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SAMOA

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Background

Samoa, like many other PICs, has a long history of being subject to natural disasters. Those disruptions and the effects of climate change have taken a toll on its regional development agenda. Its geographical location and physical environment make the country susceptible to a range of natural and human-induced hazards. Its proximity to the Tongan Kermadec Trench and its position in the middle of the world's most active seismic zone (the Ring of Fire) increase its vulnerability and exposure to the ever-present threat of earthquakes, tsunamis and volcanic eruptions.

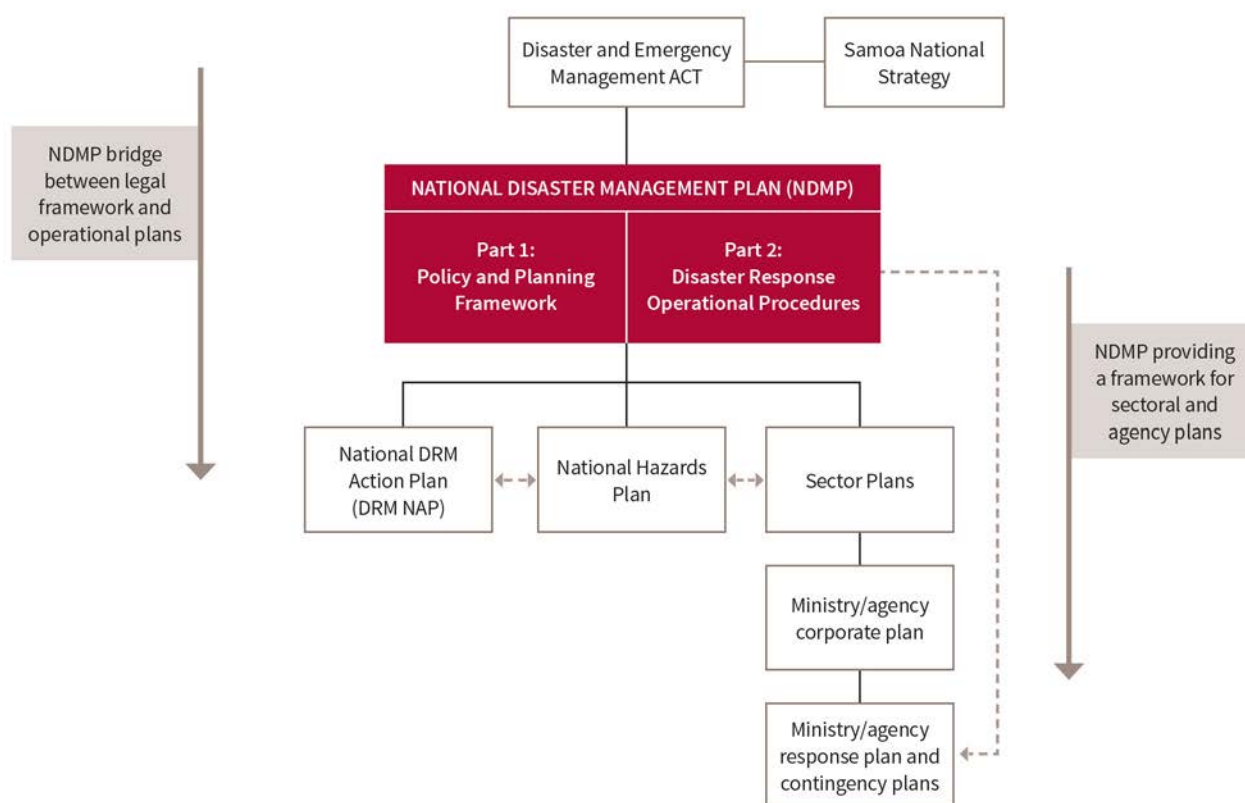
Samoa is experiencing more frequent and severe weather and climate events, such as floods, cyclones and prolonged periods of reduced rainfall and a subsequent increase in fuel loads, leading to more frequent forest fires.¹¹³ Other ever-present threats are from biological hazards and environmental crises due to invasive plant or animal species and disruptions to major essential services over a long period. Additionally, its economy remains vulnerable to external economic shocks.

