

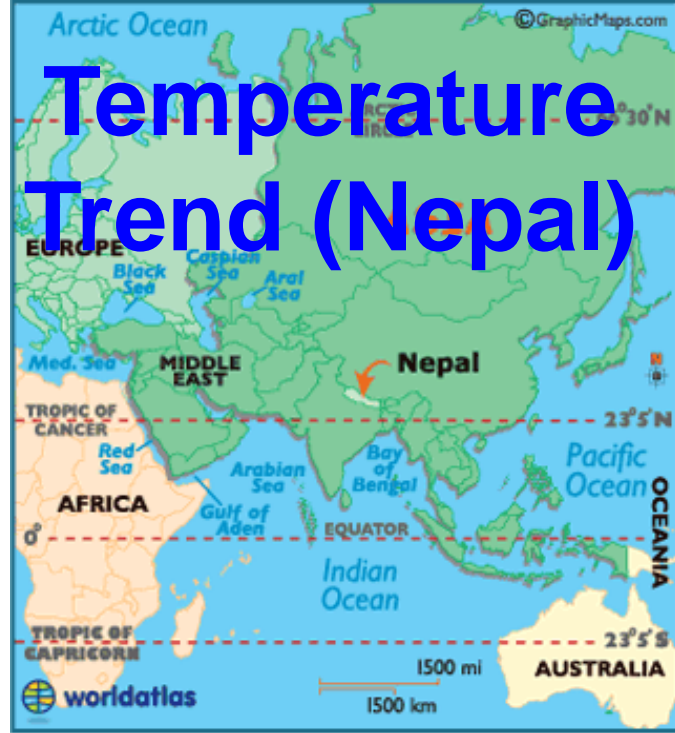
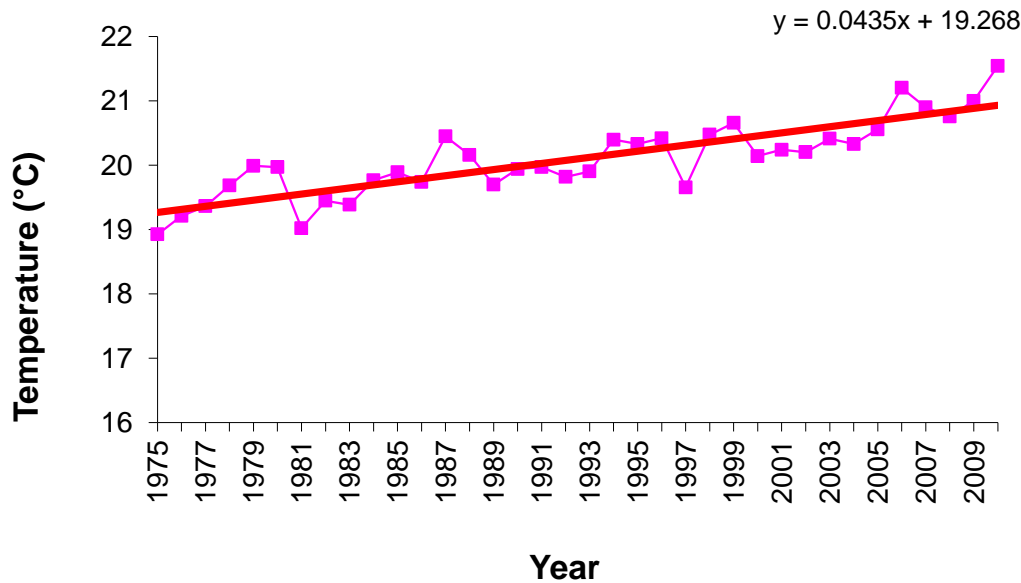
Adaptation to Climate Change in Water and Health

