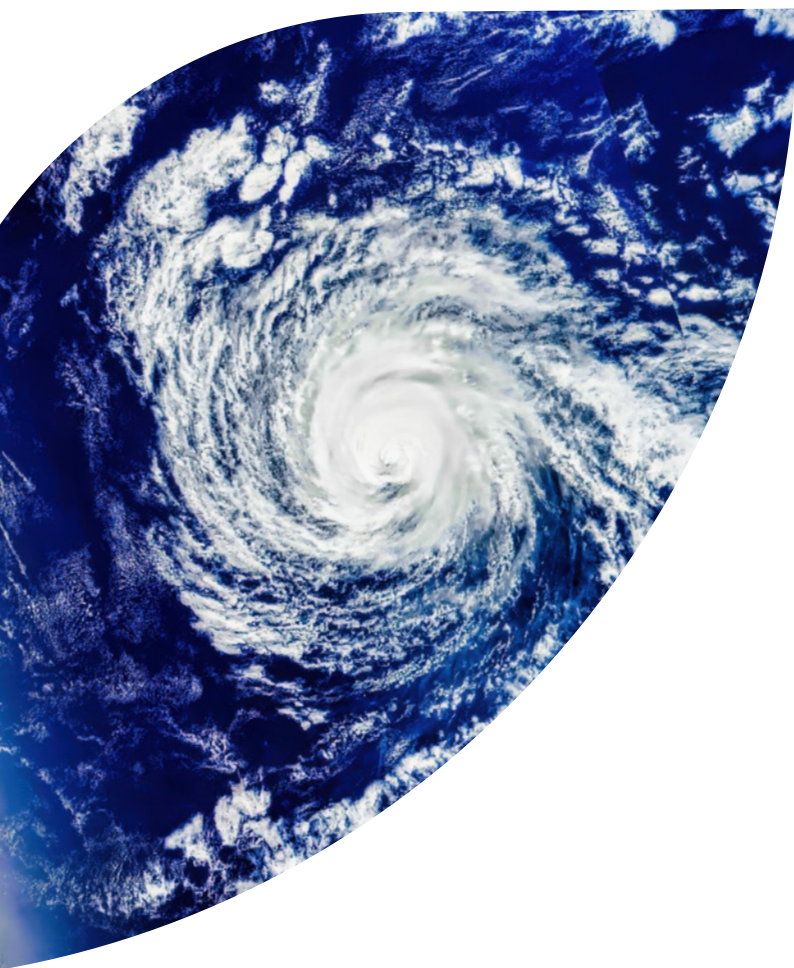




State of Play of Disaster Risk Reduction IN THE PACIFIC REGION

2023 – 2026





Funded by
the European Union



RRP

INTRA-ACP DISASTER RISK REDUCTION PROGRAMME

**Global
Gateway**



Table of Contents

1. Purpose and Scope	03
2. Regional Risk Context: Key Changes Since 2023	03
3. Policy and Institutional Developments	03
3.1 Regional level	03
3.2 National overview	06
4. Progress Against DRRP Strategic Objectives	07
SO1 4.1 Strengthening Disaster Risk Governance	07
SO2 4.2 Investment in DRR for Resilience	08
SO3 4.3 Preparedness, Response, and "Building Back Better"	09
CC 4.4 Cross-cutting issues – Inclusion and digital	10
5. Knowledge Management, Good Practices, and Learning	11
6. Partnerships and Coordination	12
7. Key Gaps, Challenges, and Risks	13
Bibliography	14

This Report is a general summary by the ACP DRRP Regional Coordinator Pacific of the current state of play of disaster risk reduction in the Pacific Region based on a synthesis of relevant, available resources.



22

**PACIFIC ISLAND COUNTRIES
AND TERRITORIES**



**HIGH EXPOSURES
TO CLIMATE AND
NATURAL HAZARDS**



**INCREASING INVESTMENTS
IN RESILIENCE AND
PARTICIPATORY ACTION**



**EARLY WARNING SYSTEMS
STRENGTHENED BUT
GAPS REMAIN**



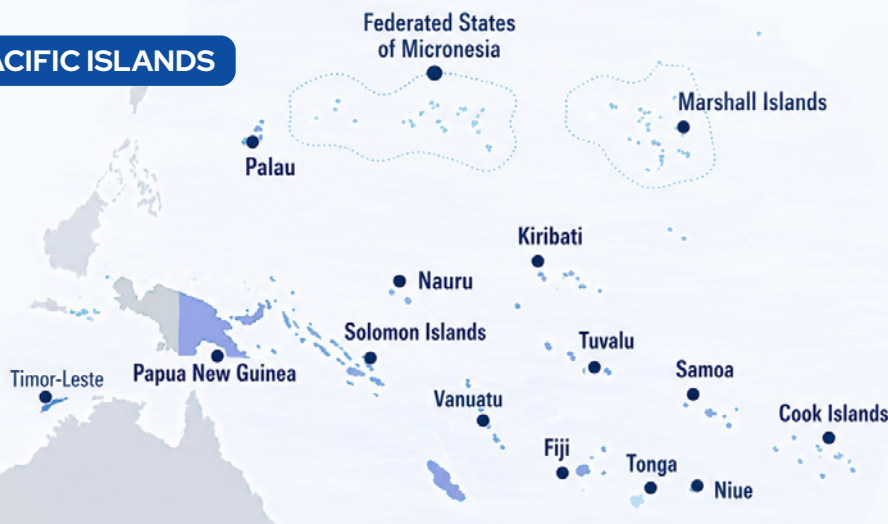
**INCLUSION PRIORITY
WOMEN, YOUTH, PERSONS
WITH DISABILITIES AND
MARGINALISED GROUPS**



