

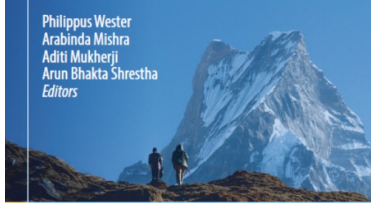
Assessing Vulnerability to Climate Change in Health: Experience from Nepal



Raja Ram Pote Shrestha
National Professional Officer
World Health Organisation

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Philippus Wester
Arabinda Mishra
Aditi Mukherji
Arun Bhakta Shrestha
Editors

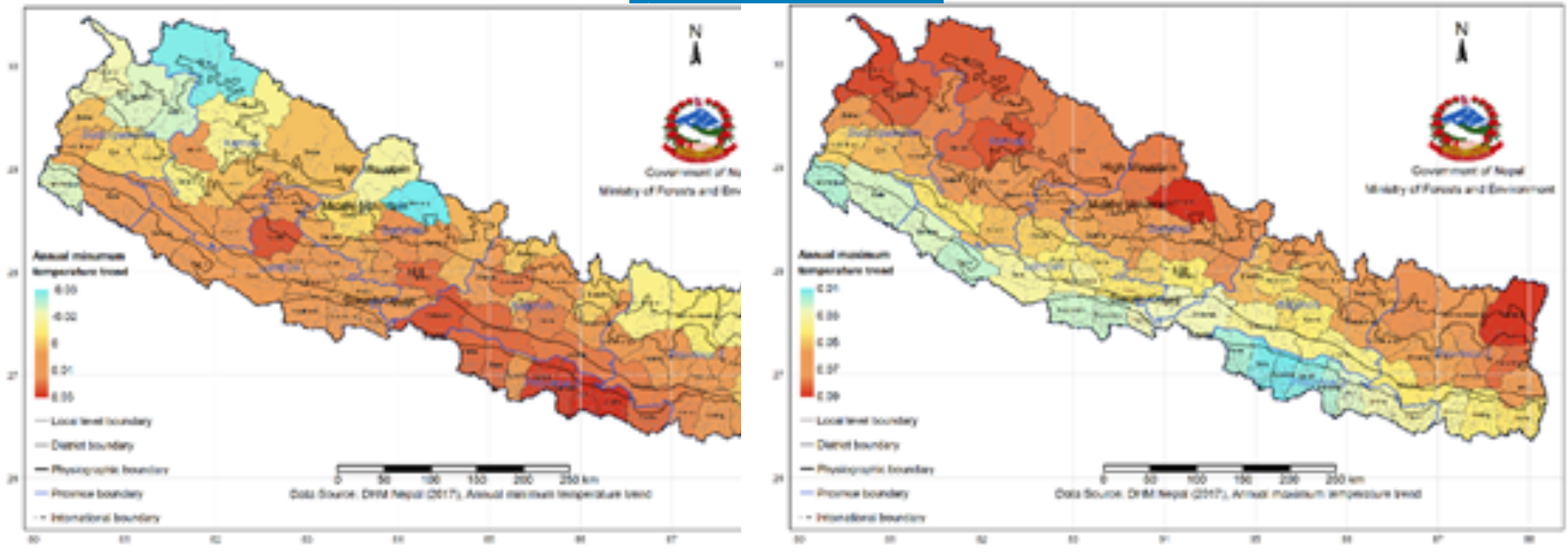


The Hindu Kush Himalaya Assessment

Mountains, Climate Change,
Sustainability and People

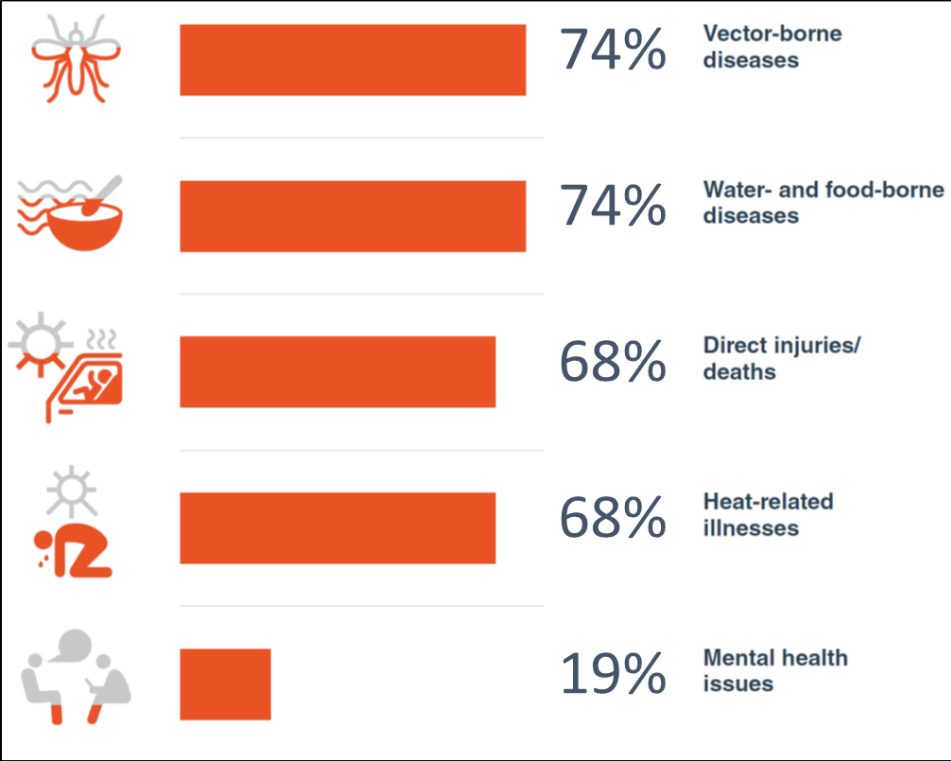
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Annual min. temp. (a) and max. temp. (b) trend (MoFE, 2021)