Raja Ram Pote Shrestha
World Health Organisation

Sept. 11, 2017

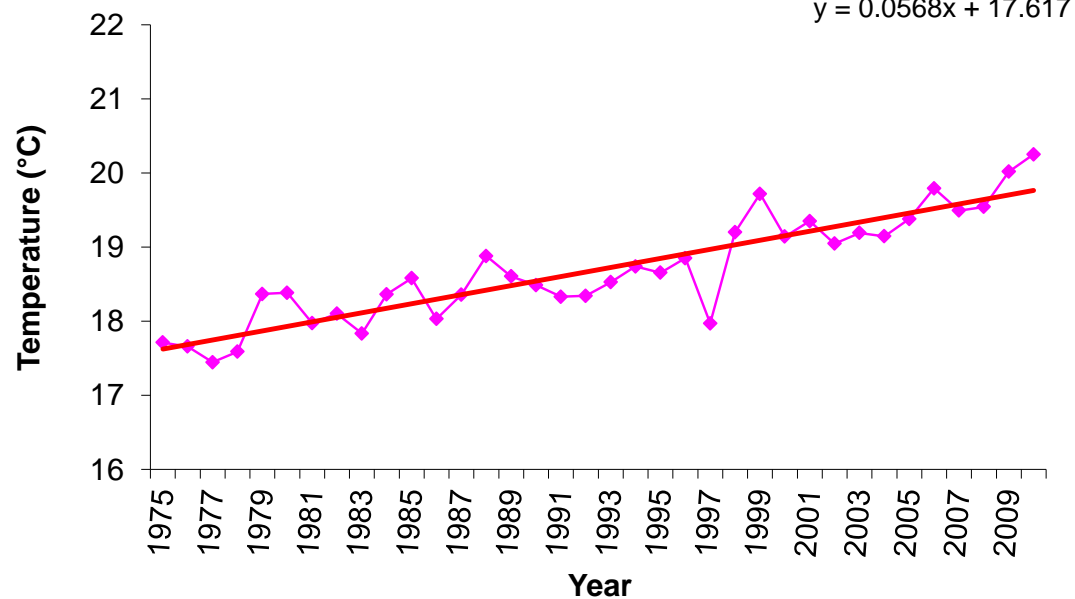


All Nepal Temperature Trend

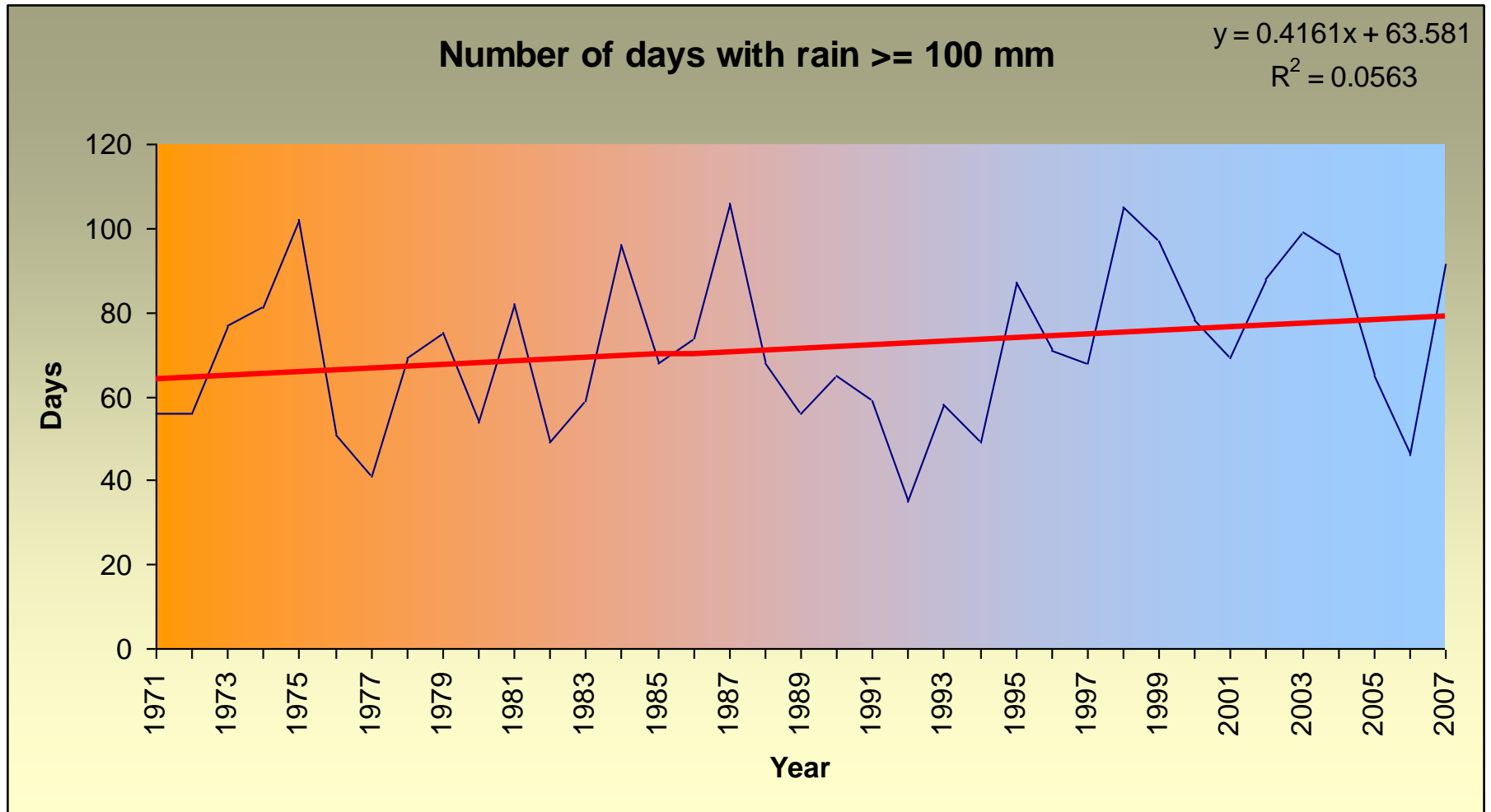


- All Nepal and Kathmandu Temp. are increasing steadily
- Rising trend over Nepal: 0.04-0.06°C
- Warming is not uniform: more in high altitude regions

Kathmandu Temperature Trend

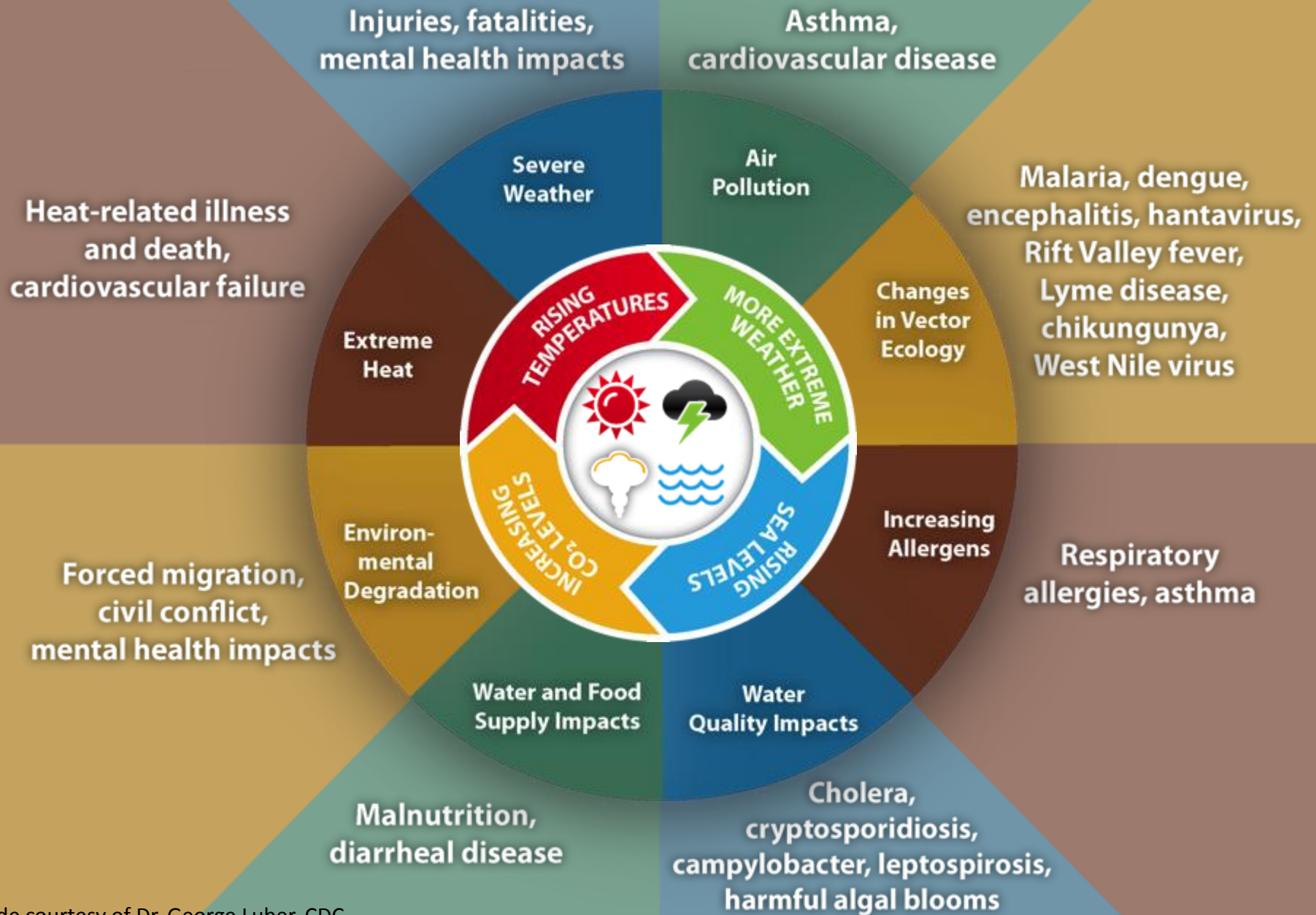


Rainfall Extremes



Increase in frequency of heavy rainfall events (> 100 mm/day)

Impact of Climate Change on Human Health



Health risks from climate change



Each year:

-Extreme weather events kill tens of thousands

-Malaria kills over 600,000

-Diarrhoea kills almost 600,000 children

-Under-nutrition kills 3.1 million

All are highly sensitive to climate conditions

Health impacts are unfairly distributed



Cumulative emissions of greenhouse gases, to 2002



WHO estimates of *per capita* mortality from climate change, 2000

Map projections from Patz et al, 2007; WHO, 2009.

