

Samoa National Adaptation Program of Action 4 – Climate Early Warning Systems

Report on the findings and recommendations of
an independent review

Prepared for DFAT
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Contents

Acknowledgements	1
Acronyms and terms	2
Background	3
Summary of findings and recommendations	4
Achievements	4
Lessons	4
Future directions	5
Review methods	7
Audience	8
Review team	8
Information sources	8
NAPA4 Implementation arrangements	9
Progress against objectives	11
What did NAPA4 do?	11
What was achieved?	11
Aid investment quality	15
Relevance – was this the right thing to do?	15
Effectiveness – did the approaches achieve the objectives?	15
Efficiency – could it have been done for fewer resources?	16
Sustainability – will it have lasting impact?	17
Gender and disability inclusion	18
Monitoring and evaluation	18
Safeguards	19
Annex 1: Climate Early Warning Systems	20
Annex 2: Terms of Reference	22
Annex 3: Evaluation plan	27
Annex 4: Meeting schedule	37

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Acronyms and terms

ACEO	Assistance Chief Executive Officer
CEO	Chief Executive Officer
CLEWS	Climate Early Warning Systems
COSPPac	Climate and Oceans support Program in the Pacific
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSO	Civil Society Organisation
CSSP	Civil Society Support Program
DFAT	Australian Department of Foreign Affairs and Trade
DMO	Disaster Management Office
FESA	Fire and Emergency Services Authority
GEF	Global Environment Fund
GCF	Green Climate Fund
GoS	Government of Samoa
M&E	Monitoring and Evaluation
MNRE	Ministry of Natural Resources and Environment
MoF	Ministry of Finance
NAPA	National Adaptation Program of Action
NGO	Non-Government Organisation
PCCSP	Pacific Climate Change Science Program
PACCSAP	Pacific-Australia Climate Change Science and Adaptation Planning program
SC	Steering Committee
SHA	Samoa Hotel Association
SMD	Samoa Meteorological Division
SoE	State of Environment
SPREP	South Pacific Regional Environment Program
STA	Samoa Tourism Authority
SWA	Samoa Water Authority
UN	United Nations
UNDP	United Nations Development Fund
USAID	United States Agency for International Development

Background

The Government of Samoa endorsed the National Adaptation Program of Action (NAPA) in 2005, to reduce risks and build resilience to the impacts of climate change. The Samoa NAPA identified nine priority areas. Activities were designed to target these areas, funded through the Global Environment Fund (GEF), United Nations Development Fund (UNDP) and the Australian Department of Foreign Affairs and Trade (DFAT) aid program.

Australia's support focused on the fourth priority area: Climate Early Warning Systems (CLEWS – NAPA4) – see Annex 1 for an explanation of CLEWS. NAPA4 aimed to achieve the following objectives:

- > To upgrade technical early warning systems and associated technical capabilities to monitor and warn against climate and extreme events.
- > To build sectoral and public capabilities to understand and use climate and early warning hazard information.
- > To improve adaptation measures for vulnerable communities, including coastal infrastructure and development of early warning systems.
- > To improve capacity building through the review of the Environment Sector Plan.

This document sets out the findings and recommendations of an independent completion review of NAPA4, conducted from 20 - 27 June 2016.

Summary of findings and recommendations

Achievements

Progress of NAPA4 was good: the major objectives of NAPA4 were achieved with substantial progress towards outcomes. The different capacities of partner agencies meant that it was also uneven – with some agencies engaging and achieving more than others. Management responses and adjustments through the project term targeted specific weaknesses. This enabled capacities to be built overall and cross-sector, multiagency collaborations established. As a result, sector development plans were changed and new strategies introduced to reduce weather and climate risks, and to build resilience.