Climate change undermines the determinants of health, increasing disease and deaths



Countries Identifying different health issues in National Health Vulnerability and Adaptation Assessments. 31 V&As reviewed. WHO Climate and Health Survey Report: Tracking Global Progress (2019)

Association of VBDs with climate variables in Nepal

DHIMAL M. et al. / *Advances in Climate Change Research xxx (xxxx) xxx*

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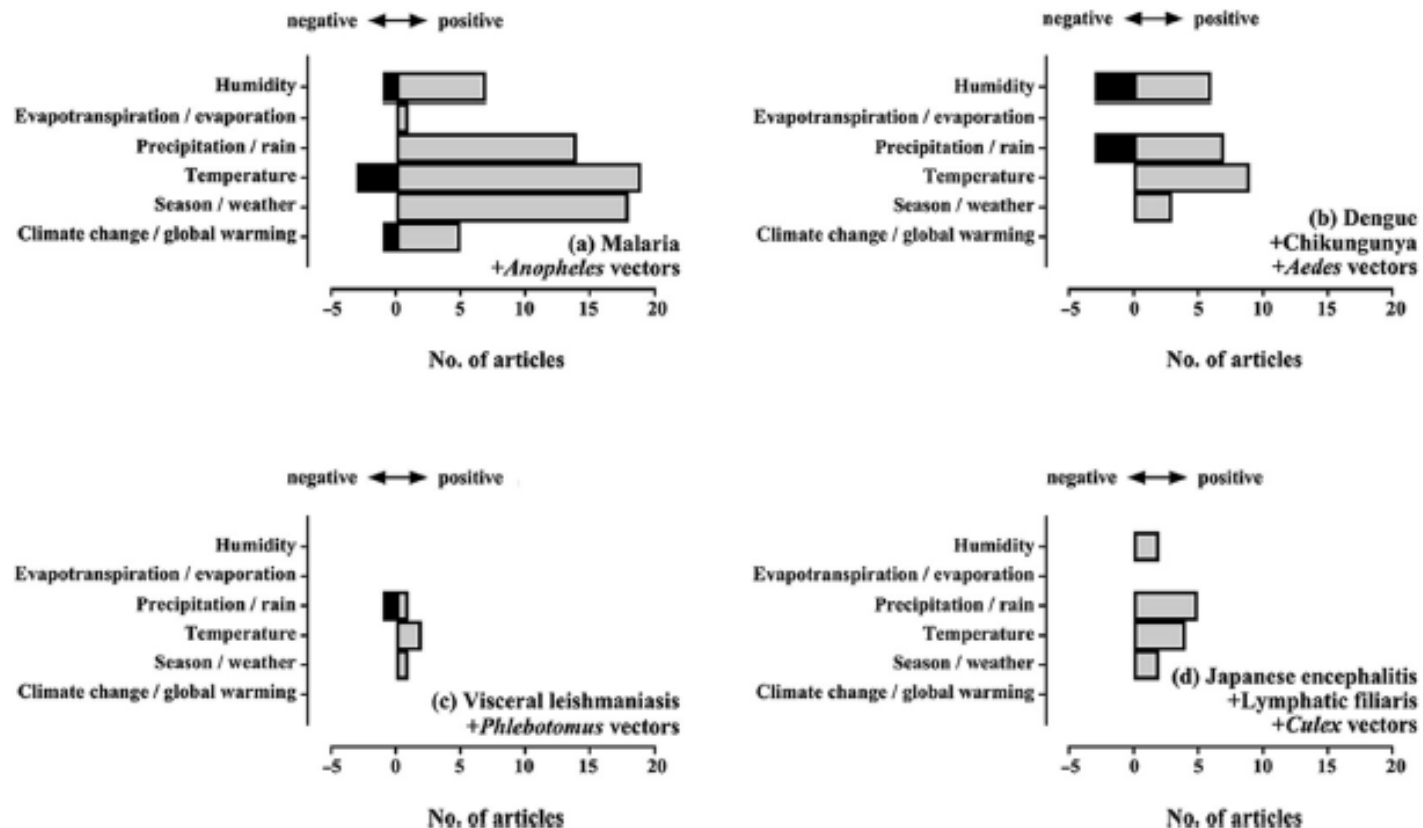
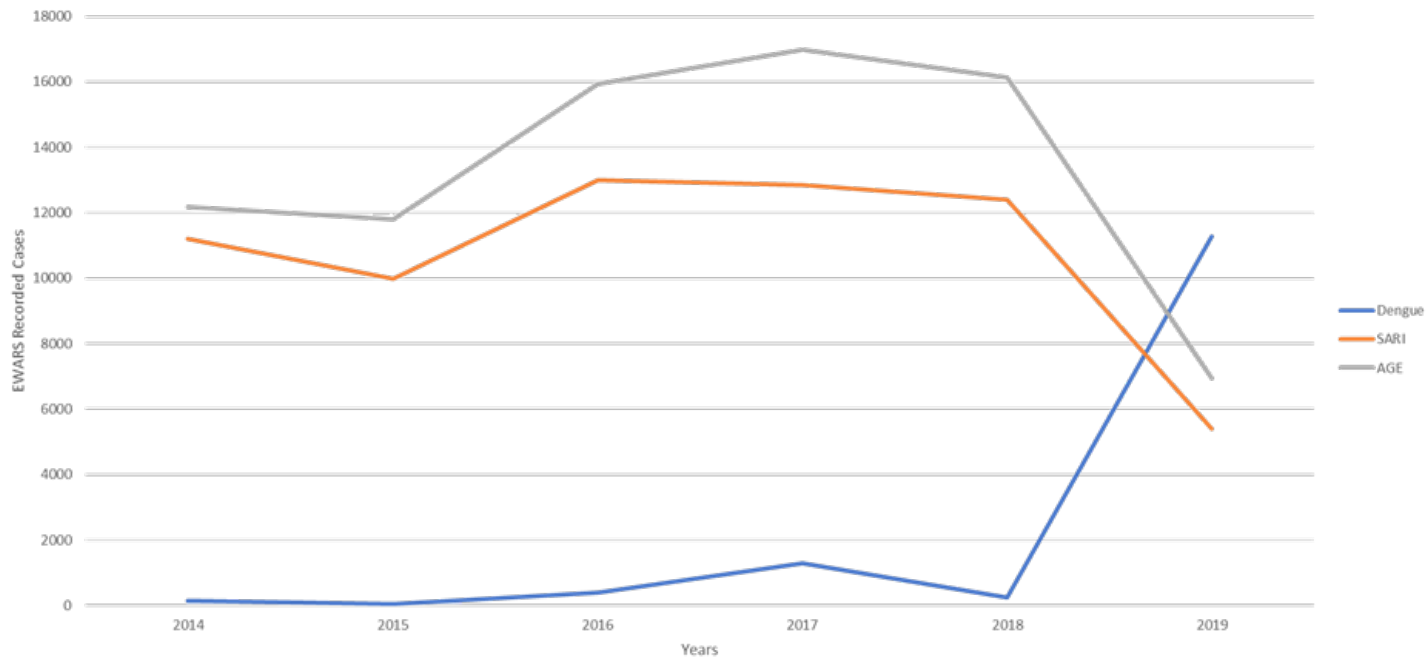