ASSESSMENT PERIOD

**JANUARY 2023 TO
EARLY 2026**

OACPS PACIFIC ISLANDS



1 PURPOSE AND SCOPE

The objective of this note is to provide an updated overview of the state of Disaster Risk Reduction (DRR) across the Pacific region since 2023, identifying the main shifts in risk, policy, financing, preparedness, inclusion and knowledge management that should inform the Disaster Risk Reduction Programme (DRRP) for 2026–2028. It is framed around the **three DRRP strategic objectives** – risk governance, investment in resilience, and preparedness/recovery – while recognising that in the Pacific, DRR cannot be treated separately from climate change adaptation (CCA), sustainable development, ocean governance, human security and regional integration.

The note therefore assesses both formal DRR systems and the wider political economy of resilience: how regional strategies, national institutions, climate finance, early warning systems, anticipatory action, knowledge platforms and inclusion mechanisms are converging or failing to converge. The geographic scope covers Pacific Island Countries and Territories (PICTs) across Melanesia, Polynesia and Micronesia, with emphasis on **Pacific Small Island Developing States (SIDS)** and countries frequently engaged through regional DRR and CCA mechanisms, including **Fiji, Vanuatu,**

Solomon Islands, Tonga, Samoa, Kiribati, Tuvalu, Cook Islands, Federated States of Micronesia, Marshall Islands, Palau, Nauru, Niue and Papua New Guinea. The assessment period is January 2023 to early 2026, while recognising that many current systems are built on earlier commitments such as the **2015 Sendai Framework, 2015 Paris Agreement, 2016 Framework for Resilient Development in the Pacific (FRDP), the SDGs and the 2050 Strategy for the Blue Pacific Continent.**

The note uses regional and global evidence, including the Pacific Islands Forum Secretariat (PIFS), Pacific Community (SPC), Secretariat of the Pacific Regional Environment Programme (SPREP), UNDRR, UN ESCAP, WMO, CREWS, IFRC/Anticipation Hub, UN Women, World Bank and Pacific Resilience Partnership (PRP) sources. It also integrates the 2050 Strategy for the Blue Pacific Continent, Asia-Pacific Disaster Report 2025, State of the Global Climate 2025, Pacific Climate Change Research Roadmap 2025–2030, Sendai Target E implementation, Anticipatory Action, CREWS Pacific SIDS, Sendai Gender Action Plan, disability inclusion and Pacific knowledge-management platforms.



RISK GOVERNANCE

Strengthen institutional frameworks and governance for disaster risk management.



INVESTMENT IN RESILIENCE

Promote more resilient investments and financing guided by risk analysis.



PREPAREDNESS AND POST DISASTER RECOVERY

Strengthen preparedness, early warning systems and recovery including after disaster

2 REGIONAL RISK CONTEXT: KEY CHANGES SINCE 2023

The Pacific is one of the most disaster-prone regions in the world due to its physical exposure to both climatic and geophysical hazards. While the southwest is surrounded by the “ring of fire” with intense tectonic activity, the South Pacific Convergence Zone (SPCZ) increases the risks associated with climate variability, particularly during El Niño–Southern Oscillation (ENSO) cycles. The region’s vulnerability is shaped by its exposure, sensitivity, and limited adaptive capacity, making it highly susceptible to

both sudden-onset hazards and slow-onset events that drive significant disaster risk

Since 2023, the Pacific risk context has shifted from a largely hazard-by-hazard model of disaster management toward a more systemic understanding of cascading and compounding risk. Tropical cyclones, floods, drought, storm surge and coastal inundation remain central, but they now interact more visibly with marine heatwaves, coral reef degradation, ocean acidification, sea-level

rise, saltwater intrusion, food and water insecurity, public health stress, labour productivity loss, fiscal fragility and supply-chain disruption. This is significant for DRRP programming because the most important risk-management challenge is no longer only emergency preparedness; it is the need to integrate disaster risk into sectoral and macro-fiscal decisions before shocks occur.

The Asia-Pacific Disaster Report 2025

is particularly relevant because it frames rising heat as a disaster-risk driver, not just an environmental variable. For the Pacific, the implications are broader than urban heat stress. Increasing air and ocean temperatures are likely to amplify drought, rainfall extremes, ecosystem stress, vector-borne disease risks, crop stress, fisheries impacts and infrastructure degradation. The report's core policy message—that heat resilience can often be embedded into existing adaptation, development, public health, labour and infrastructure funding streams rather than requiring wholly separate funding—is directly applicable to Pacific SIDS where transaction costs for new financing windows are high and implementation capacity is constrained.

