



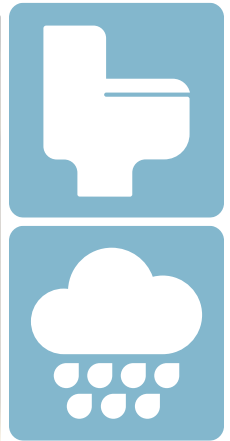
Policy Brief for Pacific Island Governments

Healthy Environments, Resilient Communities: The vital role of sanitation for improving climate resilience in the Pacific

It is well known that the climate crisis is a water crisis, however the links between climate change and sanitation are often less acknowledged and understood. Climate change is significantly impacting sanitation services across the Pacific, however climate-resilient sanitation also holds the key to poverty alleviation and improving the resilience of communities to climate change. Unless Pacific Islands Governments lead a concerted and cooperative effort to prioritise and mobilise resourcing towards sanitation access, the 2050 Strategy's vision of a resilient, healthy, equitable and prosperous Pacific cannot be realised.



WaterAid/ Dion Kombeng



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Realising the 2050 Strategy for a Blue Pacific Continent: Why we need sanitation now

The Pacific Island Countries are among the most vulnerable to climate change in the world and face a unique set of threats including sea-level rise, frequent tropical cyclones, coastal inundation and droughts. This means that they are constantly exposed to threats of extreme climate events and the frequent economic and non-economic damage they cause. Even under a low emissions scenario, economic losses from climate change in the Pacific are predicted to reach 4.6% of the region's annual 2100 GDP equivalent. Pacific Island Leaders have repeatedly recognised the existential threat of climate change to the livelihoods, security and wellbeing of the Blue Pacific Continent's people and declared a climate emergency in July 2022¹, calling on all development partners to prioritise climate action.

Universal access to safe sanitation is a foundational public service and at the heart of sustainable development.

The Pacific region is one of the most off-track regions to meet the SDG 6 targets for basic drinking water, sanitation and hygiene services by 2030. Between 2000 and 2020 over half a million people gained access to basic sanitation in the Pacific, however the sanitation gains were outpaced by population growth; the population practicing open defecation in the region increased by almost 50,000 people. Approximately 70% of the population in Pacific Island countries currently lacks access to basic sanitation services, and open defecation rates are increasing in countries such as Papua New Guinea (PNG) faster than any other country in the world. The need for sanitation is even more urgent in the context of Pacific Island countries' high vulnerability to the impacts of climate change and its impacts on human and environmental health, and economic resilience.



70%

population in Pacific Island Countries lacking basic sanitation services

“Safe sanitation underpins the very feasibility of Pacific Island Countries ... our national and international development goals are unlikely to be met without increased advocacy and financial support for water and sanitation, which will require renewed leadership and investment at the national, regional and international level.”

Pacific Island Country Statement to the 2nd Asia-Pacific Water Summit, 20 May 2013

Sanitation is the management of human excreta, including faeces, urine and menstrual blood. Inadequate sanitation services produce hazardous conditions through which human excreta may contaminate environments, food, and water, exposing people to potential disease.

Climate-resilient sanitation means strong sanitation systems, services, and behaviours that are ecosystem-aware and build community resilience and can be appropriately restored or maintained to reduce vulnerabilities, despite slow onset or acute climate hazards.

¹ Communiqué of the 51st Pacific Islands Forum Leaders Meeting, held in Suva, Fiji, July 2022



The impacts of climate change on sanitation

Whilst the links between climate change and water are increasingly recognised, the links between climate change and sanitation are less prominent in global conversations. All sanitation services are directly at risk of impact from a changing climate and climate-related disasters, with cascading impacts on users and ecosystems (below). Climate change will increasingly impact sanitation through widespread damage to critical sanitation infrastructure from flooding, droughts, and sea-level rise, contamination of drinking water sources from overflowing septic tanks, discharge of untreated wastewater into important aquatic ecosystems that provide livelihood opportunities, and exposure to pathogens from increased open defecation and

unsafe hygiene practices.

These climate hazards can cause significant economic and non-economic loss and damage that cannot be avoided through mitigation or adaptation. The Pacific is already experiencing these impacts through increased intensity of cyclones and flooding. Long term sanitation planning must consider climate change hazards, including adapting existing systems to withstand climate impacts, and acknowledging that in some instances destruction may be inevitable and allocating budgets for frequent repairs and rehabilitation.