In 2009, Samoa was severely affected by a tsunami generated by a magnitude 8 earthquake at the Tonga Trench.¹¹⁴ Total direct damage and economic loss amounted to approximately US\$124 million and a death toll of 149.¹¹⁵ Three years later, category 4 TC Evan struck Samoa while the country was still recovering from the effects of the tsunami.¹¹⁶ More recently, TC Gita struck in early 2018, and there have been floods during every wet season.¹¹⁷

The Samoan Government has been quite responsive to these events. It has progressed through three iterations of its National Disaster Management Plan (NDMP). The current plan (2017–2020) is aligned to the SFDRR¹¹⁸ and the FRDP.¹¹⁹ The Disaster Management Act 2007 and the National Disaster Risk Management Action Plan¹²⁰ (currently in its second iteration) provide actionable and implementable guidance for implementing the NDMP as well as a results-based monitoring and evaluation framework.

The focus of the current NDMP is on mainstreaming and enhancing the coordination of government agencies, communities, civil society organisations, NGOs, the private sector, development partners and donors. It employs a whole-of-country and multisectoral approach to implementation, seeking to normalise DRM across all sectors and communities. Figure 1 shows the linkages of the NDMP to the National Sustainable Development Framework, as well as to plans by sectors and line agencies.

Figure 1: National Sustainable Development Framework



Source: Samoan Government, National Disaster Management Plan (2017–2020).

Under the leadership of the Disaster Management Office (DMO), Samoa is working in close collaboration with sectors, response agencies, civil society organisations, NGOs, the private sector, communities and development partners and is progressing well with the implementation of its DRM National Action Plan.

The focus of implementation is on mainstreaming DRM across all 14 development sectors (health; education; tourism; agriculture; energy; finance; transport; communication; water; community; environment; commerce and industry; law and justice; and public administration¹²¹), building their capacity to support the implementation of risk-informed sector strategies, and getting communities ready to self-mobilise and respond to disasters through the development of village disaster preparedness and response plans.

Further emphasis is on practising drills and training in basic skills to support village-wide warning and evacuation protocols, search and rescue, damage assessment and emergency sheltering of displaced villagers. In addition, Samoa is improving its multi-hazard early-warning systems through the installation of more seismic and weather observation systems, resilient communication systems and warning-dissemination pathways using smart technology and public outreach.

Emerging trends in Samoan disaster management include the following:

- **Enhancing the capacity of village communities to self-mobilise and respond to disasters** through a dedicated program called Community Disaster and Climate Risk Management.¹²² Past disasters have shown that well-informed and prepared communities with strong community leadership and effective internal collaboration contribute to a disaster readiness and resilience.

The program, which was developed in 2010 with funding from UNESCO, is now delivered in more than 50 village communities, and more donors and development partners are taking an interest and offering financial resources

to support nationwide delivery. The implementation of the program uses a multiagency approach to facilitate its introduction and focuses on a range of village-based practices, such as risk identification and mapping and the identification of roles and responsibilities under the four phases of DRM (the development of village disaster plans; the establishment of village committees; the training of village response teams; and the testing of their plans, skills and knowledge through drills). The program can be easily adapted and replicated across the Pacific (Tokelau is the first PIC to implement it on all its atolls).

- ***Building risk knowledge through focused hazard, vulnerability and risk assessments and mapping*** at sectoral and location-specific levels. Because of the importance of risk information for decision-making and planning, this type of work is gaining momentum in Samoa. The DMO has taken the lead with support from sectors to conduct sector- and location-specific assessments to inform sector strategies and interventions for implementation in the immediate and long terms. The information is also used to inform communities of localised impacts related to those risk exposures through the Community Disaster and Climate Risk Management Program.

The work also includes building risk information databases and training users of risk data and information on the use and application of the information through their day-to-day work. The involvement of sectors and government line agencies is also helping break down barriers to access to sector-specific data and information, which have always been a problem in Samoa and other parts the Pacific region.