Drivers for health response to climate change

Global

- Compelling evidence that climate is changing – mainly due to human actions
- IPCC 5th Assessment Report – climate change impact on health, including impact on health care facilities and disrupted health services
- 1992-UNFCCC recognizes health impact from climate change (art.1)
- 2015-Paris agreement on climate change - Right to health in the preamble and recognition of health impacts of climate change.
- SDG 13 “Take urgent action to combat climate change and its impacts” (adaptation, resilience, integrate CC in planning, capacity)
- WHA 61.9 ‘Climate change and health’ in 2008

World Health Assembly has given strong mandate

World Health Assembly Resolution (2008)

WHO action plans (2009 & 2015)

- Countries strongly endorse greater WHO and health sector engagement

SIXTY-FIRST WORLD HEALTH ASSEMBLY

WHA61.19

Agenda item 11.11

24 May 2008

Climate change and health

The Sixty-first World Health Assembly,

Having considered the report on climate change and health;¹

Recalling resolution WHA51.29 on the protection of human health from risks related to climate change and stratospheric ozone depletion and acknowledging and welcoming the work carried out so far by WHO in pursuit of it;

Recognizing that, in the interim, the scientific evidence of the effect of the increase in atmospheric greenhouse gases, and of the potential consequences for human health, has considerably improved;

Noting with concern the recent findings of the Intergovernmental Panel on Climate Change that the effects of temperature increases on some aspects of human health are already being observed; that the net global effect of projected climate change on human health is expected to be negative, especially in developing countries, small island developing States and vulnerable local communities which have the least capacity to prepare for and adapt to such change, and that exposure to projected climate change could affect the health status of millions of people, through increases in malnutrition, in death, disease and injury due to extreme weather events, in the burden of diarrhoeal disease, in the frequency of cardiorespiratory diseases, and through altered distribution of some infectious disease vectors;

Noting further that climate change could jeopardize achievement of the Millennium Development Goals, including the health-related Goals, and undermine the efforts of the Secretariat and Member States to improve public health and reduce health inequalities globally;

Recognizing the importance of addressing in a timely fashion the health impacts resulting from climate change due to the cumulative effects of emissions of greenhouse gases, and further recognizing that solutions to the health impacts of climate change should be seen as a joint responsibility of all States and that developed countries should assist developing countries in this regard;

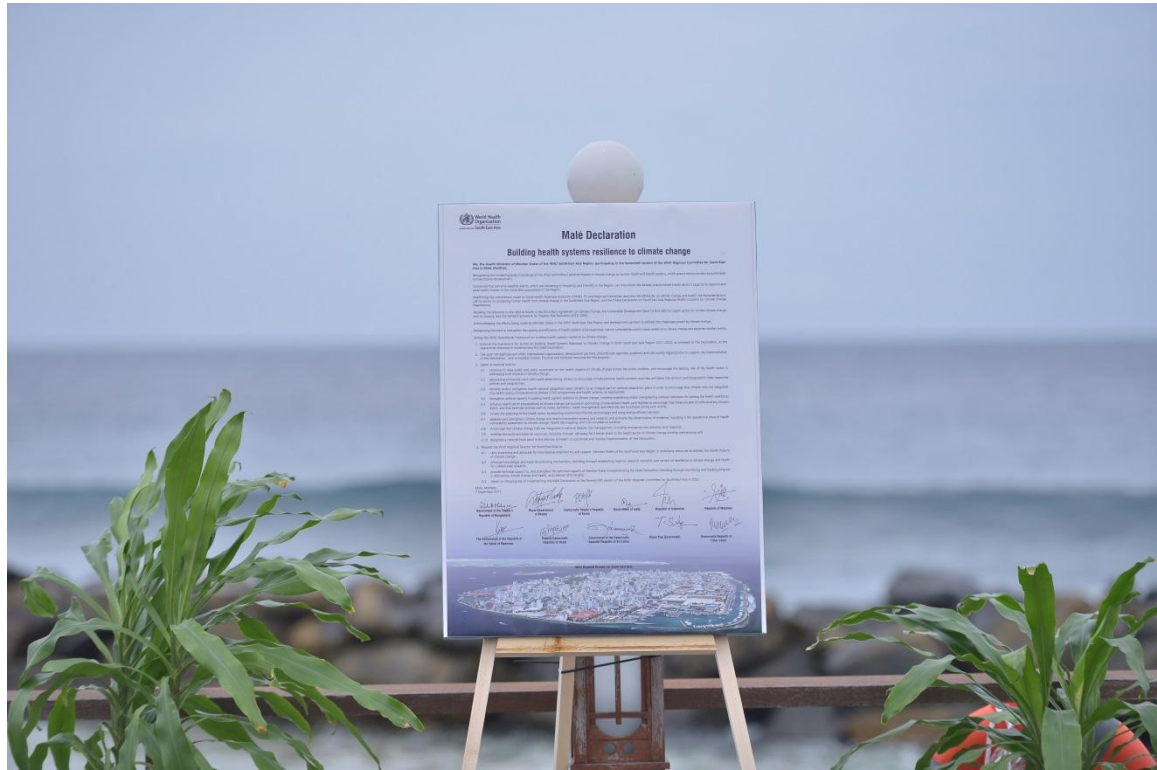
Recognizing the need to assist Member States in assessing the implications of climate change for health and health systems in their country, in identifying appropriate and comprehensive strategies and measures for addressing these implications, in building capacity in the health sector to do so and

Drivers for health response to climate change

SEA Regional

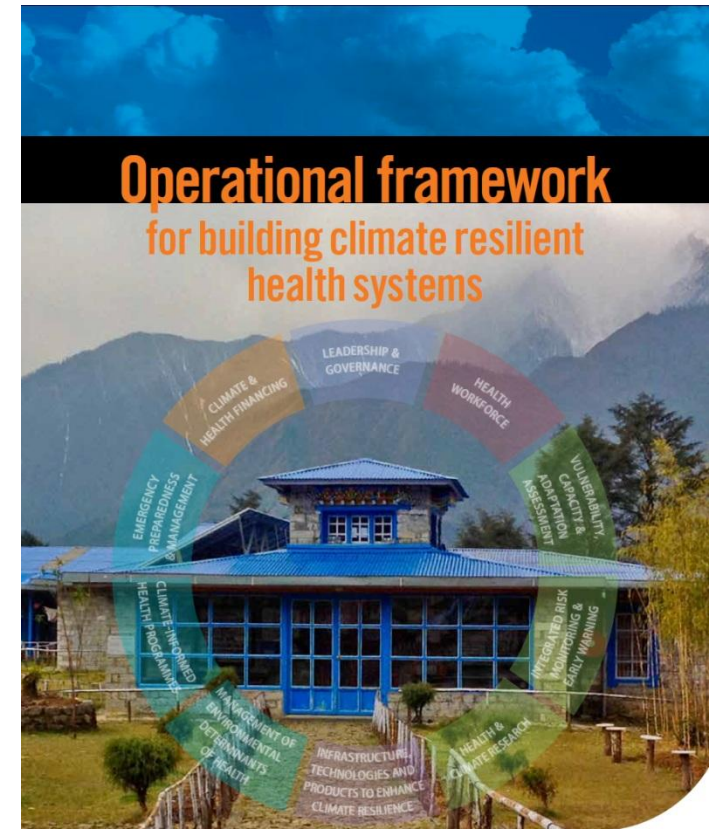
- SEAR experiencing various health impact– injuries and deaths from extreme weather events, heat related morbidity/mortality, respiratory diseases, water and vector borne diseases
- SEA Regional Committee’s Resolution SEA/RC62/R2
- Ministerial roundtable on building health systems resilience to climate change:
 - Ministers sign on Male’ Declaration
 - Framework for Action (2017-2022)



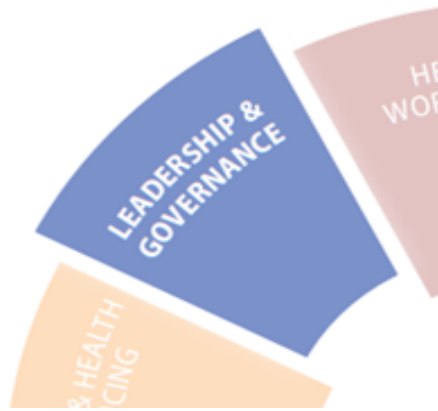


Operational Framework for building climate resilient health systems

- Tool supporting countries **planning** health adaptation in a **comprehensive and long-term** way
- **Goal: Enhance** the **capacity** of health systems to protect and improve population health in an unstable and changing climate.