Climate observations reinforce this deteriorating exposure context. WMO's State of the Global Climate 2025 confirms that 2015–2025 were the hottest 11 years on record globally and that 2025 was approximately 1.43°C above the 1850–1900 average. In the South-West Pacific, the 2024 regional climate assessment reported the hottest year on record, record sea-surface temperatures, extensive marine heatwaves and continuing concern over sea-level rise. SPC also reported that 2024 was the warmest year on record in the Western Pacific, with average

air temperature 0.87°C above the 1961–1990 average. These trends make the Pacific risk context more severe even where annual cyclone counts vary.²

Several events since 2023 illustrate the priority shift. Examples include back-to-back **Tropical Cyclones Judy and Kevin** (March 2023) in Vanuatu. **Category 5 Tropical Cyclone Lola** in Vanuatu in October 2023 was an unusually early severe cyclone, demonstrating the need for preparedness systems to remain operational outside conventional seasonal assumptions. **Drought risk in Micronesia and atoll states** has drawn renewed attention to water security and drought early warning. The **Hunga Tonga–Hunga Ha'apai eruption** (2022) and tsunami and **Vanuatu major earthquake** reported as magnitude 7.4 (2024) near Port Vila caused damage to infrastructure and triggered landslides, remain as benchmarks and demonstrate the need for multi-hazard, compound shock planning. **Flooding, landslides and storm impacts in PNG, Solomon Islands, Fiji** and other island states continue to show the vulnerabilities of settlements, transport corridors and essential services.

These larger events when combined with recurring small-scale events can have significant long-term impacts, gradually worsening conditions over time and creating a persistent sense of being in a constant "state of recovery."

Exposure and vulnerability are increasing because people, assets and services are concentrated in coastal zones and urban/peri-urban settlements; because outer islands face high logistics costs and limited redundancy; and because governments must manage debt, narrow revenue bases and repeated shock-recovery cycles.



FROM HAZARDS TO SYSTEMIC RISK

Since 2023, Pacific risk has increasingly been understood as **cascading and compounding** – connecting climate, ecosystems, health, infrastructure, food security and fiscal stability.



A REGION UNDER INCREASING CLIMATE PRESSURE

2015–2025 were the hottest 11 years on record globally, while the South-West Pacific recorded unprecedented ocean temperatures and extensive marine heatwaves.



A CONSTANT "STATE OF RECOVERY"

Major disasters combined with recurring small-scale events progressively erode resilience, leaving communities and governments in repeated cycles of shock and recovery.



RISK MUST BE MANAGED BEFORE DISASTER STRIKES

The challenge is shifting beyond emergency preparedness towards embedding disaster risk into sectoral investment, development planning and macro-fiscal decisions.

² WMO and SPC climate reporting shows that the Pacific is experiencing rapid warming in both atmosphere and ocean systems. This matters for DRR because ocean heat and marine heatwaves can affect cyclone behaviour, rainfall extremes, fisheries, reefs, food security and coastal livelihoods; hence risk is evolving even in years without headline catastrophic cyclones.

Women, youth, older persons, persons with disabilities, informal workers and remote communities face differentiated risk due to uneven access to warning information, safe shelter, transport, social protection, health services, accessible communications and decision-making forums. The overall trend since the 2015 Sendai baseline is therefore mixed: regional policy alignment and warning capacity have improved, but the underlying hazard intensity, exposure and systemic vulnerability profile is deteriorating faster than institutional adaptation.

As low emitters facing severe climate risks, Pacific countries continue to demonstrate strong climate leadership. The UNFCCC's 2025 Pacific NDC analysis notes that Pacific SIDS have advanced first- and second-round NDCs, with many setting ambitious renewable-energy, transport and nature-based-solution commitments and several aiming for carbon neutrality or 100 percent renewable electricity. For DRR, this climate diplomacy matters because mitigation ambition, resilience finance, loss and damage, ocean governance and disaster risk are increasingly negotiated as interdependent survival issues rather than separate technical tracks.³



3 POLICY AND INSTITUTIONAL DEVELOPMENTS SINCE 2023

3.1. Regional Level

At regional level, the most important strategic development is the continued operationalisation of the **2050 Strategy for the Blue Pacific Continent** and its Phase 1 Implementation Plan. The 2050 Strategy places climate change and disasters within a broader Blue Pacific agenda covering political leadership, people-centred development, peace and security, resource and economic development, ocean and environment, and technology/connectivity. This is useful for DRRP because it creates a political mandate to treat DRR as a development and security issue, not only a humanitarian or civil-protection function⁴.

Boe Declaration on Pacific Security and Boe Declaration Action Plan⁵: In line with the Pacific Islands Forum Leaders decision in 2017 to build on the Biketawa Declaration for future regional security strategic responses, the Boe Declaration for Regional Security and Boe Declaration Action Plan have specifically mandated the development of a regional coordination mechanism for disaster preparedness, response, and humanitarian assistance. The leaders made these critical declarations due to the heightened vulnerability of Pacific Region to the impacts of climate change along with the increasing frequency and intensity of weather-related hazards, and the need to improve the coordination and effectiveness of disaster preparedness and response.



³ Pacific NDC leadership is relevant to DRR because Pacific governments increasingly treat mitigation ambition, adaptation finance, loss and damage and disaster risk as a single survival agenda. This creates opportunities for DRRP to align with NDC 3.0 implementation, renewable-energy resilience, blue carbon and nature-based solutions.

⁴ The 2050 Strategy Phase 1 Implementation Plan creates an entry point for translating political commitments into sequenced actions. DRRP should align its outputs with this implementation logic, especially around climate change and disasters, technology/connectivity, ocean/environment and people-centred development.