Fig. 1. Associations of six climatic variables and (a) malaria and its vectors, *Anopheles* mosquitoes; (b) dengue fever and chikungunya fever and their vectors, *Aedes* mosquitoes; (c) visceral leishmaniasis and its vectors, *Phlebotomus* sandflies; and (d) Japanese encephalitis, lymphatic filariasis and their vectors, *Culex* mosquitoes. Light grey bars indicate the number of publications reporting positive associations, and black bars those reporting negative associations.

Climate Sensitive Diseases Trend

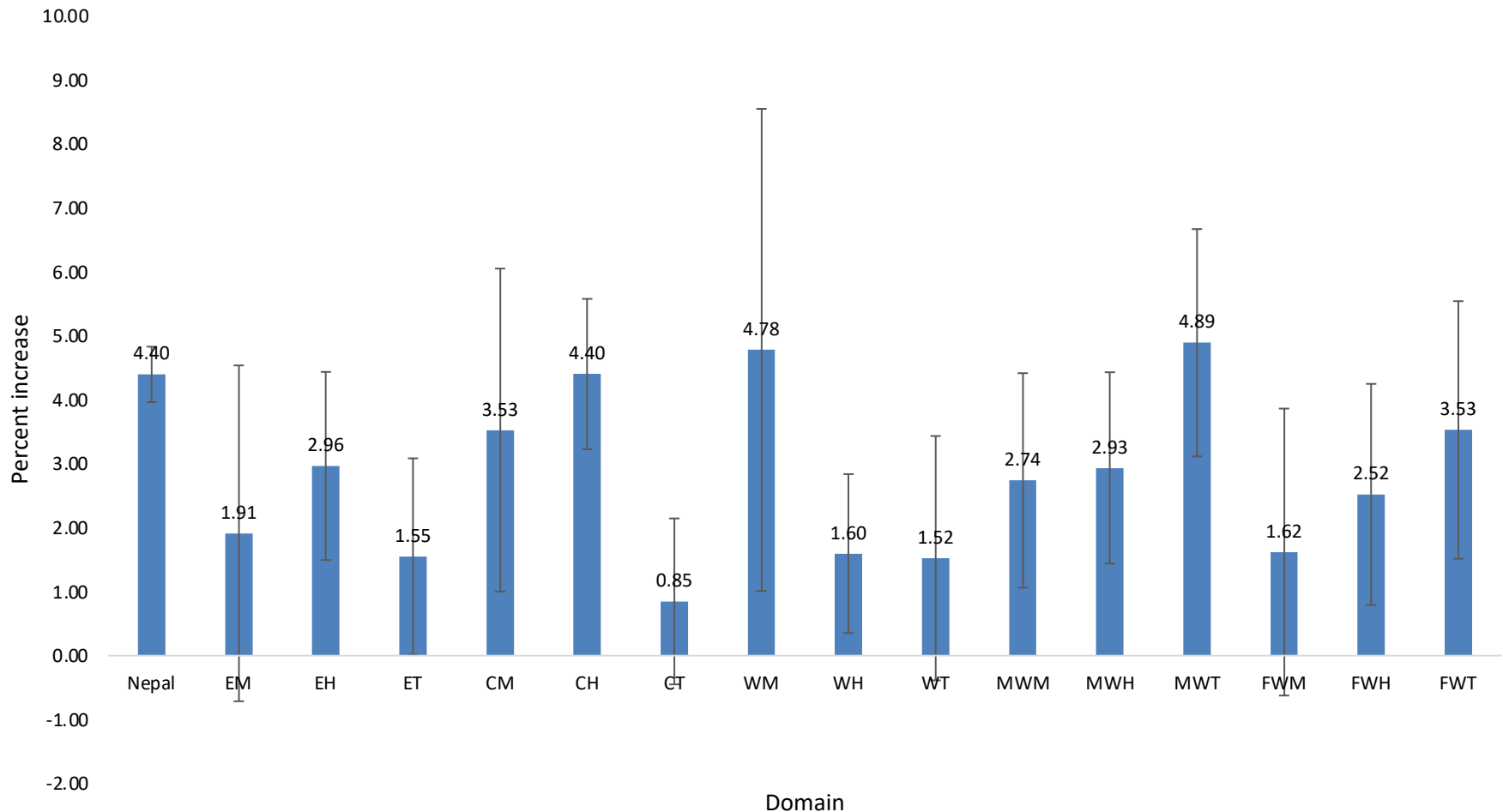


Climate Sensitive Diseases trend from 2014 to 2019



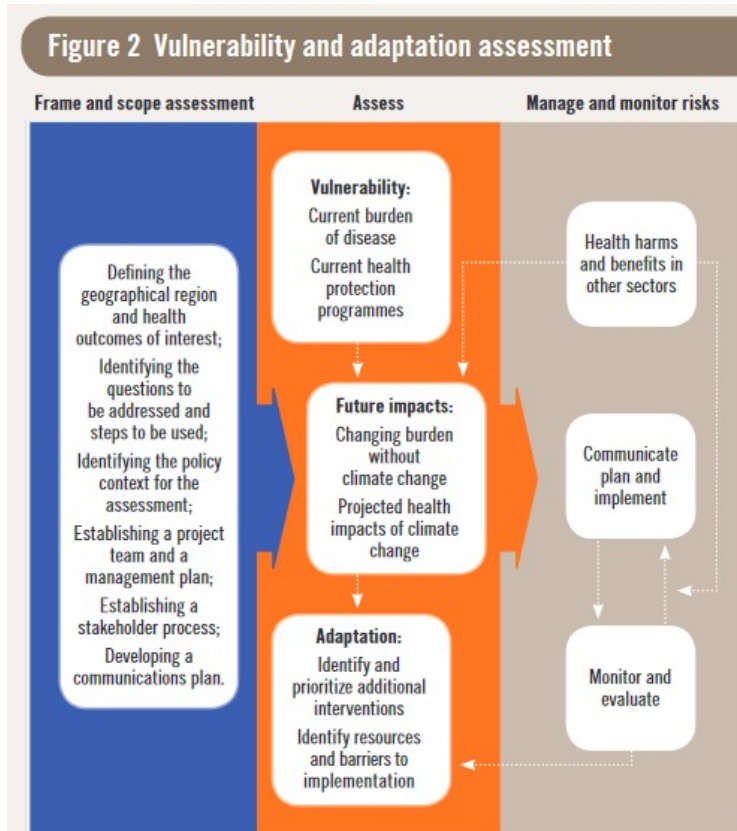
Source: EDCCD. 2020

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



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

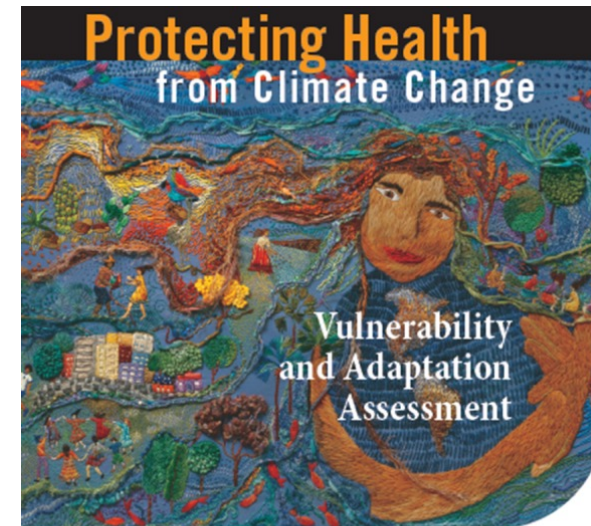
What is a V&A and why is important?