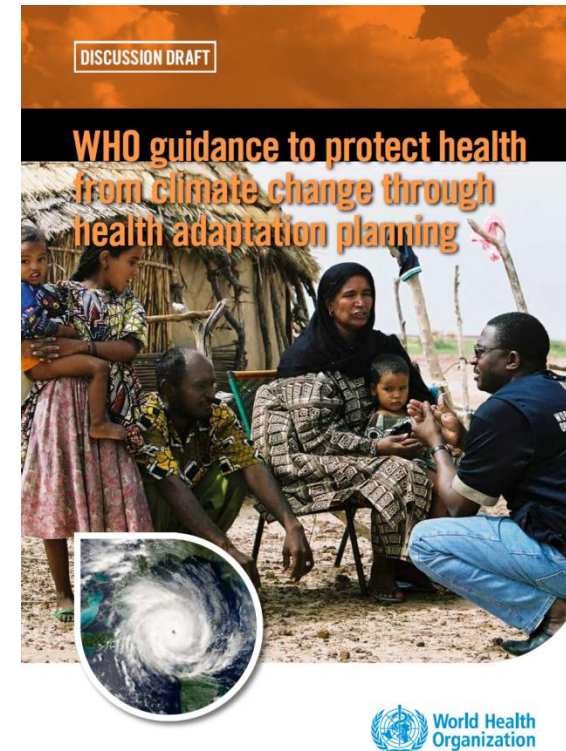
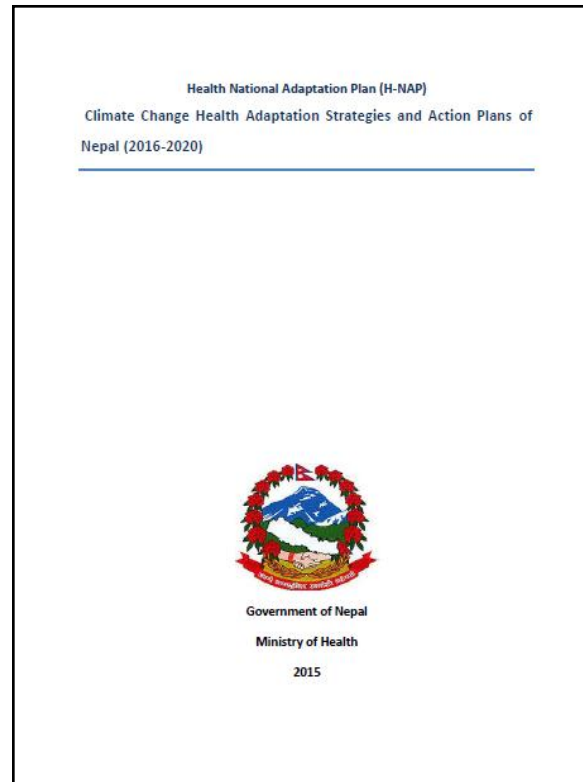






Example outputs:

- National focal points for CCHH
- Engagement in NDC
- Health component of NAPs (**H-NAP**)

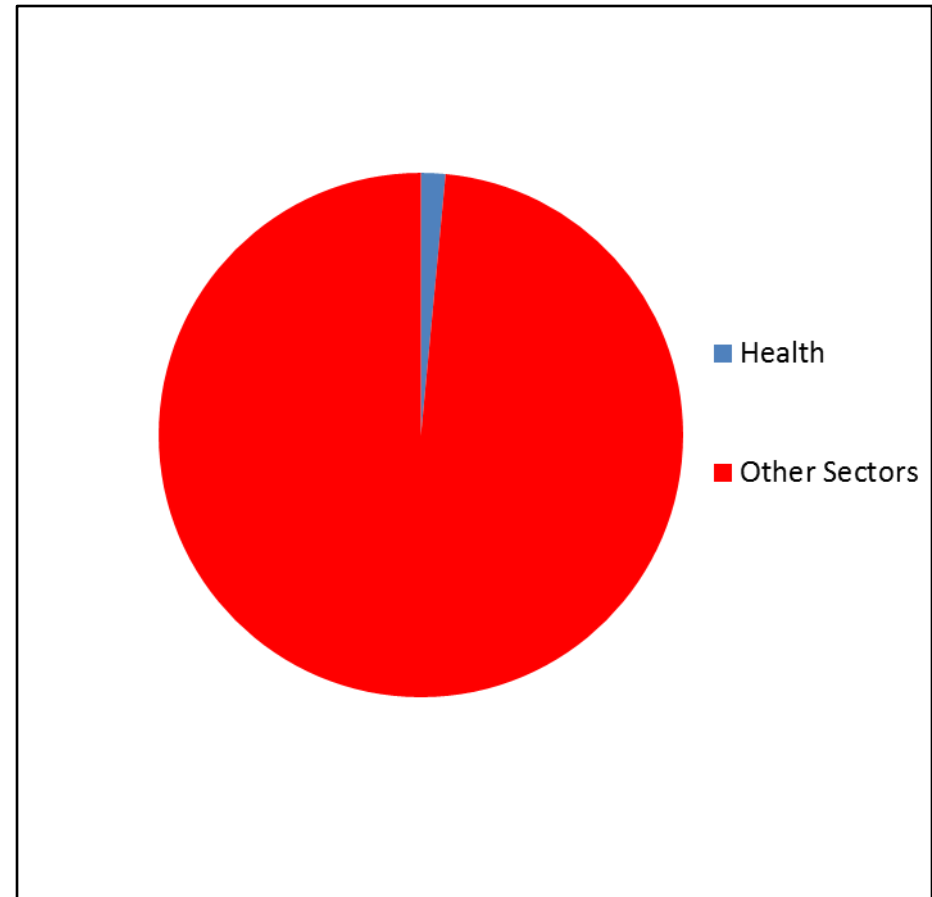


Status of health response at global level

	High income	Low income
Total number of parties represented by an INDC	53	136
Any mention of health	15.09%	85.29%
Mitigation	3.77%	19.12%
Adaptation	9.43%	64.71%

Coverage of health in Paris INDCs

(Tcholakov, Wiley et al, for WMO and WHO, 2015)