⁵ Full document can be found here: <https://www.forumsec.org/wp-content/uploads/2019/10/BOE-document-Action-Plan.pdf>

The Regional Pacific Disaster Risk Ministers Meeting and the related Annual Pacific Regional Disaster and Emergency Managers Meeting bring together leaders to strengthen collective preparedness, resilience, and political leadership against escalating climate and disaster risks. It focuses on risk-informed development, operational coordination, and mobilizing sustainable funding for Pacific Island Countries. Key purposes of the meeting include:

- **Strengthening Governance & Action:**

Advancing the Nadi Declaration (2022)⁶ and Koror Declaration (2025)⁷ to ensure high-level political leadership in disaster risk management (DRM).

- **Improving Coordination:** Operationalizing the Pacific Humanitarian Response Coordination Mechanism (PResCoM) for faster, more effective regional disaster responses.

- **Aligning Strategies:** Driving regional priorities, such as the 2050 Strategy for the Blue Pacific Continent and strengthening early warning systems and climate mobility initiatives.

- **Resource Mobilization:** Promoting collaboration to secure the needed investment to build long-term resilience.

The FRDP remains the primary regional framework linking climate change adaptation and disaster risk management. However, the practical centre of gravity has shifted from framework development to implementation through the Pacific Resilience Partnership (PRP), technical working groups, national plans, sector strategies and programmatic instruments such as Weather Ready Pacific, CREWS, the Pacific Resilience Facility and country-level anticipatory action pilots.

This shift is important: the region has many normative frameworks, but the 2023–present challenge is to finance, sequence and institutionalise actions through national systems and regional service providers.

Key actors in the region include UNDRR, SPREP, PIFS, SPC, WMO, IOM, UNICEF, OCHA, IFRC, UN Women, World Bank/GFDRR, ADB, Australia, New Zealand, Japan, EU institutions and regional civil society organisations including PIANGO, the Pacific Disability Forum and women-led networks. DRR champions in the region are often technical and institutional rather than individual political figures: National Meteorological and Hydrological Services (NMHSs), NDRMOs, SPC’s geoscience division, SPREP’s climate services and Pacific Climate Change Centre, and PRP technical working groups. The March 2025 partnership between PIFS, SPC and UNDRR to strengthen disaster resilience is a notable signal of more deliberate alignment around Sendai implementation, peer learning and technical support⁸.

Alignment with Sendai, Paris Agreement and the SDGs is strengthening through integrated programming, but implementation remains uneven. In practical terms, institutions increasingly speak a common policy language—resilience, risk-informed development, anticipatory action, inclusive early warning, climate security and loss and damage—but this has not always translated into stable budget lines, interoperable data systems, clear mandates or local-level implementation capacity. This is the core regional governance.

3.2. National Level

At national level, several Pacific countries have adopted, updated or are preparing DRR/DRM and climate-resilience strategies, legislation or implementation plans since 2023. Fiji, Vanuatu, Tonga, Samoa and Solomon Islands show relatively developed institutional arrangements, while



⁶ <https://gem.spc.int/news/2022/09/inaugural-pacific-disaster-ministers-meeting-begins-in-nadi>

⁷ <https://gem.spc.int/news/2025/11/koror-declaration-reaffirms-commitment-for-a-resilient-pacific>

⁸ The PIFS–SPC–UNDRR partnership is significant because it brings together political legitimacy, technical regional capacity and Sendai mandate support. The partnership can reduce fragmentation if it is used to coordinate technical assistance, peer learning and national Sendai implementation support.

smaller atoll and micro-states often rely heavily on regional technical services and partner-supported programmes. Sendai Target E—substantially increasing the number of countries with national and local DRR strategies—remains a useful benchmark, but the Pacific experience shows that strategy adoption is insufficient unless strategies are costed, budgeted, linked to development planning, supported by data and extended to local/community levels.

National coordination mechanisms increasingly bring together NDRMOs, climate change departments, meteorological services, planning and finance ministries, sector ministries, humanitarian clusters and civil society. However, mandate overlaps remain common between DRR, CCA, environment, meteorology, civil defence, social protection and local government. NDRMOs frequently

carry expanding responsibilities for preparedness, response, recovery, early warning coordination, risk information and community outreach without equivalent increases in staffing or recurrent financing. This weakens the ability to sustain gains after externally financed projects close.

A key national bottleneck is the uneven translation of regional and national policy into subnational delivery. Outer islands, rural areas and informal settlements often have less access to risk information, evacuation infrastructure, accessible communications and recovery support. The DRRP therefore can support the “middle layer” between national policy and community-level action: provincial administrations, municipal systems, local disaster committees, local civil-society organisations, churches, schools, health facilities and traditional governance structures.

SO1 – KEY HIGHLIGHTS

DRR moving upstream

Risk is increasingly integrated into **development planning, climate policy and public finance**.

Risk data ecosystems are expanding

More platforms and analytics are available, but **localised and decision-ready data remain limited**.

Regional-to-national links need strengthening

Technical Working Groups improve coordination, but their outputs do not always translate into funded national action.

Anticipatory Action is transforming governance

Forecast triggers and pre-arranged finance are shifting systems from post-impact response to pre-impact action.

Early warning is becoming more integrated

Modern forecasting, traditional knowledge and community communication are increasingly combined.