Developing maps and identifying critical infrastructure and services that are exposed have helped sectors and line ministries, communities and the private sector to plan and make decisions on investments and risk mitigation. Collaborating with the Bureau of Statistics and using household codes and coordinates to pinpoint vulnerable household locations is another method that's frequently used in mapping hazards and risks. The National Risk Assessment Standard was developed and endorsed in 2017 to guide the implementation of risk assessments to ensure that a standard method is applied and to guarantee the consistency of risk data and information.¹²³

- ***The use of smart technology for warning and information dissemination integrating traditional social networks*** is another area that's getting traction in Samoa. The Samoa Meteorology Office has recently developed a mobile application for Android smartphones, which are widely used in Samoa (and intended for use by other Pacific meteorology offices) to access daily public weather reports as well as near real-time warnings and advisories of severe weather, earthquakes and tsunamis.¹²⁴ Social media are also being used regularly to push out warnings and information and are monitored by dedicated staff in both the Meteorology Office and the DMO.

More observation equipment for weather, sea and river levels and seismic activity has continued to be installed in high-risk areas of the country. A digital end-to-end emergency communication system was commissioned following TC Evan in 2012 and is currently being used on daily basis by all emergency services in Samoa, enabling cost and resource sharing among those agencies in using and maintaining the system and strengthening the emergency management alliance in the country.

- ***Post-disaster displacement and resettlement*** is another area that's becoming a frequent topic in the DRM space. The tsunami in 2009 and TC Evan in 2012 triggered a rethinking of approaches to accommodating and catering for the needs of displaced people and resettlement afterwards.

At-risk households were asked to move to homes of relatives and friends in safe areas before considering being accommodated in public evacuation centres. In the rural coastal areas, families opt to move and resettle inland using land previously used for agriculture, while in the Apia urban area some leave their normal residences while others with adequate resources have bought land further inland as the fear of similar events occurring in the future lingers in their minds.

The government has started a consultative process to address how loss of land due to coastal erosion and inundation will affect where people will live and how this will be implemented. This issue needs to be continually deliberated and addressed in the context of Samoan culture and sovereignty in anticipation of more severe impacts of climate change projected in the future. Land is sacred and symbolic of the Samoan people's identity and culture and is critical to Samoa's existence as a sovereign nation.

- **Mainstreaming DRM** so it becomes part of normal business planning along with the allocation of resources to support implementation through national and local budgets is also another area that's gaining wider support within government. A *Mainstreaming DRM guide* was developed and endorsed by the central government in 2017, and work is underway to enhance its use through sector-wide strategies, programming and budget allocations.¹²⁵

This normalisation practice also requires periodic monitoring and evaluation, and a simple system has been developed and tested to do that. The results will help in identifying gaps, strengths and areas that need more attention. DMO staff are dedicated to look after one or two sectors and work closely with sector coordinators to do this work.

The challenges of limited technical and financial capacity continue to hinder the implementation of DRM in Samoa. Efforts to enhance collaboration and forge new partnerships to address some of the capacity gaps are ongoing. Increasing private-sector engagement and encouraging investment in resilient business infrastructure to ensure continuity of services will require innovative approaches.

- **Samoa's small land mass** requires detailed land-use and infrastructure planning that considers exposure to hazards and vulnerabilities as well as traditional affiliations. Traditional land ownership and custodial arrangements dictate how land is used, whether it be for settlement, agriculture, commercial use, conservation or infrastructure for lifeline services such as roads, communication, power, water and warning systems.

The high cost of compensation to landowners and uncertainty about whether landowners would relinquish part of their land to allow for risk-informed land-use planning and infrastructure construction may result in costly solutions and will require stronger collaboration with landowners.

Sustained funding for the maintenance of supportive technology and equipment remains an ongoing issue, as does ensuring that spare parts and technical expertise are readily available. Staff turnover and the allocation of dedicated staff for sustaining the momentum of best practice and post-disaster work is also a continuing challenge. The completion of targeted needs assessments followed by a commitment to address any identified capability and capacity gaps should assist in this challenging situation.