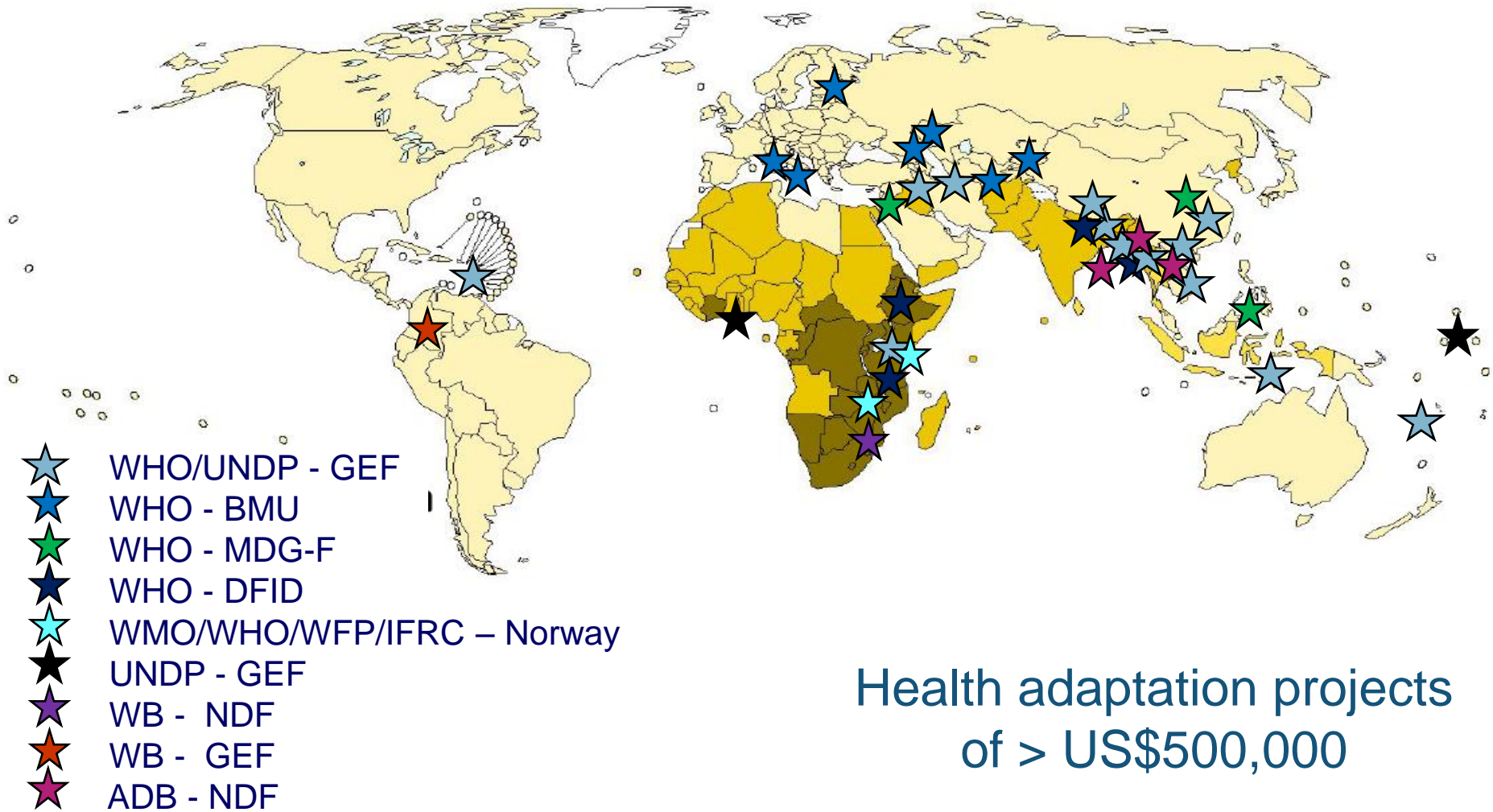


Climate change adaptation funds allocated to health projects (up to 2016)

**... health sector was absent
from NAPA process**

... the health sector is ready now...

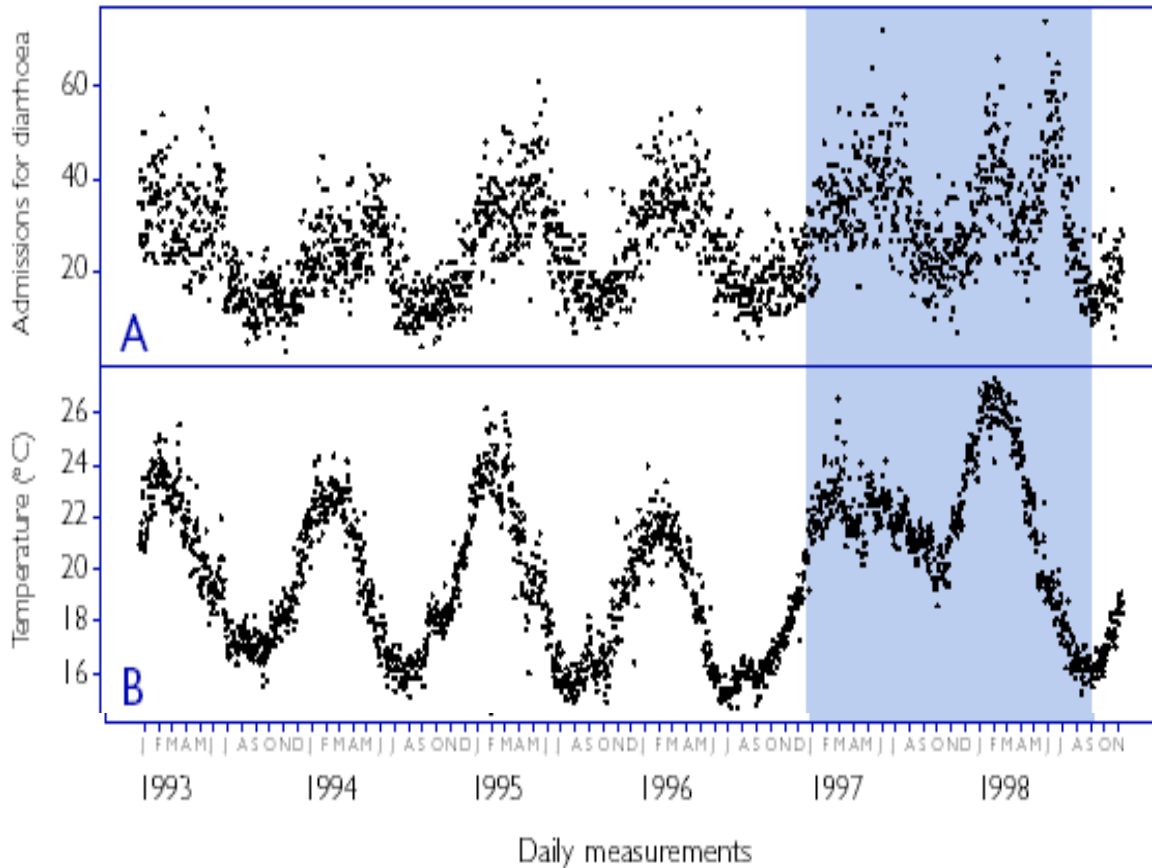
Expanding range of adaptation projects



Building adaptation to climate change in health in LDC's through resilient WASH

- **Four LDC's:** Bangladesh, Nepal, Ethiopia, and Tanzania
- **Period:** 2013-2018
- **DfID-funded**
- **Expected Impact:** Reduced risks of climate-related disease and improved health protection for the poor in low and low-middle income countries.