Economic Losses

Income:

- Sanitation service delivery disruptions
- Tourism
- Economic productivity declines from loss of fisheries due to pollution from sanitation issues

Physical assets:

- Destruction of sanitation infrastructure from cyclones
- Corrosion from drought and sea-level rise
- Sewage system failure during floods

Non-economic Losses

Individuals:

- Loss of life from disease outbreaks
- Health issues e.g. water borne diseases
- Childhood developmental issues such as stunting

Society:

- Exacerbation of existing vulnerabilities and inequalities e.g. women & girls, people with a disability
- Unequal access to sanitation facilities
- Reduced productivity and economic returns

Environment:

- Loss of ecosystem services from wastewater/ faecal sludge pollution
- Water borne diseases
- Loss of critical coastal habitats e.g. coral reefs, mangroves that provide coastal protection and food security
- Pollution of drinking water source

How off-track is sanitation in the Pacific?

The Pacific region is one of the most off-track regions to meet the SDG targets for basic sanitation with the situation more dire in rural areas, schools and healthcare facilities:

- **Households:** Pacific sanitation rates are dragged down by low sanitation rates in a few countries with large populations (Figure 1). Rural areas typically have lower sanitation access than urban areas and in PNG and the Solomon Islands as few as 1 in 5 households have basic sanitation services.

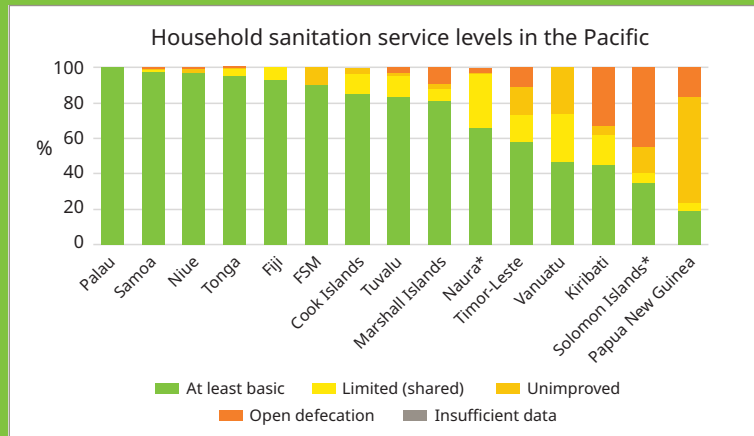


Figure 1 – Household sanitation service levels from JMP data 2022

- **Schools:** The Pacific is the worst-performing global region for sanitation access in schools, with 40% of schools having no sanitation service at all. The Solomon Islands and PNG have the highest (64%), and seventh highest (42%) proportion of schools in the world without any sanitation service respectively.
- **Healthcare Facilities:** The Cook Islands is the only Pacific country with basic sanitation in the majority of its health care facilities. Papua New Guinea is ranked seventh-worst in the world for sanitation services in health care facilities: 32% of HCFs had no sanitation service in 2019.



“Excessive nutrient inputs are causing eutrophication and associated macro-algal blooms in some of our lagoons. This is leading to nearshore habitat loss, decrease in fish numbers, and causing challenges for fishermen. Inadequate sanitation including poorly functioning septic systems, are thought to be the main contributors to the excessive nutrient loads to the lagoon.”

H.E. Kausea Natano, Prime Minister of Tuvalu
Statement to the 4th Asia-Pacific Water Conference, April 2022



Access to universal, safe sanitation services is critical to alleviating poverty and achieving outcomes across the entire SDG agenda. The links between sanitation and the rest of the SDG agenda are often overlooked within governance and financial systems, and seldom play a prominent role in sustainable development planning. Climate change and unsafe sanitation combined can tip ecosystems into collapse with cascading impacts on food security and fisheries, human health, tourism and the safety of coastal communities from extreme weather events through the degradation of critical ecosystems such as coral reefs and mangroves. Inadequate sanitation and its toll on health, livelihoods and productivity costs Pacific Island countries 1.6% of their GDP each year.



\$10

economic return for every \$1 invested in basic sanitation in the Pacific.



2.3%

average proportion of GDP expenditure on sanitation and water by Pacific governments



The definition of poverty used for the Global Goals is that everyone has access to basic services of which sanitation is one of the most fundamental ones.



Providing access to safe and sustainable sanitation systems can increase the number of girls attending school. Creating awareness around menstrual hygiene and sexual and reproductive health and rights through education can positively reinforce sustainable and inclusive practices and reduce discrimination against girls.

Sanitation workers often face discrimination and suffer from health risks due to a lack of access to sanitation, excluding them from the workforce leading to economic losses and limited opportunities to build livelihoods. Ensuring safe sanitation services can generate \$86 billion per year in greater productivity and reduced health costs.

Supporting inclusive access to sanitation services can reduce discrimination against marginalised communities and lead to improved access to education, including supporting the rights of slum dwellers and those residing in rural low-resource settings.



Re-using water for sanitation can reduce pressure on natural resources. Building a circular economy through innovative waste to energy sanitation practices can reduce waste and greenhouse gas emissions.