Lessons

NAPA4 provided valuable lessons for future aid investment programming and for the development partner agencies:

- > **The flexible approach to implementation was an enabler of progress –** This enabled partners to ‘design as you go’. Through this process, the implementation team learned that initial targets were overly ambitious for the timeframe and were able to design and tailor activities to achieve the outcomes. The reasonable reporting requirements and the responsiveness of DFAT officers in Apia meant that partners were able to spend more time on the activities.
- > **Delivery through partner government systems enabled NAPA4 to be integrated in government programs –** The ownership and adoption of the bulk of NAPA4 outputs was a direct result of allowing government to manage the finances. The system of allocations based on work plans was not perfect but outputs and outcomes were largely achieved and are likely to be lasting because of their integration in mainstream programs.
- > **Collaborative multi-sector projects are feasible and have lasting benefits –** The cross-sector partnerships established by NAPA4 around climate change were new, provided benefits to all partners and are likely to continue.
- > **The platforms established by NAPA4 provide a sound basis for reducing the risks of climate change in the sectors –** But further financing and resources are needed to implement the plans and continue the work of tailoring CLEWS and other climate warnings in vulnerable development sectors. More work and different skill sets are required to tailor the climate warnings and risk information to the needs of communities and civil society.
- > **Dedicated resources would have alleviated program management challenges –** Program management functions, including coordination and reporting needed specific resources early in the project. Functions including M&E, gender and disability inclusion also needed specific resources and specialist expertise at the beginning.
- > **Coordination of multiple donor projects in MNRE placed pressure on staff resources and capacities –** A central coordinating body for climate change aid investment in Ministry of Natural Resources and Environment (MNRE) has been proposed. This mechanism could also assist in procurement.

Future directions

The review team recommends the following to enhance NAPA4 outcomes and the broader impact of CLEWS in Samoa in future:

- > Support the Government of Samoa to access climate finance through coordinated and multilateral funds for implementation of the climate change risk reduction and resilience building sector plans developed under NAPA4 (e.g. the Green Climate Fund - GCF)
- > Continue to support the national Meteorology Division to build capacities and provide access to skills and tools to enhance their early warning capabilities – through Australian regional programs
- > Facilitate future partnerships between sectors engaged in the Samoa-Australian aid investment program and the Samoa Meteorology Division, and resource these partnerships to enable the development of CLEWS and / or other relevant warning systems in the sectors- to reduce the risks of climate change impacts on Australian investments
- > Through the education sector, support long-term climate risk reduction and resilience building skills development in Samoa through targeted scholarships, twinning arrangements, short courses and curriculum development
- > Through appropriate investment channels (e.g. regional research for development and innovation funds) – support innovation to improve accessibility and reach of early warning systems in Pacific nations (including to people with disabilities), employing advances in communications technology and social media, to reach isolated communities in a timely and informative manner
- > Expand the Civil Society Support Program (CSSP) to encompass a brokering role between Non-Government Organisations (NGOs) and Civil Society Organisations (CSOs) and the Meteorological Division – to enable better tailoring of warning systems and weather / climate information to the needs of communities. This can be achieved by:
 - Building the capacity of NGOs and CSOs to understand climate risks, CLEWS and other warning systems,
 - Resourcing NGOs and CSOs to work with communities to integrate community-level risks in their lives and livelihoods and carry out community-based adaptation.
 - Supporting the comprehensive community development planning process under development in the Ministry of Women, Community and Social Development).
 - Continuing to support the small grants scheme under the CSSP, to specifically target opportunities to develop women's economic resilience to the impacts of climate change – e.g. by creating / enhancing productive climate resilient livelihood opportunities for women.
- > Improve future funding partnerships for maintaining and continuing to expand the meteorological and hydrological monitoring networks and critical climate change risk reduction infrastructure (e.g. fire and emergency services).
- > Invest through coordinated regional programs in upgrading the quality of warning systems – for severe weather, extreme rainfall / flood, and seasonal predictions

by strengthening international communities of practice for early warning systems – drawing on Australia’s position as the most advanced meteorological, hydrological and CLEWS expert in the region (through its Bureau of Meteorology), world-class expertise in geo-hazard early warning systems through Geoscience Australia and the Bureau, and in long-term climate change projections through Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Bureau; long established relationships with national meteorological services in relation to weather and climate services.