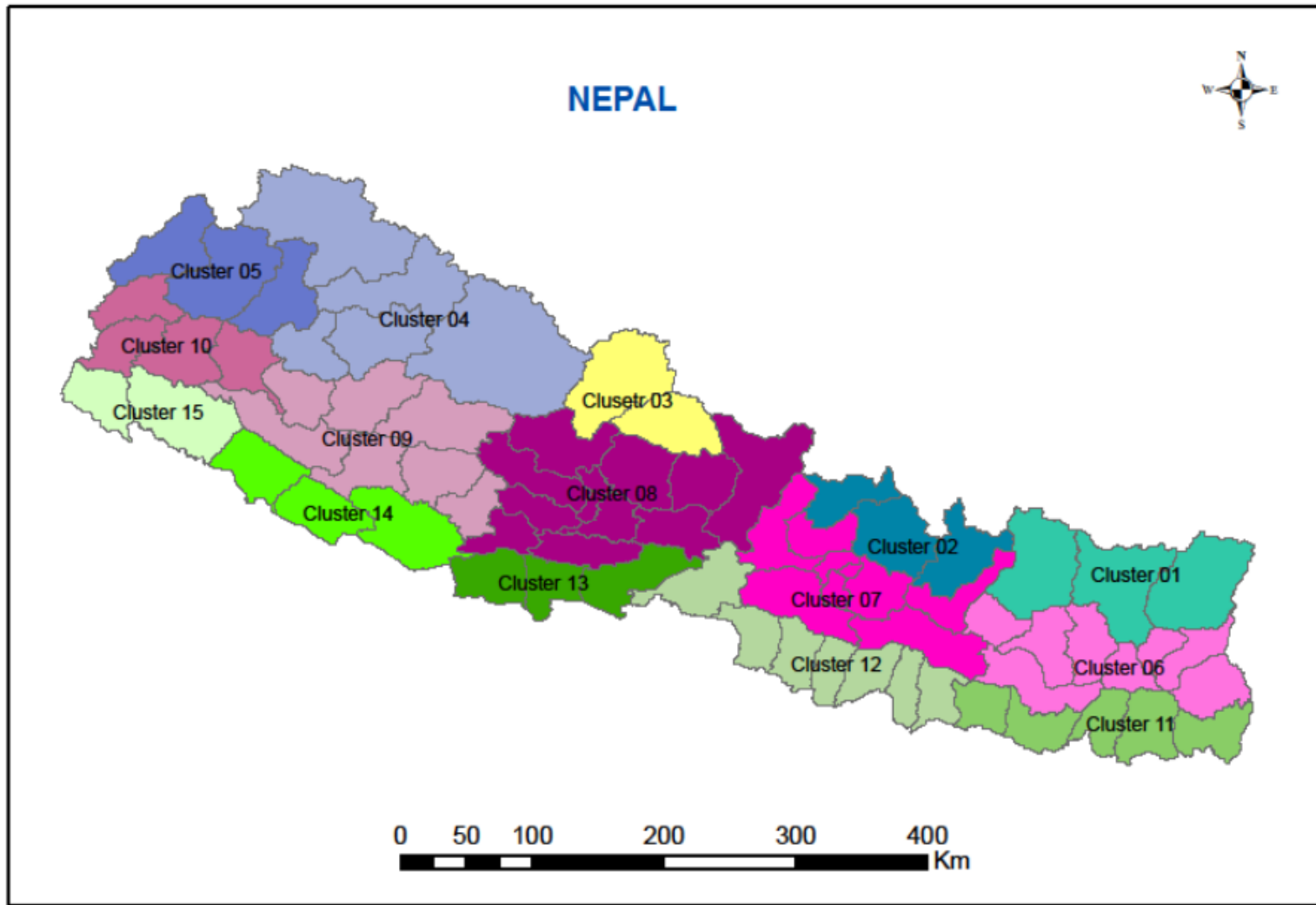
- National or subnational assessment of current and future vulnerability to the health risks of climate change, and of policies and programmes that could increase resilience, taking into account the multiple determinants of climate-sensitive health outcomes;
- Iterative process that builds capacity at country level;
- Opportunity to strengthen collaboration between researchers and policy makers;
- Inter-sectoral process led by Ministry of Health;
- Basis to manage the health risks of climate change.