Safely disposing sanitary waste rather than burning or incineration can improve air quality and reduce emissions, as well as reduce terrestrial ecosystem contamination from open defecation.



Treating human waste can reduce environmental contamination and improve environmental health, thereby supporting ecosystems that provide critical services such as food.



Building gender inclusive toilets can improve the safety and privacy of women and girls. Including menstrual hygiene management facilities in projects can support school attendance among girls and other vulnerable groups.



SDG 6.2
By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations



Encouraging capacity building and behaviour change across the sanitation sector can lead to improved resilience of communities to climate change through poverty alleviation, food and water security, and reduced disease burden from water-borne diseases.



Building inclusive toilets can reduce discrimination against women and people with disabilities. Improving access to water resources flushing and hygiene can reduce conflicts within communities.



Safely disposing human waste can reduce pathogen transfer and reduce mortality from water-borne diseases. Implementing safe sanitation can support maternal and infant health and reduce the number of premature births and under 5 mortalities by mitigating mental and physical stress for pregnant women and girls.



Supporting green technologies such as ecological sanitation systems and waste to energy conversions can boost productivity and cost savings and reduce water consumption.



Increasing funding and investment in sanitation can support small to medium scale enterprises gain access to the market, including achieving co-benefits such as innovation in the waste and energy nexus.



A lack of access to basic sanitation services is enough to classify a dwelling as a slum. In larger cities, access to sanitation also has benefits in terms of improving amenities and liveability, improving productivity, human capacity and foreign investment.



Safely disposed human waste and wastewater can reduce impacts on coastal and marine ecosystems supporting positive biodiversity, and food security from reduced contamination of fisheries and aquaculture.



Climate-resilient sanitation services are built on a foundation of cross-sectoral partnerships and leadership to achieve joint outcomes across climate resilience, human health and ecosystem health.



3%

global disease burden associated with poor sanitation and water.



1.6% of GDP

annual economic losses due to inadequate sanitation and water in the Pacific

The poor state of sanitation has widespread implications for climate resilience and sustainable development in the Pacific:



Public health concerns. Outbreaks of sanitation-related diseases such as cholera and typhoid remain common in parts of Kiribati, Marshall Islands, Solomon Islands and the Federated States of Micronesia (FSM). In 2019, the Solomon Islands and Kiribati were respectively ranked 11th and 13th in the world for deaths per capita from diarrhoeal disease.



Childhood nutrition and development. Sanitation is a key contributor to childhood stunting². Stunting affects almost half of all children under five in Timor-Leste and PNG, and is above the global average in the Marshall Islands, Vanuatu and Solomon Islands.



Educational attainment. Sanitation access in schools helps reduce student absenteeism and drop-out rates, especially among girls.



Freshwater resource protection. In low-lying atoll states like Kiribati, Tuvalu and the Marshall Islands, poor sanitation threatens the quality of scarce freshwater resources.



Climate vulnerability. In urban areas of Fiji and Vanuatu, inadequate sanitation access contributes to the growth of informal settlements into flood-prone areas.



Tourism and economy. The importance of tourism to national income in some countries, such as the Cook Islands and Fiji, has been a primary reason for developing sanitation policies to preserve public health and ecology.



Environmental health. Poor sanitation impacts the environmental health of lagoons, reefs and fisheries. This has had flow-on effects to livelihoods and national economies in countries including the Cook Islands, Samoa and Tonga.

² Stunting is an indicator of a child's impaired growth and development from poor nutrition and repeated infection.



Why is sanitation in the Pacific currently off track?

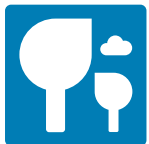
There are lots of reasons why sanitation in the Pacific is currently lagging:



Limited political prioritisation. Global experience shows that political prioritisation can catalyse rapid sanitation improvement. Governments in the Pacific countries with high sanitation rates typically have the greater public investment in water, sanitation and hygiene (WASH) while those with the lowest sanitation rates – Papua New Guinea, Solomon Islands, Kiribati and Vanuatu – typically have the lowest budget allocations for WASH, as little as US\$1.3 per capita per year. Within this, sanitation is often neglected; less than 7% of public WASH budget is directed to sanitation in Solomon Islands and Vanuatu.



Systemic failures and underinvestment. The water and sanitation sector systems of many Pacific countries have a history of underinvestment and neglect. Sanitation financing, especially from overseas aid, has often been project-based and has prioritised capital expenditure on major infrastructure over establishing the systems required for basic sanitation services. Fragmented approaches to financing rarely consider the sanitation service chain holistically, leading to skills shortages in key services, and gaps in the recurring finance needed for service operation, maintenance and rehabilitation. Aid and development financing should be targeted more strategically to strengthen sanitation sector systems and catalyse more sustainable local investment in sanitation.



