly through changes in the frequency of extreme weather events such as intense heat waves, floods, sea-level rise and storms. The health risks include heat-related illnesses and deaths, and injuries and death from extreme weather events;
   - indirect impacts of climate change on health, mediated through changes in ecosystems. Of greatest concern are the increased risks of waterborne diseases, vector-borne diseases, and cardiovascular and respiratory diseases (due to air pollution);
   - indirect impacts mediated by human systems, mainly through increased risk of undernutrition from diminished food production in poor regions, occupation health issues and mental stress.

2. In addition to the impacts on the health of people, climate change and extreme weather events can also cause damage to health facilities. This has the potential to disrupt health services, as road blocks may limit the accessibility of supplies; essential services needed for running health facilities, such as energy and water supply, may be interrupted, and patients' accessibility to health facilities may be obstructed.

3. The rural poor, urban slum dwellers, populations of small islands, mountain people and those living in coastal areas will be the most affected. The effects of climate change will be felt mostly in countries where health systems are weak, and the capacity to adapt and respond to climate change are low.

4. Recognizing the impact of climate change on health, Member States of WHO adopted a World Health Assembly resolution WHA61.19 on climate change and health in 2008. Subsequently, Health Ministers of the WHO South-East Region passed a resolution (SEA/RC62/R2) during the Sixty-second Regional Committee Meeting in 2009. Article 1 of the 1992 United Nations Framework Convention on Climate Change (UNFCCC) refers to health being one of the sectors that will be adversely affected by climate change, and Article 4 refers to the commitments of countries to assess the health implications of adaptation and mitigation policies. The landmark Paris Agreement on climate change mentions the right to health in the Preamble and the Agreement explicitly recognizes the health impacts of climate change.

5. The 2030 Sustainable Development Goals (SDGs) have a dedicated SDG goal (SDG 13) on climate change—“Take urgent action to combat climate change and its impacts” and three of the SDG13 targets are applicable to the health sector.
Current situation

6. In the South-East Asia Region, Member States are experiencing an increased frequency and intensity of cyclones, floods, landslides, heat waves, droughts and sea-level rise. Floods in Myanmar in 2015, and in the Democratic People’s Republic of Korea and Sri Lanka in 2016 have taken many lives, injured many and displaced thousands of people. A study in India showed an increase in heat waves. In 2015, over 2500 people died due to a heat wave in south India. Droughts have affected parts of India and Sri Lanka in recent years; this impacts on crop production, increasing the risk for undernutrition as well as water- and foodborne diseases.

7. Contamination of drinking water by salt water intrusion due to sea-level rise is another issue faced by Bangladesh, parts of India, and Myanmar, Maldives, Sri Lanka and Thailand, while countries such as Bhutan and Nepal have reported drying up of water sources.

8. The Democratic People’s Republic of Korea has reported problems such as bronchial asthma and silicosis due to the “sandy dust” phenomenon, which is triggered by dry weather and drought conditions.

9. All Member States are endemic to many climate-sensitive vector-borne diseases such as dengue, malaria, chikungunya and Japanese encephalitis (JE). A study from Nepal showed that a 1°C increase in mean temperature increased the incidence of malaria by 25%. A study from Bangladesh showed the disproportionate health risks from climate changes of vulnerable population groups, which manifest as malaria, dengue, childhood diarrhoea and pneumonia. A sentinel surveillance conducted as part of a pilot project on health adaptation in Bhutan found the Culex and Anopheles vectors at very high altitudes (>2100 m).

10. Health-care facilities and health services in all Member States are vulnerable to climate change and extreme weather events. These exert effects in several ways, such as damage to the health infrastructure, blocked access to facilities and disrupted energy, water and other services, which are essential for running health-care facilities.

Current responses and challenges

11. WHO has been supporting Member States in creating awareness on the impacts of climate change on health, building their capacity for developing health adaptation plans, water safety plans, quality surveillance and monitoring, and health-care waste management.

12. Ministries of health in all Member States have appointed climate change and health focal points, but most units are not funded. Health adaptation measures have been piloted or implemented in a few countries that received funds from external donors (Bangladesh, Bhutan,

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Nepal and Maldives). Other countries that have initiated action, however, were challenged by a lack of funds.

13. While the effects of climate change on health have gained attention in general, there is still room for raising awareness and understanding of these in the public policy process, particularly in the formulation and revision of public health policies. Sectors responsible for climate-sensitive diseases/programmes and environmental determinants of health should also be made aware of these and build in risk mitigation measures.

14. Health national adaptation plans (HNAPs) are necessary for addressing the medium- and long-term impacts of climate change. Nepal’s HNAP was approved by the government. Bhutan, India, Indonesia, Sri Lanka and Thailand have drafted HNAPs and the remaining Member States have plans to develop HNAPs.

15. Sri Lanka and Thailand have introduced the green hospital concept to reduce greenhouse gas emission, which contributes to mitigating the effects of climate change. Bhutan has piloted an integrated climate and health disease surveillance system in five districts. India is reviewing its disease surveillance system to improve timely reporting of and response to climate-sensitive diseases. India, Sri Lanka and Thailand have developed heat health action plans for responding to heat waves.

16. Although some small studies have been carried out in this area in the Region, these are not adequate for evidence-based policy-making. There is thus a need to partner with universities and research institutes to carry out national and multicountry research, both to understand the impact of climate change and the effectiveness of adaptation measures.

**Suggested directions and way forward**

17. Climate change is a cross-cutting issue. There is a need to mainstream it in overall health planning and programming. This can be achieved by progressively building the climate resilience of the six building blocks of the health systems. The current climate change and health units need to be strengthened. These units can then further coordinate with climate-sensitive disease programmes in ministries of health to ensure that measures to combat the risks of climate change are embedded in these programmes. These units also need to work with health-determining sectors such as water, environment, energy, meteorology, emergencies, agriculture and transport. Working with health programmes and other sectors is crucial for addressing the impacts of climate change on health and ensuring the sustainability of measures in the long run.

18. Continuous advocacy and capacity development on the subject is important for further intensifying climate and health work. Human, technical and financial resources are of paramount importance.

19. The World Health Organization’s Regional Office for South-East Asia organized an informal consultation to prepare for the Ministerial Roundtable on “Building health systems resilience to climate change” in Male’, Maldives on 14–15 May 2017. The consultation took stock of the
current health response to climate change and identified priority actions for strengthening health systems’ capacity to respond to climate change. The outcomes of the informal consultation are a proposed draft Ministerial Declaration on Building Health Systems Resilience to Climate Change and a Framework for Action (Annexures 1 and 2)*.

20. The Draft Ministerial Declaration and the Framework for Action are being proposed to the South-East Asia (SEA) Seventieth Session of the Regional Committee through the High-Level Preparatory Meeting. These are to be considered as part of the agenda for the Ministerial Roundtable at the Seventieth Session of the WHO Regional Committee for South-East Asia in September 2017.

Conclusion

21. Addressing climate change requires a health system-wide approach so that eventually the measures to combat climate risks are embedded in health programmes. Hence, Member States have agreed to work on the six building blocks of the health system using the WHO Operational framework for building climate-resilient health systems to prepare health systems to adapt and respond to climate change in a systematic manner. Member States have identified key priority actions to be taken in the next five years based on need. These actions are in line with the various international conventions and agreements on climate change and the environment, and the SDGs.

* Under consultation with the Member States, the next draft is expected to be available by 6 July 2017.