Shared responsibility is emerging

Early action increasingly connects meteorological services, DRM authorities, civil society and communities.

4 PROGRESS AGAINST DRRP STRATEGIC OBJECTIVES

SO1

4.1. Strengthening Disaster Risk Governance

Since 2023, Pacific countries have made gradual progress integrating DRR into national development planning, climate policy, sector planning and public financial management. Climate budget tagging, national adaptation planning, infrastructure resilience screening and disaster risk financing strategies are helping to shift DRR from a response-led function toward an anticipatory, development-planning function. However, this integration remains uneven. Many national systems still separate risk identification, budget allocation, project appraisal, early warning, response and recovery into different institutional streams, creating gaps in accountability and financing.

Risk data availability has improved through PacRIS, the Pacific Resilience Nexus, Pacific Data Hub, meteorological services databases, climate portals, hazard mapping and donor-supported risk analytics. Yet data accessibility, quality and usability remain persistent constraints. National and subnational decision-makers often lack current, disaggregated, localised risk data for land-use planning, infrastructure siting, school and health facility safety, social protection targeting and inclusive evacuation planning. Loss and damage accounting is also inconsistent, limiting governments' ability to quantify recurrent losses, justify investment, access finance or compare avoided losses from anticipatory action and risk reduction.

Technical Working Groups are an important governance mechanism but vary in their

⁹ Sendai Target E should be interpreted qualitatively, not only as a count of strategies. In the Pacific, the key test is whether strategies are costed, budget-linked, inclusive, locally implementable and supported by data. A strategy without implementation finance can create a compliance illusion.

influence. The PRP's TWGs—such as Information and Knowledge Management, Disaster Risk Financing, Risk Governance, Localisation and Human Mobility—help bridge regional institutions, governments and partners. Their value lies in brokering technical consensus and avoiding duplication; their limitation is that outputs are not always converted into funded national workplans or ministerial decisions. DRRP support should therefore strengthen TWG-to-national-system linkages, including clear workplans, counterpart ministries, data-use protocols and monitoring against Sendai and 2050 Strategy outcomes¹⁰.

Anticipatory Action is one of the clearest governance innovations since 2023. Fiji's UN-facilitated Anticipatory Action Framework for Tropical Cyclones and associated Simplified Early Action Protocol demonstrate how forecast triggers, pre-agreed financing and pre-defined actions can be embedded into national DRM is also advancing anticipatory action for cyclone- and rainfall-triggered events. Nauru has a drought response plan and risk financing supporting the trigger. These developments are significant because they move governance from “decide after impact” to “act when risk thresholds are crossed,” which requires different legal, financial, operational and accountability arrangements¹¹.

Early warning and early action also increasingly combine traditional knowledge with modern forecasting. UNDRR's 2025 Pacific early-warning work highlights Fiji, Kiribati, Samoa, Solomon Islands and Tonga, where end-to-end systems are being strengthened through impact-based forecasting, community communication, traditional knowledge, inclusive planning and anticipatory action. This is not only a technical improvement; it is a governance shift toward shared responsibility among NMHSs, NDMOs, local authorities, civil society and communities.

SO2

4.2. Investment in DRR for Resilience

Investment in DRR has increased, but it remains insufficient relative to the scale of risk. Public investment is being mobilised through climate finance, adaptation programming, infrastructure resilience projects, disaster risk financing, parametric insurance, social protection linkages in some instances and sectoral investments in water, transport, health, education and coastal protection. The Pacific Resilience Facility is strategically important because it will respond to a long-standing regional demand for a Pacific-owned financing mechanism focused on community-level resilience and small-grant accessibility¹².

Disaster risk financing (DRF) has matured through Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI), contingency financing, sovereign risk insurance, budget mechanisms and emerging anticipatory-finance tools. Parametric insurance remains relevant for rapid liquidity aftershocks, but it should be seen as one layer in a broader financing architecture, not a substitute for risk reduction. The most effective financing packages combine ex ante risk reduction, early warning, anticipatory action, contingent credit, insurance, reserves, social protection and recovery finance. The DRRP can add value by helping countries clarify the respective role of each instrument and by linking DRF strategies to budget systems.

Financing gaps persist in three areas. First, subnational and community-level DRR remains chronically underfunded despite being the point where risk becomes operational. Second, maintenance and recurrent costs—meteorological infrastructure, sirens, communications equipment, shelters, data systems, training and staff retention—are often under-budgeted after project completion. Third, investments in disability inclusion, gender-responsive DRR and accessible communications are still treated as add-ons rather than core design costs.

SO2 – KEY HIGHLIGHTS

More finance, but still below needs

DRR investment is growing, but remains **insufficient relative to escalating risk**.

Towards Pacific-owned financing

The Pacific Resilience Facility could improve access to **community-level resilience finance**.

A broader financing architecture is emerging

Insurance is increasingly combined with **risk reduction, anticipatory finance and contingency mechanisms**.

Local resilience remains underfunded

Community action, maintenance and inclusion continue to face persistent financing gaps.

Private investment remains constrained

Near-term opportunities lie in insurance, resilient infrastructure, telecoms, agriculture and blended finance.

¹⁰ TWGs are valuable because they maintain communities of practice and technical continuity in a region where government capacity is stretched. Their effectiveness depends on whether outputs influence national policy, budgets and partner programming rather than remaining as regional discussion products.