Vulnerability and Adaptation Assessment (VAA) in Nepal

- Objectives
 - To conduct VAA as evidence on how climate variability and climate change affects the health that will help to develop Nepal's Country Strategy for protecting health from climate change.
- Approach
 - Carried out by a group of consultants under MoHP with support from WHO
- Period: 2001-10



Geographical Coverage



Vulnerability assessment based on Aggregate index

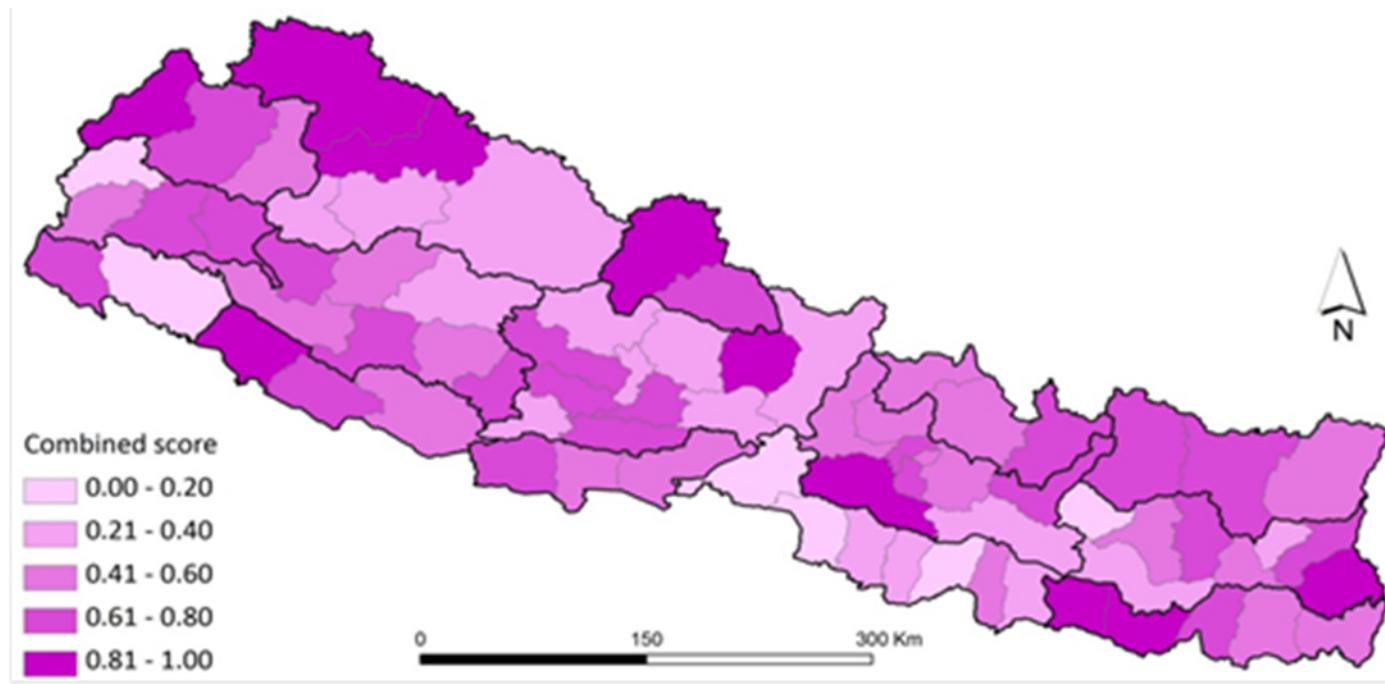


Figure 1: Spatial distribution of aggregate vulnerable values by district, Nepal

The average composite index value of all three components = 0.53

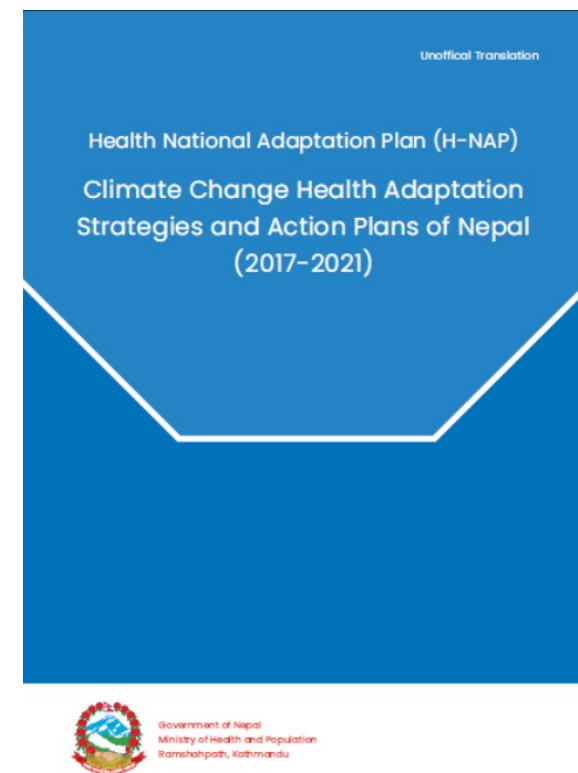
43 districts above the mean value, signifying more vulnerable.

