



POLICY BRIEF
November 2023



VIETNAM

CLIMATE CHANGE AND HEALTH SYSTEM RESPONSE

© The Energy and Resources Institute 2023

Suggested format for citation

TERI. 2023 Vietnam Climate Change and Health Systems Response: Policy Brief
New Delhi: The Energy and Resources Institute.

For more information

Ms Suruchi Bhadwal, Senior Fellow & Programme Director
Email: suruchib@teri.res.in
TERI, Darbari Seth Block, IHC Complex, Lodhi Road, New Delhi 110 003, India | Tel.: +91 11 2468 2100 or 2468 2111
Fax: +91 11 2468 2144 or 2468 2145 | Web: www.teriin.org

This policy brief constitutes an output of a study titled 'Climate Change and Health-Review of Evidence for the Indo-Pacific Region' funded by South Asia Research Hub, Foreign, Commonwealth and Development Office (FCDO), Government of UK. However, the views expressed herein do not necessarily reflect the official policies of the Government of UK.

The main objective of the study was to gather evidence on climate change and its impacts on health in South Asia (SA), South-East Asia (SEA), and the Pacific Islands (PI). The study was conducted in collaboration with esteemed partner— Asia Disaster Preparedness Centre (ADPC).

Main Contributors

The Energy and Resources Institute (TERI)

Ms Suruchi Bhadwal, Senior Fellow & Programme Director, TERI
Ms Sakshi Bajpai, Project Associate, TERI
Ms Smita Chakravarty, Associate Fellow, TERI
Ms Sisira P, Project Associate, TERI
Dr Richa Sharma, Fellow, TERI

Associate Contributors

Asia Disaster Preparedness Centre (ADPC)

Mr Aslam Perwaiz, Deputy Executive Director, ADPC
Mr Nassim Abiza, Consultant, ADPC

Funding Partners

Foreign, Commonwealth and Development Office (FCDO)

Dr Jaya Singh Verma, Policy and Programme lead, Asia Pacific Region
Mr Anirban Ganguly, Research Specialist, South Asia Research Hub

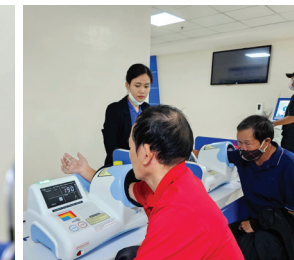
Disclaimer

All photos courtesy of: <https://www.shutterstock.com/>

TABLE OF CONTENTS

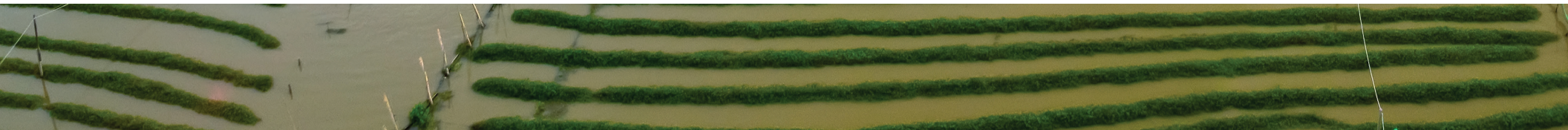
TABLE OF CONTENTS

Introduction.....	6
Challenges.....	7
Best Practices.....	8
Opportunities	9
Recommendations	11
References	13





Introduction | Challenges | Best Practices | Opportunities | Recommendations | References



INTRODUCTION

Vietnam faces severe climate challenges due to its geography. The country is experiencing a range of climate-related challenges, including rising temperatures, increased frequency and intensity of extreme weather events such as typhoons and floods, sea-level rise, and changing precipitation patterns. Rising temperatures amplify heat-related illnesses in the country,¹ particularly affecting the elderly,² chronically ill, and agricultural communities.³

Climate vulnerability in Vietnam varies across regions, with the Mekong Delta and certain coastal areas facing acute risks due to sea-level rise.⁴ The health sector suffers from infrastructure damage during extreme weather, especially in rural areas, affecting access to crucial healthcare. Also, these extreme events lead to infectious disease outbreaks, such as vector borne and water borne diseases.⁵ There is a concerning rise in mental health issues, linked to climate impacts and financial stress in the country.⁶ Additionally, urban air pollution, linked to respiratory and cardiovascular diseases, demands understanding and behavioural responses.⁷ These climate-related phenomena can have devastating consequences for public health.⁸

Vietnam's healthcare system comprises three tiers: primary, secondary, and tertiary care, linked by a referral system.⁹ It is funded by government support, insurance, and out-of-pocket payments; yet the system struggles with evolving health needs, particularly in chronic disease management like hypertension and diabetes. Private providers,

though growing, are mainly urban-based, which exacerbates the disparities in rural healthcare.^{10,11}

Vietnam has taken extensive measures to combat climate change and fortify its health sector against environmental risks. The government introduced several plans and strategies, including the National Target Programme to Respond to Climate Change and a Climate Change Response Action Plan for the Health sector. These initiatives focus on policy development, awareness, data systems, community-based responses, and healthcare system enhancements to address climate-induced health issues.^{12,13}

This policy brief aims to address Vietnam's primary focus on addressing climate change within the context of health risks and evaluating the capacity of country's health system to respond effectively. It delves into the necessary recommendations to navigate and mitigate the impacts of climate change, considering the existing state of health system.