- > Support collaborative local research partnerships:
 - Linking climate, climate variability and climate change to critical sector variables, e.g. crop yield, tourist activities, and disease outbreak, and the development of more targeted early warning systems
 - To better understand, and document early warning systems taking account of traditional knowledge related to weather, climate, climate variability, to assist with the further development of more targeted systems and their effective communication
 - To improve understanding of the impacts of climate variability and climate change on Samoan weather and climate, and on Samoa more broadly, as a step towards improved early warning systems and to provide ever more robust information for climate change adaptation.

Review methods

The review was carried out in accordance with the Terms of Reference (Annex 2) and DFAT's standards and principles for independent evaluations.¹ The evaluation plan (Annex 3) developed for the review adopted a 'pathways to community resilience' approach, focusing on the plausible pathways from the outcomes of the project to the ultimate beneficiaries – vulnerable communities:

- > An assessment of the capacity building approaches and the skills, tools, partnerships, networks, plans and other products developed under NAPA4 to determine their influence on partner agency capacities to address the impacts of climate change within their sectors
- > An analysis of the change that occurred or is occurring in the development planning and practice of the partner agencies resulting in improved / strengthened outcomes for risk reduction and resilience building
- > An assessment of how these changes in the bureaucracy and their partners are likely to benefit the broader community in the longer-term, with a particular focus on vulnerable communities, women and people with disabilities.

In assessing progress towards the objectives of NAPA4, the review also evaluated the project against the standard evaluation criteria, focusing on what was learned (lessons) and how these may apply in future aid programming and investment in climate change adaptation in Samoa and more broadly in the Pacific Region:

- > The **relevance** of the investment locally and in the broader context
- > The **effectiveness** of the development processes employed – skills, knowledge and capacity building; partnerships and collaborations
- > The **efficiency** of the investment and management arrangements – could the outcomes have been achieved for less?
- > The **sustainability** of outcomes – will they lead to lasting impacts for vulnerable people?

The review also examined performance and lessons relating to:

- > **Monitoring and evaluation** – were the systems in place to facilitate timely reporting of progress and results, analysis of achievements and lessons, and learning to inform this and future projects?
- > **Inclusive development** – were women and girls, and people with disabilities included and will they benefit? Were appropriate guidelines and standards for inclusive development met?
- > **Safeguards** – Were people's natural and cultural assets and values protected? Were relevant local and Australian safeguard standards met?

¹ Department of Foreign Affairs and Trade Monitoring and Evaluation Standards, June 2014

Audience

The primary audience for the evaluation is DFAT program staff at Post, who commissioned the evaluation as part of their quality assurance process, and to inform future programming.

The Government of Samoa, particularly the managing and implementing agencies, are an equally important audience, having an interest in the outcomes and lessons as they apply to the design and implementation of comparable future work.

Communities and other beneficiaries also have a stake in the evaluation and its outcomes, and, while not consulted directly, civil society perspectives were sought throughout the consultations. The likely longer-term outcomes of NAPA4 for communities were the primary consideration in the analysis of impacts.

Individual sets of questions were tailored to these audiences (Annex 2) and were used to guide interviews with partners and stakeholders, and a roundtable / wrap up held towards the end of the consultation period (23 June).

Review team

The review team comprised:

- > Dr Kate Duggan – climate change adaptation specialist and team leader
- > Dr Scott Power – climate early warning systems specialist

The team worked collaboratively with the implementing agency (MNRE), the partner sector agencies and DFAT.

Information sources

The review accessed information from a range of sources and methods of inquiry:

- > A review of documents, including the NAPA document, NAPA4 completion report, Independent Review and Needs Assessment for Australian Climate Change, Environment and Disaster Risk Management Activities in the Pacific Report; project reports, plans and information products produced by partner agencies; reports of other donors and multilateral agencies active in climate change in Samoa; independent studies of climate change and climate early warning systems in Samoa and the Pacific
- > An interview with the primary audience; the program managers at Post
- > Interviews with partner government agencies involved in implementation
- > Interviews with partner government and civil society agencies that could possibly have benefited (e.g. from information and skills developed through the project) or have adopted the project products in their development planning.
- > A roundtable discussion with managing and implementing partner agencies and other stakeholders.