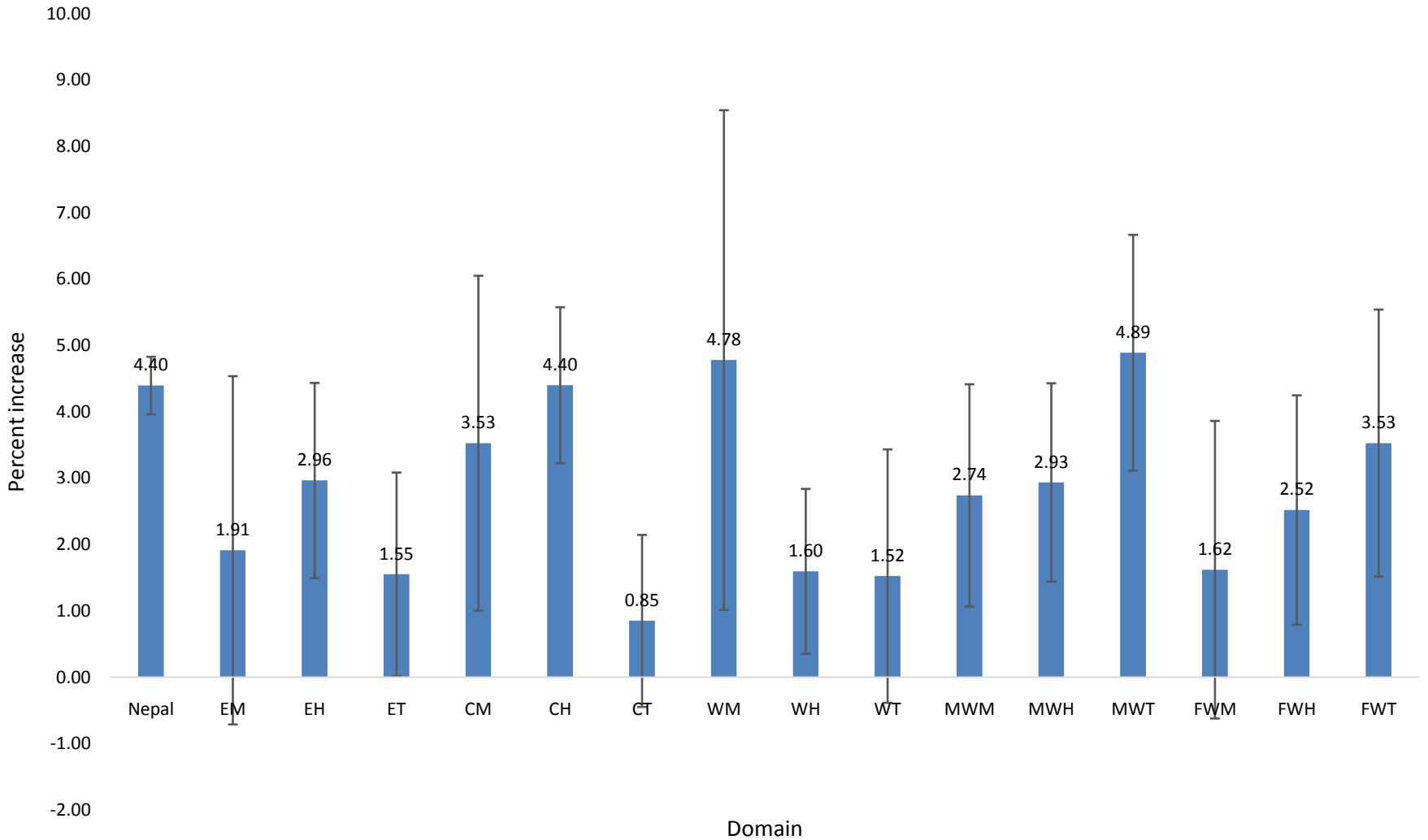
Where WASH is poor, diarrhoea is also sensitive to temperature:



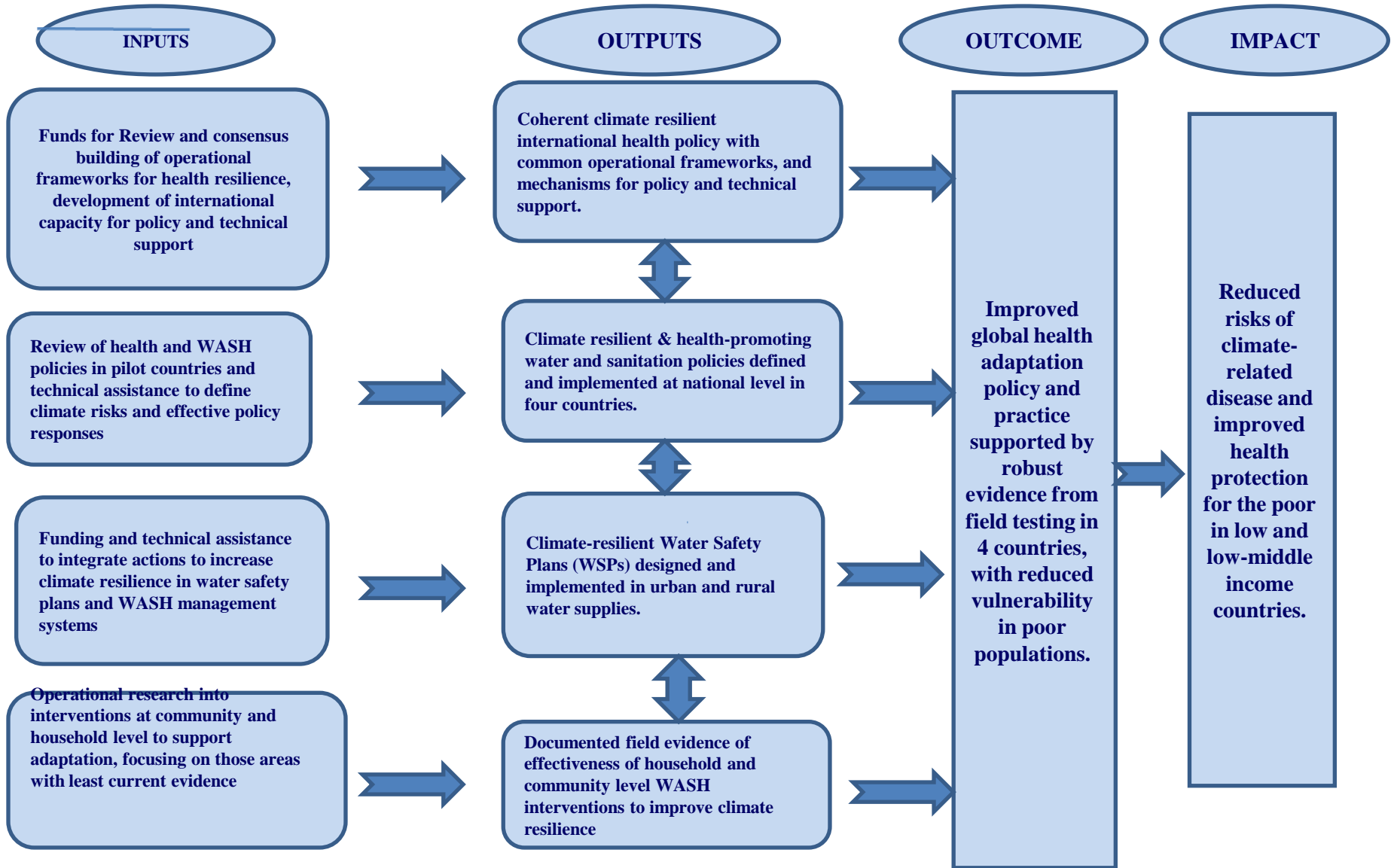
Diarrhoea is related to temperature and precipitation. In Lima, Peru, diarrhoea increased 8% for every 1°C temperature increase.

