



PERSPECTIVE ARTICLE

Acting on the Climate Crisis: Toward Health System Resilience in the Pacific

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ABSTRACT

Pacific Island Countries and Territories are experiencing intensifying health threats due to climate change, including the rising incidence of vector- and waterborne diseases, worsening non-communicable disease and increasing mental health stress. The vulnerability of health systems is compounded by the high proportion of facilities located near coastlines and the lack of essential infrastructure such as electricity, clean water, and sanitation services. Climate change also undermines critical social determinants of health which impact food security, livelihoods, and access to care, particularly for remote and vulnerable populations.

In response, the Pacific has mobilised a strong regional agenda to address the climate-health nexus, supported by high-level political commitments such as the Pacific Health Ministers. This article aims to provide an overview on the escalating health threats posed by climate change and how countries are advancing climate-resilient health systems through governance, adaptation planning, climate-informed surveillance, policy alignment, and cross-sectoral coordination. For example, momentum is building through platforms like the Pan-Pacific Conference on Climate and Health, which has accelerated the translation of regional commitment into action. Countries are implementing climate-resilient health care facility guidelines, conducting vulnerability assessments, operationalising adaptation plans, investing in early warning systems, and expanding inclusive community engagement. These innovations reflect growing efforts to embed resilience into service delivery, infrastructure, surveillance, and multisectoral governance

The Pacific's collective experience offers a compelling model for how regions can respond to climate-driven health risks with unity, innovation, and equity at the core, ensuring that health systems can protect communities now and into the future. Through sustained cooperation and innovation, the region has the potential to not only adapt but lead in global climate-health resilience.

Keywords: Health and Climate Change, Pacific Islands, Health System Resilience

Climate Change and Health in the Pacific: Escalating Risks

Climate change is one of the most complex and pressing threats to health in the Pacific. This is an existential threat where 90% of the region's population, excluding Papua New Guinea, is located within 5 kilometres of the coast.¹ Across Pacific Island Countries and Territories (PICTs), rising temperatures, extreme weather events, and sea level rise are intensifying the spread of vector- and waterborne diseases, worsening the burden of non-communicable diseases (NCDs), and contributing to a growing mental health crisis due to displacement, livelihood loss, and environmental degradation, all of which undermine psychological well-being.²⁻⁴ Outbreaks of dengue, leptospirosis, and diarrhoeal illnesses have become more frequent and severe.⁵ Rising heat and changing rainfall patterns are expanding the habitat ranges of disease vectors such as mosquitoes, heightening the risk of dengue, Zika, and chikungunya outbreaks in previously low-risk areas. At the same time, climate-related disruptions are affecting the management of NCDs, such as diabetes, cardiovascular diseases, and respiratory conditions, as access to regular treatment, medications, and nutritious food becomes more challenging.⁶⁻⁷

These impacts are particularly acute in a Pacific region where over 62% of healthcare facilities are located within 500 meters of the coastline.⁸ Many of these facilities are exposed to flooding, storm surges, and saltwater intrusion, and often lack essential services such as reliable electricity, clean water, waste management, and internet connectivity. These conditions significantly compromise the ability of health systems to deliver uninterrupted, quality care in the face of climate-related disruptions.⁹ Health workers face increasing strain in responding to disease outbreaks while maintaining continuity of care for chronic conditions and vulnerable populations.

Beyond immediate clinical outcomes, climate change undermines key social and environmental determinants of health.¹⁰ It threatens food and water security, increases displacement and livelihood loss, and exacerbates economic vulnerability, especially for remote and outer island communities. These compounding risks further expose women, children, older persons, and persons with disabilities to poor health outcomes and deepen existing

inequities.¹¹ The rising mental health burden, linked to loss of homes, environmental degradation, and uncertainty about the future, has emerged as a critical but often overlooked dimension of climate impacts.¹² Together, these realities underscore the scale and complexity of the climate-health challenge facing Pacific communities.

This article aims to provide an overview of the escalating health threats posed by climate change in the Pacific and highlight regional policy responses, innovations, and strategic actions to strengthen health system resilience. Rather than providing in-depth technical analysis of individual interventions, it offers a high-level synthesis to inform policy dialogue, coordination, and investment.

Building Momentum through Global and Regional Commitments

Over the past decade, momentum has been growing to position health centrally within regional climate strategies. Grounded in the 2050 Strategy for the Blue Pacific Continent¹³ and aligned with global commitments such as the Sustainable Development Goals,¹⁴ Pacific leaders have increasingly acknowledged the importance of integrated climate-health responses. High-level Health Forums, including the 15th Pacific Health Ministers Meeting in 2023,¹⁵ and the Pacific Heads of Health Meeting in 2024 and 2025¹⁶⁻¹⁷ have brought urgency to climate-health issues and galvanised support for regional coordination.

A significant outcome of these processes was the formal endorsement of the Pacific Network for Health and Climate Change in 2024 by the Pacific Heads of Health. This network provides a platform for countries to align on priorities, coordinate adaptation strategies, and strengthen capacity. The network's creation reflects a broader shift: health is now seen not just as a sector impacted by climate change, but as a vital part of the solution, one that must be included in climate policy, finance, and planning frameworks at all levels.