The consultation reached all of the partner agencies, with a focus on the main implementation agencies. Gaps were noted for possible future follow up at Post (Annex 4).

NAPA4 Implementation arrangements

NAPA4 was delivered via partner government systems through the MoF, with MNRE as the primary implementing agency. Australia provided AUD\$2.1 million as grant funding to the Government of Samoa to support the implementation of NAPA4 from 2010-2015. During this period, other Australian aid funded regional programs and Australian Departments also provided separate but related assistance to the Government of Samoa to improve climate early warning systems.

NAPA4 was managed by a Steering Committee (SC), chaired by MNRE (GEF Division), and representing the implementation partners and sector agencies. Project funds were managed by MoF, allocated to the Divisions and sector agencies according to work plans reviewed by the SC. The SC was able to adjust allocations during the implementation period in response to changed circumstances, delays or unforeseen risks.

Integrating five of the nine key priority areas of the NAPA, NAPA4 coordinated partnerships with sectoral agencies managing water, forests, climate services, spatial planning, and tourism. The primary implementation partners were:

- > MNRE's Samoa Meteorology Division – managing meteorological forecasting and issuing CLEWS
- > MNRE Water Division – managing water resources and responsible for flood warnings
- > MNRE PUMA – managing spatial planning
- > MNRE Disaster Management Office (DMO) – coordinating disaster preparedness and response
- > MNRE Capacity Building and Sector Coordination Division – coordinating environment reporting (State of Environment – SOE).

These partners worked with sector agencies to achieve the project outcomes:

- > The Samoa Tourism Authority (STA) – supporting local tourism industry
- > The Fire and Emergency Services Authority (FESA) – front line emergency response
- > The Samoa Hotel Association (SHA)
- > The Samoa Water Authority (SWA)
- > Ministry of Women, Community and Social Development – coordinating consultations with communities

Other important stakeholders included:

- > Nuanua O Le Alofa – People with Disability Organisation – engaging with government and civil society to improve disability inclusion in all development programs
- > Ministry of Agriculture – providing extension services including climate outlooks and advice to farmers

- > The CSSP – funded by Australian aid – building capacity of NGOs and CSOs through a community small grants program – including a focus on resilience and climate change adaptation (through past Australian adaptation funding)
- > SPREP – coordinating Pacific regional climate change and science programs, including several supported by Australia and engaging Australian science agencies
- > UNDP – coordinating and implementing agency for the NAPA.

Other relevant Divisions and projects within MNRE were included in the Steering Committee to enhance coordination across the project.

Progress against objectives

What did NAPA4 do?

A series of extreme weather events (the 2009 tsunami; Tropical Cyclone Evan, December 2012); the 2015 / 2016 El Niño) brought home the vulnerability of Samoan communities to the impacts of climate change. In response, the Government of Samoa (GoS) is investing in building resilience and preparedness, including by integrating climate and weather risks in sector development planning programs.

Certain sectors are particularly vulnerable – these include water, tourism, forestry and land management, agriculture, fisheries, and health, fire and emergency services – and were targeted by the nine NAPA projects (NAPA1-9).

NAPA4 complemented the other eight NAPA investments by targeting vulnerable sectors that were not covered. NAPA4 enabled the Meteorology Division and DMO to engage for the first time with FESA, STA and SWA, and to deepen their input in spatial planning (through MNRE PUMA), with the aim of building capacities and understanding of climate risks, tailoring CLEWS to sectors, providing better access to CLEWS, and enabling integration of climate risks in sector plans. The agencies conducted extensive community consultations to develop new sector plans that take account of climate change.

What was achieved?

Progress of NAPA4 was good: the major objectives of NAPA4 were achieved with substantial progress towards outcomes. The different capacities of partner agencies meant that it was also uneven – with some agencies engaging and achieving more than others. Management responses and adjustments through the project term targeted specific weaknesses. This enabled capacities to be built overall and cross-sector, multiagency collaborations established. As a result, sector development plans were changed and new strategies introduced to reduce weather and climate risks, and to build resilience. The representative of MoF, who was closely involved in the project from the beginning, commented that sector agencies are now sufficiently prepared as result of NAPA4 – that future finance for implementation can be disbursed through MoF direct to the respective sector.

