



Agreement for Performance of Work

Terms of Reference: Analysis and response to climate change impacts on health systems in the Western Pacific Region

This Agreement for Performance of Work is requested by:

Unit:	Health and the Environment (HAE)
Division:	Healthy Environments and Populations (DHP)

1. Introduction

The work to be conducted under the Agreement for Performance of Work will contribute into the broader work of the Climate Change, Environment and Health (CCE) programme which is a thematic priority of the World Health Organization (WHO) Regional Office for the Western Pacific (WPRO) vision *For the Future: Towards the Healthiest and Safest Region*. This work will also connect with the strategic actions of WHO's *Western Pacific Regional Framework for Action on Health and Environment on a Changing Planet*, on building health system resilience to climate change across the region.

WHO's Western Pacific Region consists of 37 countries and areas, from Pacific island states to large continental countries such as Australia and China. These countries are in different climatic subregions, and the climate change impacts on human health will be different in the different subregions.

This a modeling and analytical exercise which can inform WPRO's backcasting approach to the climate change and health work. The analysis of current data could help in identifying possible future scenarios which could then be compared with the desired future or goals.

The activities to be conducted under the terms of reference will divide the Western Pacific Region into climatic subregions in order to analyse climate change impacts and make recommendations how to address these. This assessment will need collaboration across different disciplines such as state-of-the-art climate science and meteorology, public health, earth sciences, water sanitation and hygiene (WASH), health facilities/systems, environmental health, mental health, and food and nutrition.

As such, an institution or university would be best able to accomplish the objectives of this project since it requires different disciplines and expertise across sectors, most of which are outside of the health sector.

2. Purpose of the contract

The purpose of this Agreement for Performance of Work is to undertake an assessment of the impacts and risks posed by climate change to health in the region, differentiating between the Asian countries and the Pacific island countries, and to reflect the geographical diversity of the region and different climate change threats faced by different subregions. An institution or university will be suitable for this work since it requires contribution from different disciplines. The contract will focus on the following areas:

- Infectious disease modelling;
- Climate change impacts on health-care facilities;
- Psycho-social impacts of climate change; and
- Heat and nutrition;

The assessment will provide an analysis of:

- climate projections for the region, disaggregated by subregion, for agreed time periods and provide a commentary on the likely changes in the frequency of extreme events and their associated health impacts;
- how climate change may impact infectious diseases and population health in the region;
- how climate change may impact on nutrition and food security in the region; and
- the threats to health-care facilities and actions required to build more resilient infrastructure in the region including water and sanitation and energy systems.

In the infectious disease modelling, an assessment will be undertaken using available evidence and likely trends. Likewise, the work on food security and the climate models will be about critical assessment based on existing data. This modelling can inform the backcasting approach of WPRO to the climate change, environment and health (CCE) work. The analysis of current data could help in identifying the possible future scenarios which could then be compared with the desired future or goals.

3. Planned timeline:

Start date: 1 April 2022

End date: 30 September 2022

Total input days: 100 days

4. Work to be performed

Method(s) to carry out the activity

- Desktop planning, organizing and delivering results via email, virtual meeting sessions in collaboration with WPRO teams.
- Use of different modelling and mapping techniques with geographic information system (GIS)
- Maintaining regular communication and reporting back to WHO and WPRO on progress.

Description of activities to be carried out and outputs

The work to be completed under this project will focus on climate change risks and potential impacts on human health and health-care facilities. However, the Contractor should recommend key strategies and intervention measures to address the identified impacts within the Western Pacific Region.

The key activities under the terms of reference are:

- 4.1 Analyse and report on climate projections for the region, disaggregated by sub-region, for agreed time periods;
- 4.2 Report on the likely changes in the frequency and intensity of extreme weather events, and the associated health impacts of these, by climatic subregion;

- 4.3 Analyse and report on how climate change will affect incidence of infectious diseases, and what impacts this is likely to have on population health across the Western Pacific Region;
 - 4.3.1 Recommend actions to address climate change effects on infectious diseases by climatic subregion;
- 4.4 Analyse and report on how climate change will impact on food security and nutrition across the region;
 - 4.4.1 Recommend actions to address climate change effects on food security and nutrition, by climatic subregion;
- 4.5 Analyse and report on the climate change risks to health-care facilities by subregion;
 - 4.5.1 Based on situation analyses and desk-based assessment, report on the actions required to build resilience of health-care facilities across the Western Pacific Region;
- 4.6 Analyse and report on the climate change risks to water and sanitation systems in health-care facilities across the region including WASH and energy systems; and
 - 4.6.1 Based on situation analyses and desk-based reviews, report on the actions required to build resilience of water and sanitation systems, energy systems, disaggregated by climatic subregion.

Deliverables

The deliverables under the terms of reference should be prepared as inputs to WPRO's work on climate change, environment and health with specific contribution to the Climate Change, Environment and Health (CCE) Pillar 2 on building resilience of health systems. The deliverables due under the terms of reference are:

1. Climate projections report, disaggregating projections by subregion and including extreme event projections, and likely impacts on human health.
2. Report on impacts that climate change will have on infectious diseases, food security, nutrition, and psycho-social impacts of climate change by subregion, and including recommended actions to address these.
3. Report on the climate change risks to health-care facilities and their water and sanitation and energy systems, by subregion, and including recommended actions to proactively address these risks.

5. Payments

Signing of contract – 0%
Submission of Deliverable 1 – 30%
Submission of Deliverable 2 – 30%
Submission of Deliverable 3 – 40%

6. Technical supervision

The Contractor will work under the supervision of:

Responsible Officer:	Ms Myoungsil Han, Technical Officer, HAE	email:	hanmy@who.int
Manager:	Dr Angela Pratt, Director, acting Director, DHP	email:	pratta@who.int

7. Specific requirements

Education

Required: Project Manager should have a doctoral degree in environmental science, social science, public health and engineering; and Team Members should have university degrees in public health, environmental health, engineering or related fields

Desired: Team Members with advanced or doctoral degrees or professional degrees in environmental health, social science and with strong knowledge of climate change and health including natural disasters and extreme weather events

Experience

Required: Project Manager should have at least 15 years of relevant work experience at the national as well as at the international level (e.g. experience working with WHO and other UN and bilateral agencies an advantage)

Desired: The Team should have experience working in climate change and health in relation to the Asia-Pacific region and countries or lower-middle income countries

Desired: The Team should have experience across the following disciplines:

- Environmental health;
- Infectious disease modelling;
- Climate change impacts on health-care facilities;
- Psycho-social impacts of climate change; and
- Heat and nutrition.

Skills

- Knowledge on climate change and health, including the specific context in the Asia Pacific;
- Demonstrated experience modelling climate and health outcome correlations;
- Ability to work independently and in a team;
- Excellent interpersonal and communication skills; and
- Computer literacy (modelling software, Word, Excel, PowerPoint etc.).

Language

Fluency in written and spoken English is essential.

8. Competencies

- Ability to communicate in credible and effective ways;
- Ability to produce results;
- Ability to move forward and adjust in a changing environment; and
- Effective ability to foster integration and teamwork.

9. Place and duration of assignment

The Contractor is expected to work for 100 days, home-based, starting 1 April 2022, to deliver the above work, which is to be completed by 30 September 2022.

10. Medical clearance

A medical certificate of fitness for work is required for the Project Manager.

11. Travels

Travel in relation to this contract is not anticipated.