CHALLENGES



Emerging from extensive consultations, the challenges in promoting a climate-resilient health system in Vietnam revolve around several key areas:

- **Overcrowding in the health system:** Overcrowding is a major issue, namely at the central and provincial levels, potentially affecting the quality and accessibility of healthcare.
- **Healthcare workforce shortage:** Vietnam faces a shortage of healthcare professionals, especially in rural areas. The disparity between urban and rural distribution leads to limited access to quality healthcare services, contributing to health inequities. Consequently, Vietnam's disadvantaged groups, particularly ethnic minorities and residents of impoverished and hilly areas experience much lower health outcomes than the rest of the country.
- **Lack of data:** Only recently, there have been efforts at filling the gaps in an array of climate change-induced illnesses, namely respiratory conditions and air pollution. While research on dengue fever is established and has informed early warning systems, evidence gaps in data collection of other diseases prevent adequate environmental health training and capacity building. Similarly, mental health and heat stress particularly faced by informal laborers in large urban areas requires further modelling.
- **Vulnerability in infrastructure:** The absence of adequate evaluation tools hampers the integration of vulnerability considerations into adaptation strategies. This shortfall extends to infrastructure development, hindering effective climate change adaptation and disaster prevention.
- **Financial and international aid gaps:** Despite efforts, financing and international aid have not matched the country's requirements, impacting the implementation of adaptation strategies and healthcare improvements.

BEST PRACTICES

BEST PRACTICES



- **UNDP Telemedicine for Rural Ethnic Communities:** The “doctor for everyone” project successfully provides pre-consultation to know if it is necessary or not to go to a medical facility; make an appointment to reduce waiting time and dispense medical support and advice during home treatment after medical examination. The software also works

for health education and disease prevention. Health care and disease prevention information, especially vaccination notices and disease prevention notices, are sent to each citizen’s personal account to help them access official information sources and timely. The results of consultation with health workers showed that the three most positive impacts of the Project on people are: timely emergency support; reduced travel time to medical facilities and more frequent health monitoring. The biggest obstacle when using remote health care services is that people do not have enough connected devices such as computers and smartphones. To meet the language and knowledge of the populations, the software’s interface has been upgraded to be simple, easy to use and have instructions in ethnic languages.

- **FAO Food Security Anticipatory Action:** The protocol aims to guide the government and partners to systematically monitor the likely impact of a hazard and use forecast information to trigger specific and adapted anticipatory actions. The Anticipatory Action protocol targets vulnerable rice farmers in high-risk provinces, with a particular focus on women’s committees, to protect livelihoods ahead of a potential drought. It provides information, financing, and fodder directly to impacted communities. That ultimately safeguards production and protects the population from major disasters. By guaranteeing food security, the protocol preserves access to nutritious and healthy food, strengthening the immune system and preventing mental health and socio-economic repercussions.

OPPORTUNITIES

OPPORTUNITIES



Amid these challenges, there are significant opportunities to strengthen Vietnam’s health system against climate impacts. These are—

Climate-health policy integration: By identifying and addressing vulnerabilities unique to different regions, policies can be tailored to ensure healthcare systems are equipped to respond effectively. Strategies may include targeted initiatives to combat vector-borne diseases in areas prone to flooding, or implementing heat management plans to protect vulnerable populations during extreme temperatures.

Adaptive capacity building: Developing early warning and surveillance systems to detect climate-related health risks can aid in prompt responses.

Health infrastructure resilience: Upgrading infrastructure design and fortifying buildings against natural disasters ensures continued healthcare delivery, even amidst severe climatic disturbances. From reinforcing hospital structures to ensuring uninterrupted



power supply and water resources during emergencies, resilient healthcare infrastructure safeguards critical services during crises.

Public-private partnership: Collaborating with climate and health organizations to facilitate knowledge sharing, resource mobilization, and expertise exchange, helps to enhance healthcare systems' resilience. These partnerships enable the implementation of best practices, innovative technologies, and cross-sectoral approaches to address the emerging threats.

Targeted health financing: It is beneficial to ensure adequate financing and international aid to meet the evolving health needs, especially in vulnerable regions. Directed financial support enables the implementation of targeted healthcare interventions, including disaster preparedness, infrastructure improvements, and healthcare workforce training.

RECOMMENDATIONS



Scale-up Community Health Services (CHSs): Primary and preventive care, rather than advanced facilities, must be the first point of contact within the health system in both urban and rural contexts. The gaps in healthcare provision across different levels are growing wider as Vietnam enters an epidemiological transition with diseases becoming more complex—a triple-burden pattern of slowly declining communicable diseases, rapidly increasing non-communicable diseases, and occasionally reemerging illnesses amid a rapidly ageing population. Patients frequently avoid CHSs, or district health units in favour of services at higher service levels. Greater capacity, training, and education of both staff and populations must shift to more effective, quicker, and cost-sensitive local assistance. This is in response

to the increasing needs of chronic patients and demand from recurring natural disasters and climate change-induced illnesses.