¹¹ Anticipatory action is a governance reform because it moves decisions upstream. It requires agreed triggers, pre-authorised finance, operational roles and accountability before a hazard impact. This can reduce losses but also demands stronger legal and financial procedures than traditional response activation.

¹² The Pacific Resilience Facility is strategically important because it responds to Pacific concerns that resilience finance is often too slow, too large-scale, too externally designed and too inaccessible for communities. Its effectiveness will depend on capitalisation, governance, fiduciary systems and linkages with national priorities.

Private capital mobilisation remains limited. Market size, high transaction costs, thin insurance penetration, limited bankable project pipelines and sovereign debt constraints reduce the scope for conventional private investment. More realistic near-term entry points include meso-level insurance, resilient agriculture value chains, telecommunications partnerships for warning dissemination, resilient tourism infrastructure, concessional blended finance for utilities and community infrastructure, and risk-informed lending by national development banks or regional facilities. Pacific Insurance and Climate Adaptation Programme's (PICAP) meso-level insurance products for farming communities illustrate a practical model where financial instruments can be linked to forecast thresholds and livelihood protection¹³.

The Asia-Pacific Disaster Report 2025 also has a financing implication: heat resilience and systemic risk reduction should be mainstreamed into existing adaptation, infrastructure, health, labour, urban and social protection financing rather than framed as a separate project category. For Pacific countries with limited absorptive capacity, this argues for fewer fragmented project windows and more integrated programme approaches aligned with national planning and public financial management cycles.

SO3

4.3. Preparedness, Response, and "Build Back Better"

Preparedness and early warning have improved substantially, particularly through CREWS, Weather Ready Pacific, EW4All, WMO/SPREP support, national meteorological upgrades and community-based early warning initiatives. The CREWS Pacific SIDS 2.0 project (January 2021–June 2025) provided US\$4.8 million to strengthen meteorological, hydrological and disaster-management services across¹⁴

Pacific SIDS. It supported legislation and institutional arrangements, quality and accessibility of services, communication and awareness for early warnings, and stronger inclusion of gender and minority groups.

CREWS has been important because it worked across both regional and national levels: strengthening RSMC Nadi and NMHSs serving Cook Islands, Fiji, Kiribati, Nauru, Niue, Tokelau, Tuvalu, FSM, RMI, Palau, Samoa, Solomon Islands, Tonga and Vanuatu. Its focus on impact-based forecasting and community-based early warning is directly relevant to DRRP SO3 because the technical value of forecasts depends on whether communities understand the likely impacts and know what actions to take. The transition of successful initiatives into Weather Ready Pacific is also important because it provides a longer-term investment framework rather than another short project cycle¹⁵.

Weather Ready Pacific is emerging as the primary regional investment platform for meteorological and hydrological service strengthening. It is framed as a 10-year programme that aims to reduce human and economic costs of severe weather and to raise significant long-term investment for Pacific National Meteorological and Hydrological Services (NMHS) capacity. It is explicitly connected to EW4All and offers a platform to consolidate multiple funding streams, reduce administrative burden on SIDS, and address chronic observation, infrastructure, communication and capacity gaps. This should be treated as a strategic pillar for any DRRP support to early warning and preparedness.

Last-mile warning remains the weakest link. Tuvalu's nationwide warning system and siren-based outreach to outer island communities, Fiji's tsunami warning systems, and community-based EWS materials in Cook Islands, Fiji and Kiribati demonstrate progress, but coverage is not the same as effective use.

SO3 – KEY HIGHLIGHTS

Stronger early warning systems

CREWS, Weather Ready Pacific and EW4All are strengthening **forecasting and preparedness capacity**.

Make warnings actionable

The priority is shifting from warning coverage to **trusted, accessible and actionable last-mile communication**.

Bridge early warning and early action

Anticipatory Action links **forecast triggers, pre-agreed actions and pre-arranged finance**.

Prepare to Build Back Better

Recovery readiness before disasters can accelerate **more resilient and inclusive reconstruction**.

Connect regional, national and local systems

The key challenge is no longer creating institutions, but ensuring **interoperability and effective service delivery**.

¹⁴ CREWS Pacific SIDS 2.0 is a good example of a regional public-good investment: it strengthens institutions, services and community warning systems across multiple countries. Its limitation is sustainability unless successful products are absorbed into long-term national budgets and Weather Ready Pacific.

¹⁵ RSMC Nadi and NMHS strengthening are regional risk-governance issues because many Pacific countries depend on shared meteorological infrastructure and specialised services. Strengthening regional forecasting capacity produces benefits across borders, but only if warnings are translated into locally actionable messages.

Alerts must be accessible to persons with disabilities, available in local languages, trusted by communities, linked to practical action, and disseminated through redundant channels including radio, mobile, churches, schools, local leaders and traditional systems. The Sendai requirement for people-centred MHEWS should therefore be assessed through four functions: risk knowledge, monitoring/forecasting, dissemination/communication, and preparedness/response capability.

Anticipatory Action has become a key bridge between early warning and early action. Fiji's Tropical Cyclone Early Action Protocol includes forecast thresholds, pre-agreed actions such as safe shelter kits and water kits, and pre-arranged financing. The Fiji framework was piloted through 2023/24 and 2024/25 cyclone seasons and extended into Phase 2 for 2025–2027. Although it has not always been activated, readiness itself is a governance and operational gain because roles, triggers and financing are clarified before the event¹⁶.