The fit of the Sendai Framework in the context of Samoa

The Sendai Framework is very comprehensive and entails several practical actions and measurable targets at national, regional and global levels. National-level actions can be adapted to suit national situations and needs, but applying them further at provincial and local levels will require further finetuning to suit culture, traditions, capacities, capabilities, laws, policies and institutions.

The main concern for Samoa (and probably for other PICs) is the burden of implementation, monitoring, evaluation and reporting without enough people, capacities and resources.

What Samoa has done is to develop its own framework that fits its context and needs but is aligned to the spirit, objectives and principles of the SFDRR as well as the SDGs, the SAMOA Pathway, the FRDP and other relevant global and regional frameworks.

One gap of note is that the SFDRR 'Words into action' guideline, although comprehensive and simple to follow, doesn't have a practical guide on the 'displacement, relocation and resettlement' of people; nor does it provide a relevant case study on this area.¹²⁶ This aspect of the guideline is too focused on cities and big countries and lacks detailed guidance for small island states such as Samoa and other PICs.

Full use of the *Sendai Monitor* will require significant capacity building for Samoa and other PICs.¹²⁷ Training is needed to support countries on what data to collect, its cleansing and disaggregation, and the use of methodologies for data analysis. Collecting data to suit the indicators might be a challenge, as definitions of 'damaged dwellings',

for example, aren't the same, and therefore might lead to confusion and under- or overestimation of damage and the costs of losses. Trialling the monitoring process with full engagement of the PICs in planning an application is imperative.

Use of the Sendai Framework and doable actions into the future

The Samoan NDMP is 'aligned' to the SFDRR objectives, outcomes, principles and actions. It's also referenced in many research papers, reports, frameworks and funding proposals to reflect the alignment of those documents to the SFDRR goals and objectives.

The SFDRR objectives are being used to guide reviews of legislation, policies and institutional frameworks, such as the recent functional and institutional review of DRM and climate change in Samoa to inform a realignment of government functions to improve efficiency and effectiveness and to identify services that could be privatised. It has also been used to inform the development of the Samoa Meteorological Services Bill that's currently under development.¹²⁸

Three suggested options for enhancing DRR in Samoa are as follows:

- **Refocus global implementation guidelines** to regional, national and local contexts to enable small island developing states¹²⁹ and least developed countries,¹³⁰ particularly PICs, to implement the SFDRR. Their capacity limitations and need to have the right technical people to do the work will also require trialling the application of downscaled guidelines to help them incorporate, align with and adapt the SFDRR and its actions, goals and targets.
- **The UNDRR should strengthen partnerships** with Pacific intergovernmental organisations mandated to work with PICs in DRM and climate change, such as the Secretariat of the Pacific Community and the Secretariat of the Pacific Regional Environment Program, to jointly implement synergies between the SFDRR and the FRDP in a way that works well with PICs' resources and needs to support the enhanced national implementation of both.
- **Develop and trial an SFDRR- and SDG-aligned monitoring, evaluation and reporting system** for small island developing states and least developed countries to reduce the burden of reporting and the cost of conducting reviews of global and regional frameworks and multilateral agreements on DRM, climate change and sustainable development. The Secretariat of the Pacific Community, the Secretariat of the Pacific Regional Environment Program, the Pacific Islands Forum Secretariat, the Pacific Resilience Partnership and PICs are working together to develop the FRDP monitor. The monitor will be aligned to the *Sendai Monitor* and the SDGs. Trialling the regional monitor to ensure that DRM and climate change focal points and stakeholders can use it to inform further improvements is critical.
- **Promote the SFDRR and the Sendai Monitor** through regional and national DRM and resilience platforms and other relevant regional events, such as through the biennial Pacific Resilience Meeting, as important opportunities for enhanced awareness of the SFDRR.

A final issue to be noted is that Samoa has its own DRM programs and frameworks for which it's obligated to promote and develop capabilities and capacities. While the Sendai Framework is a very useful guide to actioning DRR, its full adoption isn't yet a norm, although some countries have signed off on the framework.