Digital health management system: Vietnam’s healthcare system now produces most of its reports manually, on paper. As a result, it is challenging for decision-makers to gather and analyse accurate data about the healthcare system, make predictions, and adequately allocate funding. Manual reporting, moreover, requires time, risks losing data, and prevents large data compilations and cross-examination. As climate change models require a large amount of historical trends and disaggregated information to tailor policies to different vulnerabilities, digitalization must be urgently prioritized across the whole country.

Monitoring and evaluation: Currently, monitoring and evaluation of past or existing policies is not conducted routinely, but usually only

before new measures are proposed, hindering timely course correction. Accountability is limited as health management agencies and facilities generally respond to higher authorities, without an official feedback mechanism to lower levels, or meaningful public participation in policy amendments. The implementation of a nationwide compliant mechanism, recurrent progress monitoring against set minimum standards, and participatory community fora is crucial—to maintain up-to-date measures against climate change volatility, adapt structures to particular needs, and foster public trust towards the health system.

References

1. Dang, T. N., Van, D. Q., Kusaka, H., Seposo, X. T., & Honda, Y. (2018). Green space and deaths attributable to the urban heat island effect in Ho Chi Minh City. *American journal of public health*, 108(S2), S137-S143.
2. Dang TN, Honda Y, Van Do D, Pham ALT, Chu C, Huang C, Phung D. Effects of Extreme Temperatures on Mortality and Hospitalization in Ho Chi Minh City, Vietnam. *Int J Environ Res Public Health*. 2019 Feb 2;16(3):432. doi: 10.3390/ijerph16030432. PMID: 30717328; PMCID: PMC6388260.
3. Nu Quy Linh Tran, Son Nghiem, Cordia Chu, Mai Anh Luong, Thi Tu Ho & Dung Phung (2022) The Prevalence of Heat-related Illnesses and Associated Factors among Rice Farmers in Vietnam, *Journal of Agromedicine*, DOI: 10.1080/1059924X.2022.2154086
4. Phung, D., Huang, C., Rutherford, S., Chu, C., Wang, X., Nguyen, M., Nguyen, N. H., Manh, C. D., & Nguyen, T. H. (2015). Association between climate factors and diarrhoea in a Mekong Delta area. *International journal of biometeorology*, 59(9), 1321–1331. <https://doi.org/10.1007/s00484-014-0942-1>
5. Razafindrabe, B.H., Kada, R., Arima, M. and Inoue, S., 2014. Analyzing flood risk and related impacts to urban communities in central Vietnam. *Mitigation and adaptation strategies for global change*, 19, pp.177-198.
6. Pollack, A.A., Weiss, B. and Trung, L.T., 2016. Mental health, life functioning and risk factors among people exposed to frequent natural disasters and chronic poverty in Vietnam. *BJPsych open*, 2(3), pp.221-232.
7. World Bank, 2021 (unpublished). “Accelerating Clean, Green, and Climate-Resilient Growth.” Vietnam Country Environmental Analysis. Washington, DC: World Bank.
8. WHO (2016). Human Resources for Health Country Profiles. Vietnam. <https://www.who.int/publications/i/item/9789290617716>
9. Van Nguyen, H., Debattista, J., Pham, M.D., Dao, A.T.M., Gilmour, S., Nguyen, H.L., Van Nguyen, T., Mai Le, P., Nguyen, P.T., Tran, A.T.N. and Vu, K.D., 2021. Vietnam’s healthcare system decentralization: How well does it respond to global health crises such as COVID-19 pandemic?. *Asia Pacific Journal of Health Management*, 16(1), pp.47-51
10. Nguyen, L. H., Tran, B. X., & Hoang, L. T. (2018). Factors Associated with Job Satisfaction among Vietnamese Hospital Pharmacists. *International Journal of Environmental Research and Public Health*, 15(9), 2032.
11. Dang, A., Vu, H., & Nguyen, H. (2018). International nurse recruitment in Vietnam: Tensions and ethical implications. *PLOS ONE*, 13(8), e0202629.
12. World Bank; UNDP. World Bank, Hanoi, Vietnam. 2015. Available online: <http://documents1.worldbank.org/curated/en/334491474293198764/pdf/108348-REVISED-PUBLIC-ACS.pdf>
13. Drogoul, A., Pannier, E., Nguyen, M. H., Woillez, M. N., Ngo-Duc, T., & Espagne, T. (2022, March 8). Climate change in Vietnam: impacts and adaptation. *The Conversation*. <http://theconversation.com/climate-change-in-vietnam-impacts-and-adaptation-173462>



The Energy and Resources Institute (TERI)

Darbari Seth Block, Core 6C, India Habitat Centre, Lodhi Road, New Delhi - 110 003, India

Tel: (+91 11) 2468 2100, 7110 2100

Email: mailbox@teri.res.in Website: <http://www.teriin.org>