(Checkley et al, Lancet, 2000)

4.39% increase in diarrreal cases per 1°C increase in average temperature




Source: NHRC/WHO. Assessing effects of climate factors on diarrreal diseases at national and sub-national levels in Nepal. 2016



Outputs and activities



- A. Output: Climate resilient & health promoting WASH policies defined and implemented.
 - Awareness raising
 - Training manuals on CC & WASH and Health
 - V&A assessment and review of national policies and practices
 - CR-Design guidelines
 - Integration of climate resilience framework into national policies and plans
- B. Output: Climate resilient WSP's designed and implemented.
 - Development of climate resilient rural and urban water safety plans (guidelines and training modules)
 - Piloting of CR-WSPs
- C. Output: Documented field evidence of effectiveness WASH interventions to improve climate resilience.
 - Research study on household level WASH interventions
 - Studies on climate sensitive health risks (diarrhea, cold waves, etc.)
 - Best practices on climate resilient WASH

Training Manual



TRAINING MANUAL ON CLIMATE RESILIENT WATER SAFETY PLAN

FACILITATOR'S HANDBOOK
July 2016



World Health Organization
COUNTRY OFFICE FOR
Nepal

CR WSP Urban Water Supply

Draft Final Report

Climate Resilient Water Safety Plan Guideline
Urban Water Supply System

Submitted to:
World Health Organization
(WHO) Nepal Country Office
October 2015

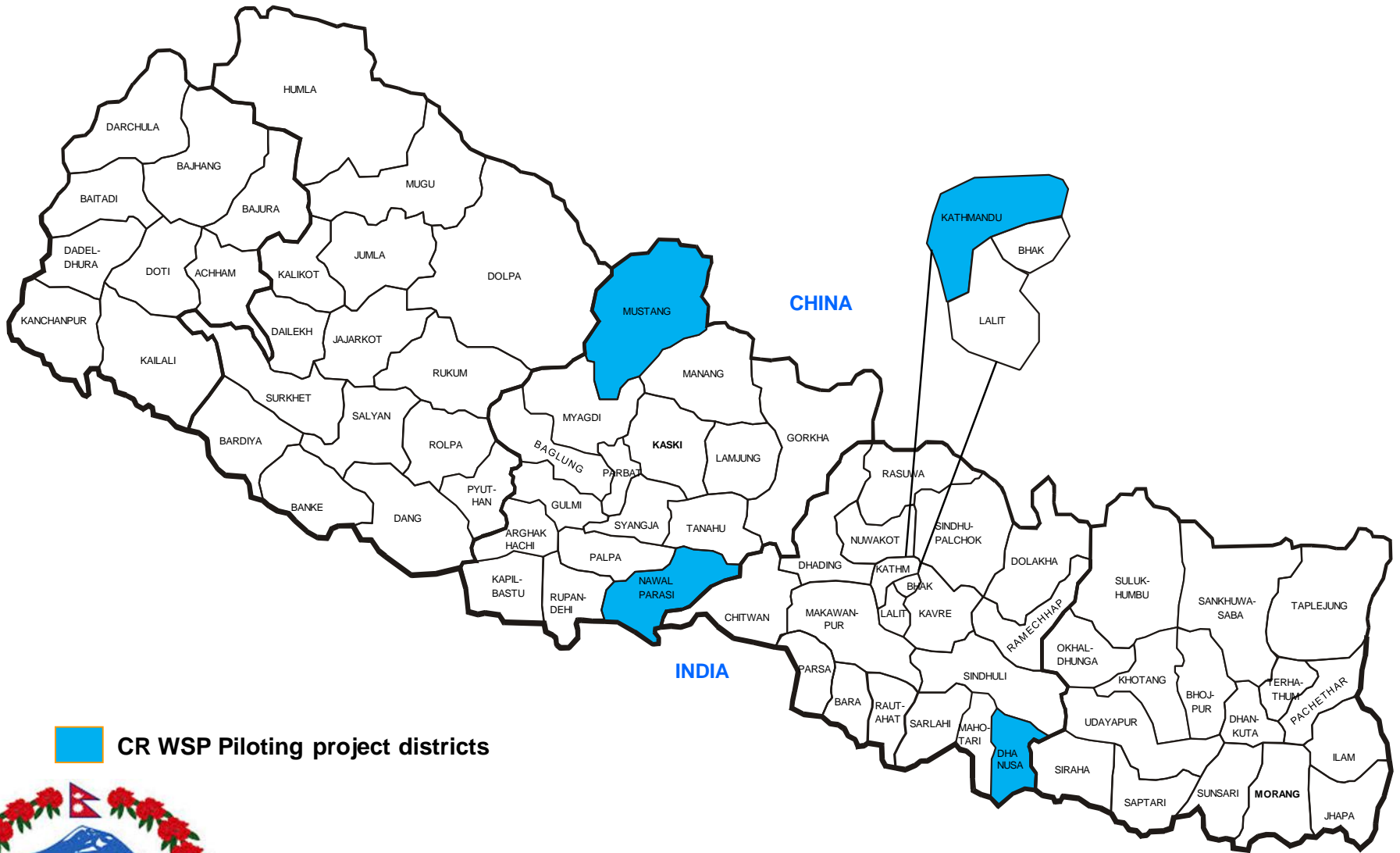
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Climate Resilient WSPs in Nepal



 CR WSP Piloting project districts

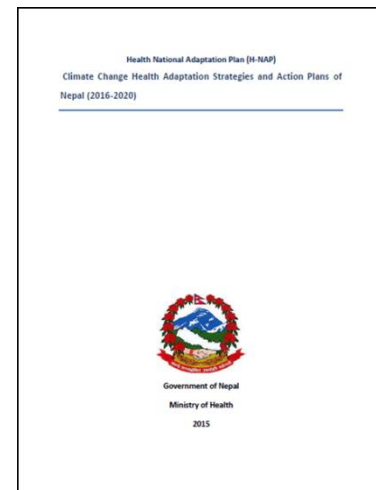


Nepal Health Sector's Response

- **Policy Documents**
 - National Adaption of Programme of Action to Climate Change (NAPA) 2010
 - Climate Change Policy 2011
 - National Health Policy 2014
 - Nepal Health Sector Implementation Plan III (2015-2020)
- **WHO/DfID funded project “Building adaptation to climate change in health in LDCs through resilient WASH” (2013-18)**
 - Vulnerability and Adaptation Assessment
 - Health National Adaptation Plan (H-NAP)
- **Prepared proposal on building climate resilient health system for GEF funding**
- **Involvement in NAP process**