Challenging geographies require contextually-appropriate sanitation technologies. Challenging environments in the Pacific range from atolls with high water tables across Micronesia and Polynesia, to steep mountainous terrain in Papua New Guinea, Solomon Islands and Timor-Leste, and high-density urban centres with limited land for sanitation treatment facilities. Technology must also be affordable for the poorest households and accessible for people with a disability. Within each country, and even each island, multiple sanitation technologies and service models may be required to respond to localised conditions.



Expensive market access and costs of doing business. The Pacific's relatively small and fragmented populations - isolated by vast ocean distances or challenging mountain terrains - lead to complicated and expensive sanitation supply chains which inflate the costs of sanitation products and services and limit the economies of scale possible elsewhere.



Cultural taboos. Discussion of sanitation and hygiene practices is taboo in many Pacific cultures. The highly gendered nature of many sanitation topics introduces additional sensitivities about who can participate safely in community dialogues, especially in the many patriarchal cultures.



Social structures and norms. Social norms and cultural customs in the Pacific can be both an asset and a challenge to sanitation. Customs such as *kastom*, *wantok* and *vanua* may drive rapid sanitation behaviour change in communities through social relationships and reciprocity. However, highly localised customs may limit the scalability of successful sanitation programs.



Pacific Island Governments as champions of change

Pacific Island Governments have an opportunity to lead a step change in sanitation to achieve the climate resilience outcomes that are already called out in their national strategies. Existing global and regional commitments made in the 2050 Strategy for the Blue Pacific Continent, National Adaptation Plans, the 2019 Pacific High-level Dialogue on Water and Sanitation, and other policy processes can be achieved if adequately championed and resourced. Governments should coordinate sanitation actors to ensure every service across the sanitation supply chain is fulfilled and lead the development and implementation of costed national roadmaps to ensure climate resilience across the entire sanitation supply chain. Political willingness and prioritisation of sanitation by Governments also sets the agenda by which donors can mobilise finance.

Pacific Island Governments also play a critical role in inspiring behaviour change at the community and household level, driving community investment in toilets and improved sanitation practices. Government action on sanitation can build on development progress that has already been made, including in childhood development, healthcare and education and economic development. The following section provides targeted recommendations for Pacific Island Governments to lead change in financing, policy, user engagement and service delivery for climate resilient sanitation.



“There is a need for a shift in thinking from the project-by-project approach, to one of sustained and sustainable financing for the water sector.”

H.E. Kausea Natano, then Deputy Prime Minister of Tuvalu

Statement to the 2nd Asia-Pacific Water Summit, 20 May 2013





Financing

- **Increase per capita investments in sanitation** to maximise economic, health and environmental outcomes for Pacific peoples. This is especially relevant for **Papua New Guinea, Solomon Islands, Vanuatu and Timor-Leste** which have the lowest basic sanitation access rates in the Pacific.
- **Advocate for increased donor funding** to be directed towards sanitation systems, including within financing commitments and Loss and Damage funding.
- **Fund initiatives to drive household investment in sanitation** through behaviour change, sanitation market development and user-pays services for wastewater and faecal sludge transport and treatment.



Policy and planning

- **Lead the development of national sanitation roadmaps** that set standards and strategies to provide climate-resilient sanitation services in community, school and health-care settings.
- **Include sanitation-specific actions in National Adaptation Plans** and operationalise those commitments to improve sanitation services' preparedness and resilience to climate change and disasters.



Service delivery

- **Convene sanitation actors in their country** to clarify and document the appropriate sanitation service models for relevant contexts, including technologies, roles and responsibilities.
- **Urgently accelerate access to basic sanitation services in schools** to provide healthy and safe learning environments and remove barriers to educational attainment. This is especially relevant for **Papua New Guinea, Timor-Leste and Solomon Islands**.
- **Urgently rectify the dire state of sanitation in the region's health care facilities**.



Partnership

- **Prioritise sanitation in funding requests to donors especially for basic sanitation services.** Basic sanitation is foundational for national development and community climate resilience.
- **Champion collaborative and collective regional platforms for sanitation.** Regional platforms such as Pacific Water and Wastewater Association and the Pacific Resilience Partnership technical working group can enable regional capacity development, sharing of good practice and collective negotiation of environmental standards.
- **Promote integrated approaches to address childhood stunting,** across sanitation, maternal and child healthcare, food security, nutrition, education and household disaster risk resilience. This is especially relevant in **Papua New Guinea, Timor-Leste, Marshall Islands, Vanuatu and Solomon Islands**.



User engagement

- **Consult widely and identify vulnerability hotspots to climate change risks.** Social and climate vulnerability indexes can enable targeted, differentiated support to the unique vulnerabilities climate hazards present to different social groups.

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