From Momentum to Urgency: Protecting Health Systems in a Changing Climate

The inaugural Pan-Pacific Conference on Climate and Health, held in September 2024 in Fiji, marked a turning point in transforming strategic dialogue

into concrete action. The conference brought together high-level political leaders, technical experts, and development partners to identify practical steps for enhancing health system resilience. It resulted in several regionally endorsed recommendations, spanning across thematic areas such as governance, collaboration, capacity building, monitoring and data, climate financing, community engagement, and technical coordination.

Subsequently, to implement these outcomes, the Health and Climate Change Technical Working Group was established, supported by the Pacific Community (SPC), the Secretariat of the Pacific Regional Environment Programme, the Pacific Islands Health Officers Associations, the World Health Organization, and other partners. The Technical Working Group has begun coordinating stakeholder engagement and mapping existing climate-health initiatives to avoid duplication and maximise impact.

Countries such as Fiji have adapted and begun applying the Climate-Resilient and Environmentally Sustainable Health Care Facilities guidelines in health facility upgrades and planning. Vulnerability assessments conducted in Fiji, Solomon Islands, and Tonga among other PICTs have helped prioritise infrastructure needs. Capacity building in climate-health risk management, including training in vector control; food systems and nutrition; water, sanitation and hygiene; and environmental surveillance is enhancing regional readiness.

Strengthening Resilience: Systems, Surveillance, and Innovation

Alongside policy frameworks, innovation is playing a growing role in building climate-resilient health systems. PICTs are investing in clean energy infrastructure, such as solar power, to secure critical services at health facilities during disasters. In Niue, the “Cool Roof” initiative is being piloted to reduce heat stress within facilities which improve patient safety and working conditions for health workers. These technologies are being matched by advances in health surveillance, including early warning systems for diseases such as leptospirosis, which integrate climate and environmental data to anticipate outbreaks.

One Health approaches are also gaining ground in the region, linking environmental, human, and

animal health systems to understand and mitigate the risks of zoonotic and climate-sensitive diseases. These approaches offer a more holistic way to strengthen public health systems and anticipate future threats. At the same time, countries are exploring ways to integrate climate-health data into national health information systems, enabling decision-makers to allocate resources more effectively and respond promptly to emerging risks.

Collectively, these innovations demonstrate that the Pacific is not just reacting to climate change but actively shaping climate-informed health systems that are forward-looking, community-driven, and adaptable to future climate induced disasters.

Strategic Priorities for Action

Despite some progress, Pacific governments and their partners must sustain and scale-up efforts to build resilient health systems through making decisive steps in developing and implementing Health Adaptation Plans that embed climate risk across infrastructure, service delivery, and governance. These plans should be context-specific, guided by vulnerability assessments, and aligned with broader national climate policies.

It is critical to operationalise the pledges made under the COP28 health initiatives,¹⁸ while also increasing investment in climate-resilient health systems by securing access to international climate finance. Efforts must be made to strengthen national capacities to develop compelling funding proposals and navigate sustainable financing mechanisms. Accelerating the implementation of the Pacific Network for Health and Climate Change agenda and the outcomes of the Pan-Pacific Conference on Climate and Health will require firm national leadership supported by strong regional mechanisms and global partnerships.

Development partners have a crucial role to prioritise support and scale up investments in both national and regional climate-health programmes. This includes not only financial support, but also sustained technical cooperation, monitoring and evaluation, and knowledge exchange across countries. Capacity strengthening must also remain central through structured mentorship, leadership development, and technical assistance, ensuring that countries are equipped with the tools, knowledge, and systems to respond effectively and

sustainably to the growing health impacts of climate change. Regional training hubs and peer-learning platforms could play a vital role in institutionalising these efforts. Community engagement, particularly with youth and vulnerable groups, should be expanded to ensure inclusivity and sustainability in adaptation planning. Culturally grounded approaches and traditional knowledge systems should be integrated to foster community ownership and long-term resilience.

A United Pacific for a Healthier Future

The climate crisis is a lived reality in the Pacific,¹⁹ already undermining health systems, deepening inequities, and threatening lives. While the region contributes little to global emissions, it bears an outsized share of the consequences which makes climate and health adaptation an urgent priority. The Pacific has responded with growing regional coordination, policy innovation, and community-driven initiatives that place health at the centre of climate resilience.

Through mechanisms such as the Pacific Network for Health and Climate Change and the Healthy Islands Vision,²⁰ PICTs are shaping a proactive agenda that links health security, sustainable development, and environmental justice. However, translating regional strategies into lasting impact will require continued leadership, sustained financing, and meaningful local engagement. With its unique strengths such as community solidarity, cultural knowledge, and strong regional identity, the Pacific can lead by example in enhancing health system resilience. By investing in resilient, inclusive, and future-ready health systems today, the region not only safeguards its own people but also offers a global model for responding to the health impacts of climate change. Furthermore, by prioritising health in all climate-related policies, the Pacific can lead a global shift toward more just, sustainable, and resilient systems.

Conclusion

Climate change presents a multidimensional threat to health across the Pacific. While PICTs have made strides in positioning health centrally in climate responses, the urgency of implementation cannot be overstated. This article outlines the growing risks, regional momentum, and actionable pathways to strengthen resilience. Continued

political commitment, targeted investments, inclusive governance, and culturally grounded approaches are essential to protect the health and well-being of Pacific communities. Through sustained cooperation and innovation, the region has the potential to not only adapt but lead in global climate-health resilience.

Conflict of interest

The authors have no conflicts of interest to declare.

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