H-NAP National Strategic Objectives

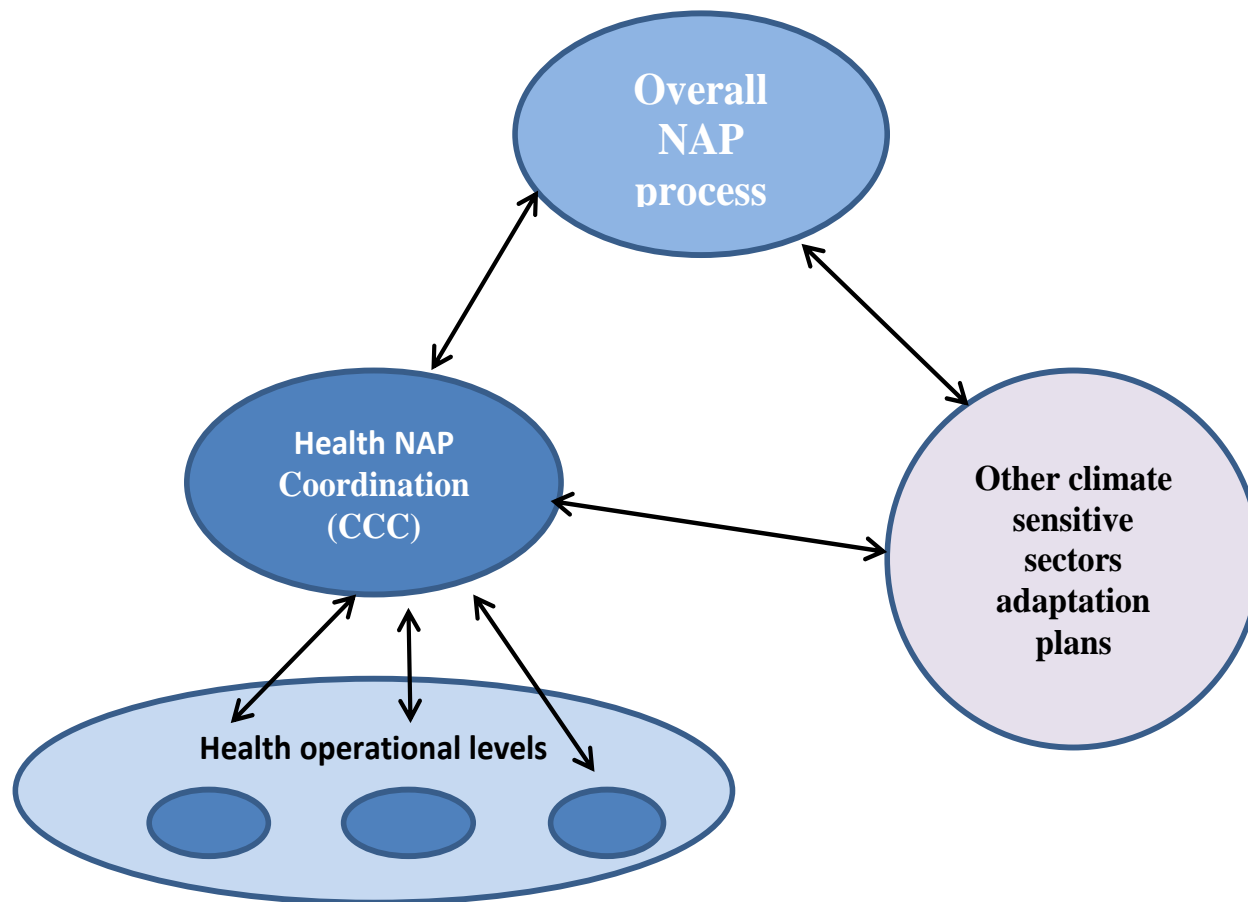
1. To raise **public awareness** about climate change and its effects on health;
2. To **generate evidences** on health effects of climate change at national and sub-national levels through research and studies;
3. To **reduce the morbidity and mortality** of infectious diseases (vector, water, air and food-borne diseases) and malnutrition attributed to climate change;
4. To manage the risks of **extreme climatic events**;
5. To protect human health from climate change through **multi-sectoral response** ensuing health in all policies.



Opportunities: UNFCCC negotiations and mechanisms have:

- Continued to raise the **importance of adaptation**, and the need for international support.
- Maintained the **Nairobi Work Programme** on Adaptation.
- Established the **Green Climate Fund**, with aim of US\$30 billion per year for mitigation and adaptation
- Established the process of **National Adaptation Plans**, to move to sustained, mainstreamed support

Health component of the National Adaptation Plans (H-NAP)





Government of Nepal
 Ministry of Population and Environment
 Climate Change Management Division

National Adaptation Plan
 Formulation Process

Approach paper



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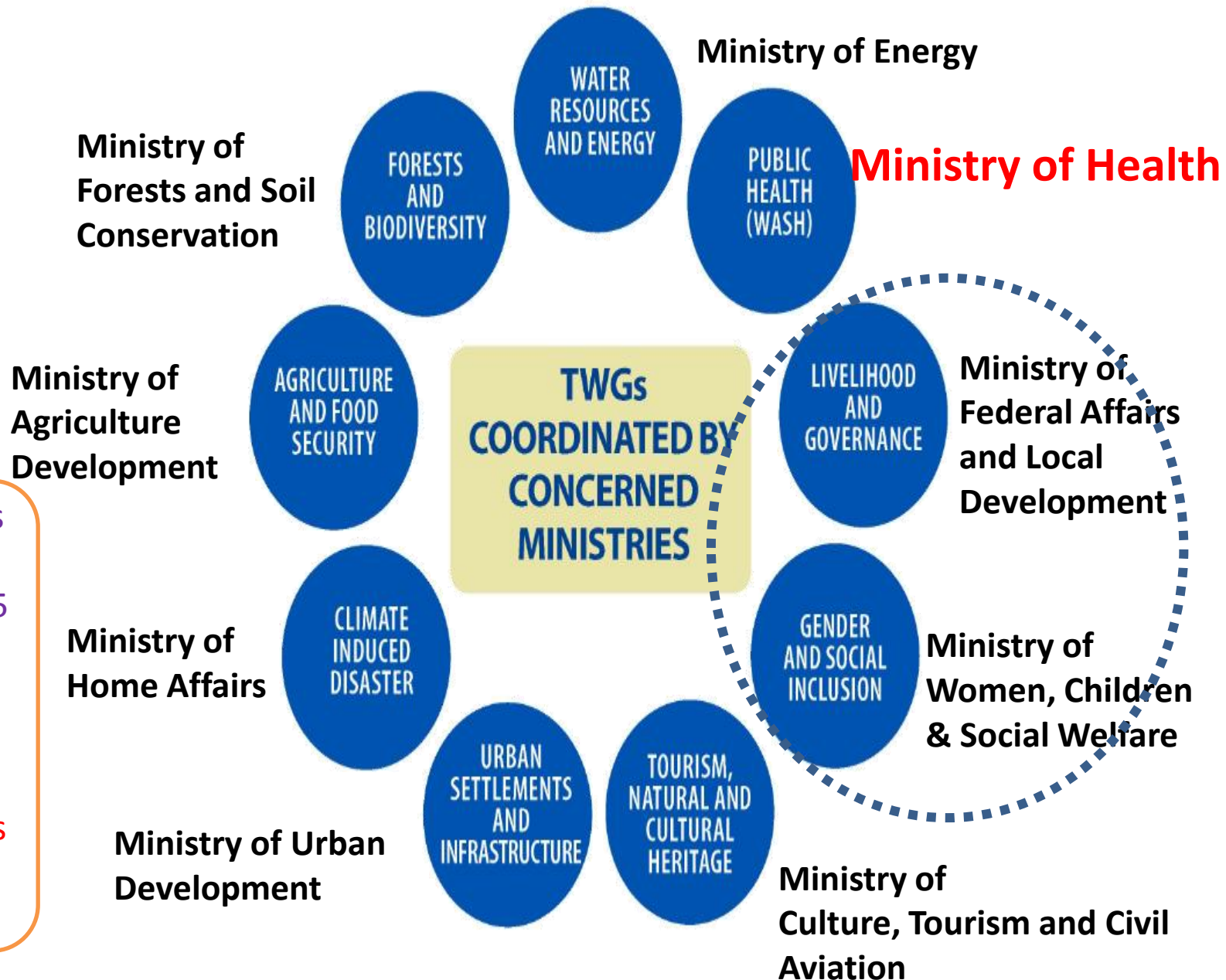
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Background

Climate change adaptation is fundamental to safeguard the climate vulnerable communities and ecosystems in least developed countries (LDCs) by adapting and building resilience to climate change impacts. The UN Framework Convention on Climate Change (UNFCCC)

In LDCs, NAP process will build upon experience in preparing and implementing NAPAs, as a means of (a) identifying medium- and long-term adaptation needs; and (b) developing and implementing strategies and programmes to address adaptation needs. The COP 17

7 Thematic and 2 Cross-cutting Sectors



172 members
in 9 Working
Groups as of 5
January 2017

9 ministries
coordinate
WGs activities
for NAP
process

Future needs:

- The HNAP is **coordinated** with the **overall NAP process**, and supporting bodies; LEG, Adaptation Committee, UNFCCC...
- Health is coordinated with other **health determining sectors**; Agriculture, food, **water**, energy, housing and (urban) planning...
- Resilience of health systems is done as part of **current national health programmes, not in parallel**
- The health sector has the possibility to **access international financial mechanisms**

Thank You