

Cover Story



Climate Resilient Health System in Sri Lanka

Mahesh Kumbukage

Directorate of Environmental Health, Occupational Health and Food Safety, Ministry of Health, Sri Lanka

Correspondence: mpkumbukage@gmail.com

 <https://orcid.org/0000-0001-9685-6361>

DOI: <https://doi.org/10.4038/jccpsl.v31i1.8848>

Received on 15 Apr 2025

Accepted on 16Apr 2025

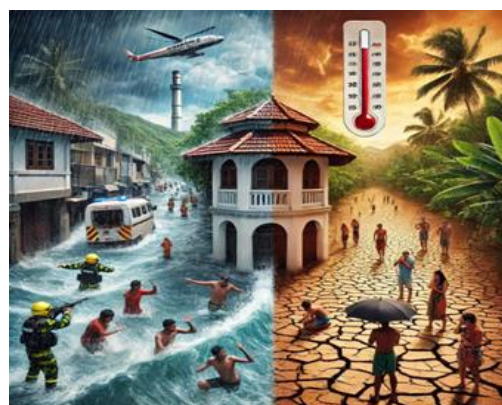
Concept – Developed by Drs. Mahesh Kumbukage, Sajani Nadeeka and Gayan Ariyadasa of the Directorate of Environmental Health, Occupational Health and Food Safety, Ministry of Health, Sri Lanka

Photo – The impact of climate change on healthcare infrastructure highlights both the challenges it poses and the resilience of healthcare systems adapting to protect communities

Photo Credit – Image generated using ChatGPT by Kosala Mendis, Development Officer, Environmental & Occupational Health and Food Safety Unit, Ministry of Health, Sri Lanka

Sri Lanka, an island nation in the Indian Ocean, is highly vulnerable to the adverse impacts of climate change. Rising temperatures, increased frequency and intensity of extreme weather events, and shifting disease patterns pose significant threats to the country's health system (1). The vulnerability is heightened by Sri Lanka's status as a developing country, its geographical location as an island nation, and the challenges of unplanned development.

Sri Lanka faces various issues from climate change due to its geographical location, reliance on climate-sensitive livelihoods, and increasing extreme weather events (2). Rising temperatures, intensified monsoons, and erratic rainfall patterns have led to a rise in vector-borne and zoonotic diseases (e.g., dengue, leishmaniasis, leptospirosis) and non-communicable diseases, malnutrition, and heat-related illnesses. Coastal erosion and sea level rise threaten coastal communities by increasing saltwater intrusion into freshwater sources, compromising food and water security, and raising the risk of gastrointestinal diseases. Though malaria transmission has been halted, continued surveillance is necessary due to its climate sensitivity (3). Mental health impacts from climate-induced displacement and loss of livelihoods require special attention. Integrating mental health services into healthcare, including community-based support, is essential for resilience (4).



Sri Lanka's health sector also faces significant challenges from environmental stressors and climate change. Poor waste management, especially in urban areas and healthcare facilities, contributes to disease outbreaks, water contamination, and pollution. Extreme weather events, such as floods, droughts, and cyclones, disrupt healthcare infrastructure, damage facilities, and interrupt supply chains, making it difficult to provide consistent care during emergencies.

Sri Lanka's health sector has made progress through the National Adaptation Plan for Health and Nationally Determined Contributions (NDCs) (5). However, more action is needed to strengthen resilience, particularly for vulnerable groups (e.g., children, pregnant women, the elderly, and low-income communities). Healthcare infrastructure should adopt sustainable practices such as renewable energy and efficient waste management to reduce emissions and improve resilience.

Community engagement and awareness are crucial for effective climate action (6). Public health programs must integrate climate risks into policies and interventions. Strengthening healthcare systems to withstand climate impacts will protect public health, promote health equity, and support sustainable development goals. Addressing these interconnected issues requires a climate resilient healthcare system that integrates sustainable practices and effective climate adaptation strategies.

Author affiliation: Consultant Community Physician, Directorate of Environmental Health, Occupational Health and Food Safety, Ministry of Health, Sri Lanka

References

1. Ebi KL, Hess JJ. Health risks due to climate change: inequity in causes and consequences: study examines health risks due to climate change. *Health Aff (Millwood)* 2020; 39(12): 2056-2062.
2. Rathnasiri M & Gunathilaka D. *Climate change and social responsibility*. Sri Lanka: Emerald Group Publications, 2025.
3. Hoshen MB & Morse AP. A weather-driven model of malaria transmission. *Malar J* 2004; 3(1): 32.
4. Berkes F & Ross H. Community resilience: toward an integrated approach. *Soc Nat Resour* 2013; 26(1): 5-20.
5. United Nations Office for Disaster Risk Reduction. *Analysis of DRR inclusion in national climate change commitments*. 2021.
6. Leknoi U, Yienthaisong A, Likitlersuang S. Community engagement initiative amid climate change crisis: Empirical evidence from a survey across Bangkok Metropolis of Thailand. *Cities* 2022; 131: 103995.