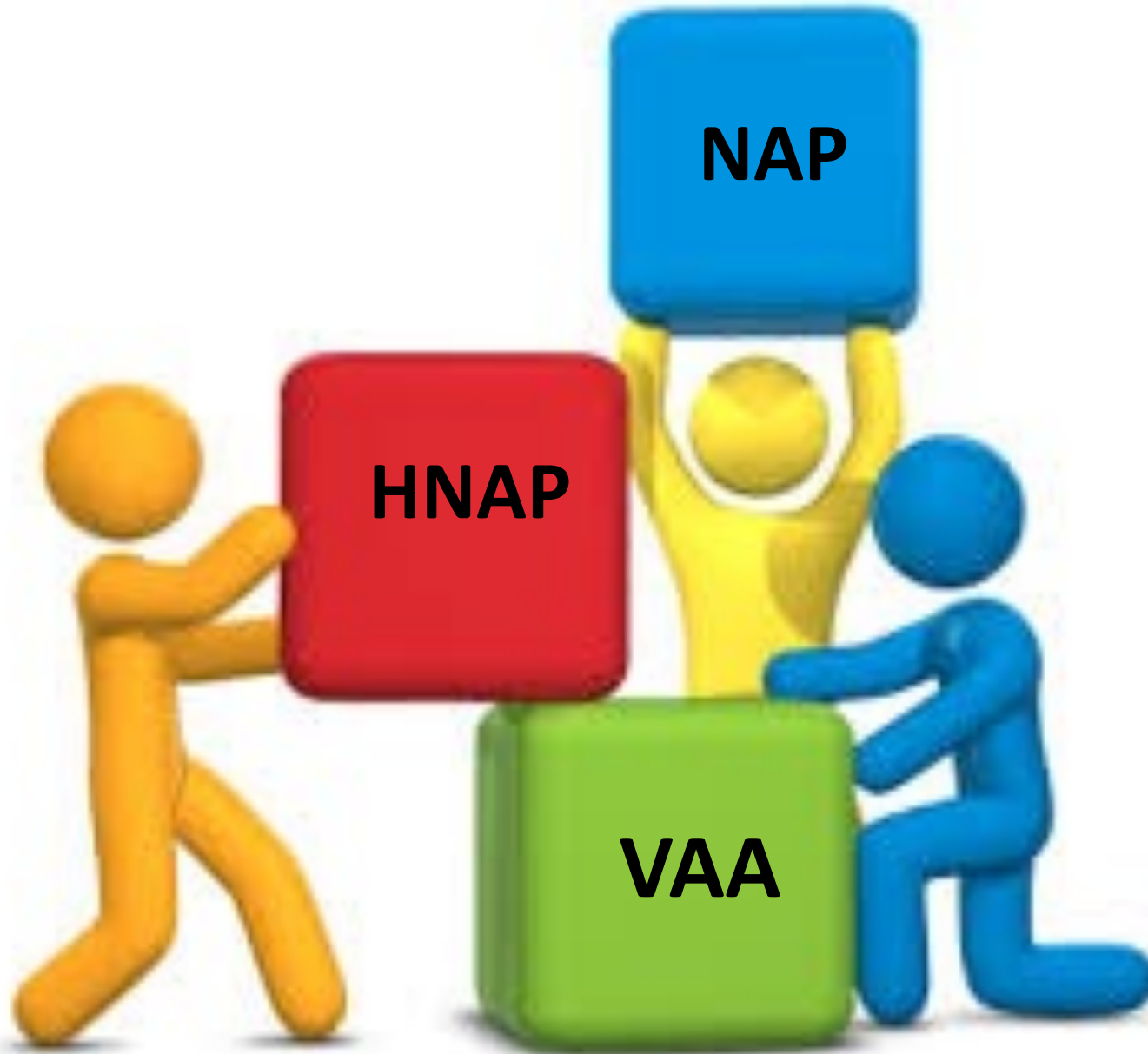
Rest 32 districts are less vulnerable.