Post-Disaster Needs Assessments (PDNAs) and recovery frameworks are widely used after major disasters, and “Building Back Better” is now standard language in recovery planning. The practical challenge is that BBB is often constrained by delayed financing, shortages of technical staff, procurement bottlenecks, land-tenure complexity, limited local contractor capacity, lower-cost external solutions, and pressure to restore services quickly. Successful recovery frameworks in Tonga and Vanuatu show the value of linking humanitarian response, recovery planning and development investment, but systematic learning across countries remains limited. DRRP can add value by supporting recovery-readiness planning before disasters, including pre-agreed recovery governance, damage-and-loss data standards, social inclusion measures and resilient infrastructure specifications.

It does not make sense to replicate regional EWS functions where they already exist; the priority is interoperability and service delivery. Regional systems provide specialised forecasting, climate services, ocean monitoring, training and surge support. National systems translate this into warnings, decisions and action. Local systems interpret and act on warnings. The key gap is not a lack of institutions but weak connections between levels: data standards, common alerting protocols, communication redundancies, forecast-impact translation, disability-accessible warnings, and routine exercises.



4.4 Cross-cutting issues – inclusion and digital

Inclusion has become more prominent since 2023, but the gap between policy recognition and operational practice remains significant. The Sendai Gender Action Plan (Sendai GAP), launched in March 2024, provides a global framework for gender-responsive DRR to 2030. It sets out nine objectives and recommended actions across the four Sendai priorities, including improved gender-risk data, inclusive governance, women's leadership, gender-responsive investment and accountability. For the Pacific, Sendai GAP is directly relevant because women's organisations, peacebuilders, disability advocates, youth networks and community leaders are already central to preparedness and recovery, but often not resourced as core DRR actors¹⁷.

The Pacific localisation of Sendai GAP should focus on practical systems: sex-, age- and disability-disaggregated data (SADD), gender and environment surveys, women-led community risk assessments, gender-responsive evacuation planning, protection and GBV risk

CROSS-CUTTING KEY HIGHLIGHTS

Make inclusion operational

Move from policy commitments to **resourced and measurable inclusive DRR**.

Put inclusion at the core of risk reduction

Gender, disability and community participation should be **built into planning, financing and preparedness**.

Make early warning accessible to everyone

Warnings, evacuation and shelters must respond to **different abilities and communication needs**.

Harness digital innovation for better DRR

GIS, mobile alerts, remote sensing and AI can strengthen **risk analysis, forecasting and response**.

Innovate without leaving anyone behind

Digital DRR must combine technology, **accessibility and redundant communication channels**.

¹⁶ The Fiji EAP experience shows that activation is not the only measure of success. Preparedness of protocols, triggers, financing and roles can improve institutional readiness even in seasons where thresholds are not reached.⁷ <https://gem.spc.int/news/2025/11/koror-declaration-reaffirms-commitment-for-a-resilient-pacific>

¹⁷ The Sendai GAP is useful because it converts gender-responsive DRR from a general principle into objectives and actions. For the Pacific, it should be linked to women-led local resilience, SADD data, protection in evacuation settings and budget accountability.

mitigation in shelters, women's leadership in disaster committees, and budget accountability for inclusive DRR. Fiji and Samoa provide entry points through national and regional workshops, while the UN Women's Resilience to Disasters Programme offers useful tools for policy and implementation. The most important operational shift is to treat inclusion as a risk-reduction requirement, not a compliance paragraph.

Disability inclusion remains one of the clearest equity gaps. The UNDRR thematic report on disability inclusion in the Pacific identifies progress since Sendai but also persistent gaps in disability data, participation of persons with disabilities and Organisations of Persons with Disabilities (OPD), accessible early warning and dedicated budget allocations. This has direct implications for MHEWS: a warning that cannot be received, understood or acted upon by persons with disabilities is not an

effective warning system. Disability-inclusive DRR should therefore be costed into every preparedness, EWS and recovery investment, including accessible shelters, sign-language and audio/visual alerts, evacuation support, inclusive drills and OPD participation in planning¹⁸.

Digital technologies are increasingly central to DRR: GIS risk mapping, climate portals, mobile alerts, social media, cloud-based data platforms, drones, remote sensing, hydrological and ocean monitoring, forecast visualisation, AI-assisted modelling and digital damage assessments. These tools can improve timeliness and precision, but they also create new inequities where outer islands, older persons, low-income households, persons with disabilities or communities with unreliable connectivity are excluded. Digital DRR in the Pacific should therefore be designed around redundancy and accessibility, not only innovation.



5 KNOWLEDGE MANAGEMENT, GOOD PRACTICES, AND LEARNING

Knowledge management (KM) in the Pacific is comparatively well developed at the platform level but still uneven at the decision-use level. Key repositories include the Pacific Data Hub, Pacific Climate Change Portal, PacRIS, PreventionWeb Pacific resources, SPREP and SPC project platforms, national climate portals and sector-specific databases. The main problem is not the absence of information; it is the fragmentation, variable quality, limited interoperability, uncertain maintenance funding and insufficient translation of technical data into planning, budgeting and community action. 'Integrate Pasifika' is the most recent investment to rationalise and bring coherence across risk information and risk platforms. Its strategic goal is to make resilience information usable: moving from passive repositories to active brokerage between scientists, policy-makers, sector planners, local authorities and communities¹⁹.