Health-National Adaptation Plan

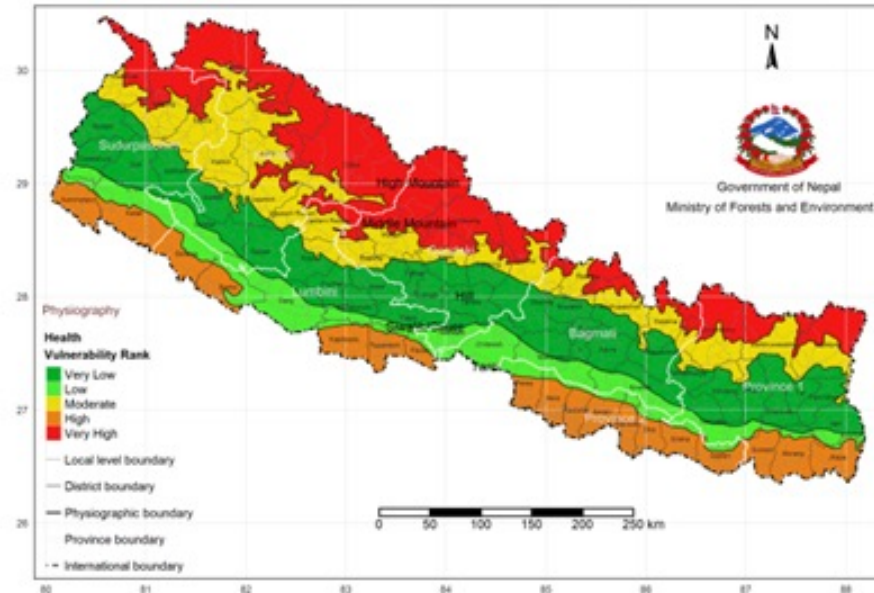
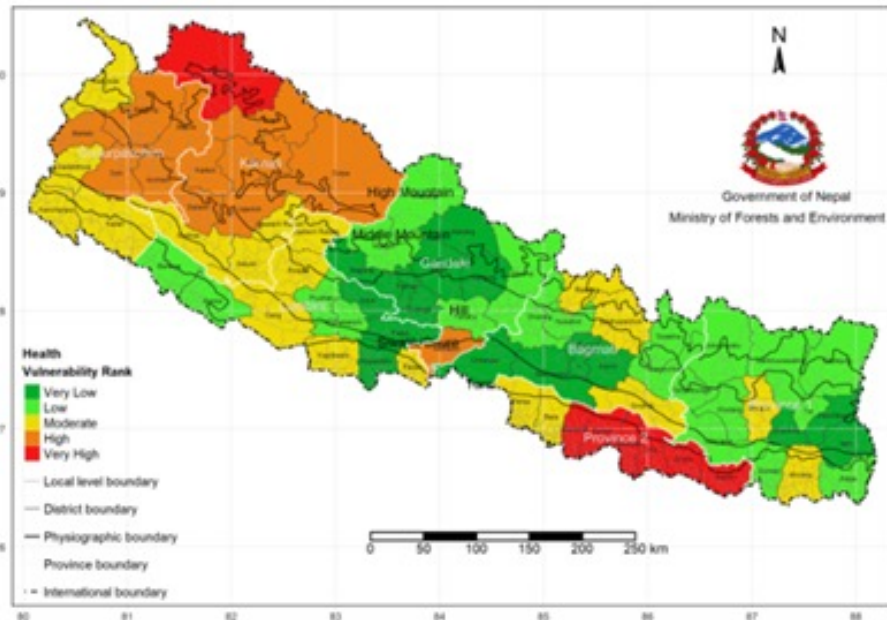
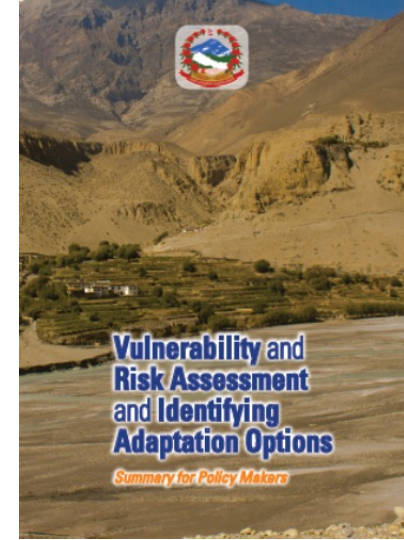
Strategic Objectives

- To raise public awareness about climate change and its effect on health;
- To generate evidences on the health effects of climate change at national and sub-national level through continuous research and studies;
- To reduce morbidity and mortality of infectious diseases (vector, water, air and food-borne diseases) and malnutrition attributed to climate change;
- To manage the risk induced by the extreme climatic events; and
- To protect human health from adverse effects of climate change by incorporating health in all policies through multi-sectoral cooperation.





VRA in overall NAP formulation process in Nepal



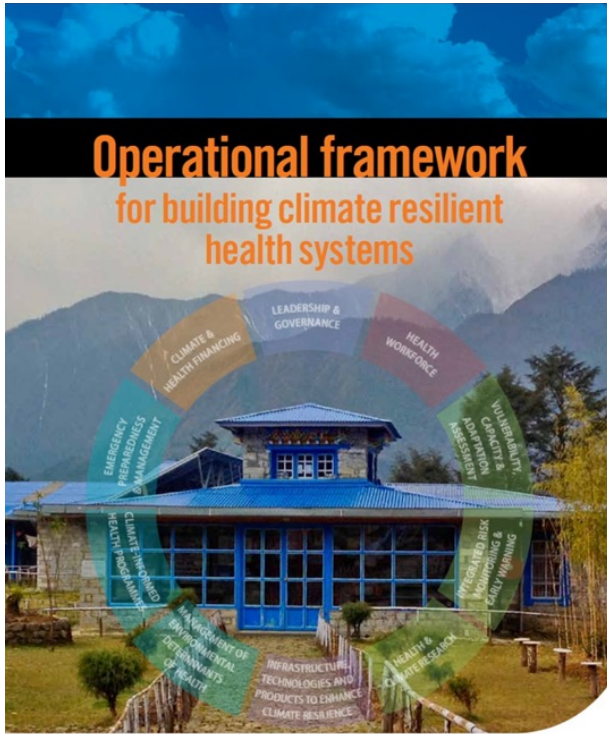
Health vulnerability by district (left) and physiography (right) (MoFE, 2017)

Nepal Health Sector's Response

- **Policy Documents**
 - National Adaption Programme of Action to Climate Change (NAPA), 2010
 - Health National Adaptation Plan (2017-21)
 - Climate Change Policy 2019
 - National Health Policy 2019
 - Second NDC, 2020
- **WHO/FCDO funded project “Delivering climate resilient WASH in Africa and Asia” (2018-22)**
- **GEF funded project “Building resilience of health systems in Asian LDCs to climate change (2019-23)**
- **Support on health component in overall NAP process**



Operational Framework for building climate resilient health systems



Thank You