The PRP technical working group on MHEWS and risk information is also a recent but key player in addressing the knowledge management issue. The TWG should provide visibility to key knowledge products such as regional assessment reports, climate-risk country profiles, hazard maps, early warning materials, traditional knowledge resources, community-based EWS products, risk financing analyses.

The Pacific Climate Change Portal provides access to climate resources through SPREP's Pacific Climate Change Centre, while the Pacific Data Hub provides regional datasets and dashboards including SDG-related information. The World Bank Climate Risk Country Profiles, such as the Fiji profile, remain useful for structured country-level risk summaries but should be complemented by local and traditional knowledge.



¹⁸ Disability inclusion is a practical effectiveness issue, not only a rights issue. If persons with disabilities cannot access warnings, transport, shelters, response information or recovery assistance, disaster systems fail a high-risk group and underestimate real vulnerability.

¹⁹ KM is a governance function because risk knowledge only reduces disaster losses when it changes decisions. The Pacific's challenge is to convert repositories and technical reports into decision-grade products for ministries, local governments, communities and donors.

Good practices that should be scaled include: **community-based adaptation in Fiji; integrated coastal and water-resource planning in Samoa and atoll states; climate-resilient infrastructure planning in Tonga; traditional knowledge integration in climate services; Fiji's anticipatory action framework; CREWS community-based EWS products; and disability-inclusive DRR work led by OPDs and Pacific Disability Forum partners.**

These examples show that good practice is usually hybrid: it combines scientific data, local knowledge, trusted institutions and pre-agreed financing or action protocols.

Knowledge management gaps that impede decisions include delayed data updates, limited subnational data, inadequate SADD data, weak loss-and-damage accounting, inconsistent metadata, lack of common standards between national and regional systems, and insufficient capacity to turn risk data into investment decisions. **For DRRP 2026–2028, the priority should be to support “decision-grade” knowledge products:** risk dashboards for finance ministries, local risk profiles for provincial governments, accessible warning materials for communities, and monitoring tools that link DRR investments to avoided loss and resilience outcomes.



6 PARTNERSHIPS AND COORDINATION

At the strategic level, regional DRR is Government-led through the Regional Pacific Disaster Risk Ministers Meeting and the annual Pacific Regional Disaster and Emergency Managers Meeting. On technical level, DRR coordination is assisted by SPC, SPREP and PIFS, supported by UNDRR, WMO, IOM, UNOCHA, IFRC, UNICEF, UN Women, World Bank/GFDRR, ADB, EU, Australia, New Zealand and civil-society networks. The partnership landscape is dense and generally constructive, but the density itself creates coordination risk. Many initiatives address overlapping themes—early warning, climate services, adaptation planning, risk finance, inclusion, community resilience and knowledge management—which can create reporting burdens and fragmented implementation if not aligned through national systems and regional strategies.

The strongest coordination platforms are those linked to clear mandates and workstreams: the Pacific Resilience Partnership (PRP) and its TWGs; Weather Ready Pacific for NMHS and early warning investment; CREWS for MHEWS strengthening; EW4All for global-to-national early warning

investment; CREWS for MHEWS strengthening; EW4All for global-to-national early warning alignment; Pacific Humanitarian Team coordination for response and anticipatory action; and PIFS-led political coordination through the 2050 Strategy. The March 2025 PIFS–SPC–UNDRR MoU provides a useful model because it explicitly links political leadership, technical support and Sendai implementation.

EU Delegations and other donors have strong opportunities to align behind these regional mechanisms, especially where investments can reduce fragmentation and support national ownership. The main duplication risk is project-by-project support that creates parallel tools, short-term consultants, separate reporting systems or pilot initiatives that cannot be maintained. Coordination should therefore prioritise shared results frameworks, use of existing regional platforms, co-financing of long-term programmes such as Weather Ready Pacific, and joint support to national DRR financing and implementation plans.



7 KEY GAPS, CHALLENGES, AND RISKS

The top institutional capacity gap is implementation capacity. Pacific governments and regional organisations have strong policy frameworks, but limited staff, high turnover, small technical teams and heavy reporting burdens constrain delivery. NDMOs, NMHSs, planning ministries and local governments are asked to manage increasingly complex risk systems—climate science, disaster law, anticipatory action, social inclusion, finance, data, recovery and community engagement—without adequate recurrent resources.

Technical gaps include subnational risk data, loss-and-damage accounting, inclusive EWS design, drought and heat-risk management, recovery-readiness planning, resilient infrastructure standards, digital interoperability and monitoring of DRR investment effectiveness.

Financing gaps include the limited scale of domestic resources, dependence on grants and external projects, insufficient recurrent funding for maintenance, and limited access to finance for local/community actors. Political and contextual risks include changing government priorities, geopolitical competition, donor fragmentation, debt stress, climate-induced displacement pressures, land-tenure conflicts and the possibility that climate impacts outpace adaptation investments. The most serious strategic risk is that the region continues to improve preparedness while the underlying exposure and vulnerability curve worsens. Without stronger integration of DRR into finance, infrastructure, urban planning, social protection and health systems, disaster losses will continue to rise even if response systems improve.



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