Progress against outcomes:

Outcome	Result
Enhanced technical and organizational capabilities of the Samoa Meteorological Division (MD) to monitor climate trends and provide monthly climate risk and early warning communications to the planning, water, fire and tourism sectors to help augment existing Disaster Risk Reduction management processes	<ul style="list-style-type: none"> > Expansion of CLEWS to include water, fire, agriculture and tourism sectors > 12 automatic and 12 manual rain gauges delivering data to Samoa Meteorology Division (with the support of other donors)

Outcome	Result
Capacity of Samoa's planning sector improved to map strategic zones and develop surface flooding adaptation strategy and perform short term (seasonal) and long-term (decadal) climate change adaptation planning and DRRM	<ul style="list-style-type: none"> > Apia Spatial Plan (2014) – adopted by GoS > Local Area Investment Plan and Urban Area Flood Study > National Urban Policy (2013) and awareness
Capacity of Samoa's water resource managers and GIS planners strengthened to reduce the impact of climate change on groundwater resources	<ul style="list-style-type: none"> > 4 / 21 Groundwater monitoring sites (2015) – training in bore drilling > Groundwater map – not sited > Draft Groundwater CC Adaptation Strategy – not sited
Capacity of Samoa's forest fire managers and GIS planners strengthened to reduce impact of CC on native forests during periods of drought	<ul style="list-style-type: none"> > National Forest Fire Management Strategy and awareness program in Savaii and Upolu; specific training for villager response teams > Maota and Asau Fire Stations constructed in drought prone areas of Savaii > Ability of FESA to issue enforceable fire restrictions created
Capacity of Samoa's tourism resource managers and Climate Change Task Force strengthened to reduce the impact of CC on tourism resources	<ul style="list-style-type: none"> > Tourism Adaptation Strategy > Training and awareness on PUMA EIA > Tourism Climate Change Resource Centre to raise awareness > Samoa registered under Global Sustainable Tourism Council's Early Adopter Program
Enhanced learning, evaluation and adaptive management in order to systematically capture experiences in CC impacts and adaptation preparedness	<ul style="list-style-type: none"> > SOE Report (2013) – national consultations in Upolu and Savaii > National Environment and Development Sector Plan (2013-16)

The platforms established by NAPA4 are enabling the sector agencies to implement climate change risk reduction and resilience building activities with communities and businesses (for example, tourism operators have adopted a water saving code to encourage conservation when a dry period is forecast). The partnerships and coordination across the agencies meant that some sectors were exposed to climate and weather information relevant to their sector for the first time. Their regular meetings provided opportunities to consider and better

understand how to integrate CLEWS / seasonal forecasts (for 3-6 month periods) in their planning and development activity. Even though the seasonal outlooks are more relevant to some sectors than others (e.g. seasonal forecasting of hot, dry periods are highly relevant to FESA, whereas the STA is more concerned about warnings of tropical cyclones, tsunamis and floods), the collaboration led agencies to look more broadly at climate risks and how these impact in their sectors.

Engagement in NAPA4 enabled the sectors to conduct community and industry consultations and studies of climate change risks and vulnerabilities in their sectors – leading to a better understanding of likely climate change risks and impacts, and of the most vulnerable areas. In some sectors it was the first time there had been a systematic identification of hazards and vulnerabilities:

- > Awareness of climate change, climate variability and early warning systems was raised in the agencies and communities. For example, prior to the studies, STA did not consider climate change impacts to be a priority in their sector.
- > FESA confirmed that the most vulnerable districts in terms of fire emergencies and emerging changes in rainfall and temperature (hotter / drier at times) are on the island of Savaii, which also has the least capacity to fight fires and reduce fire risks.
- > The SWD identified a specific risk of seawater intrusion to groundwater (not previously studied) and a need for monitoring of salt levels. The SWD also identified a risk of drying in some groundwater sources and a need to improve the monitoring of water levels to regulate future use. Groundwater monitoring confirmed that seawater is entering some groundwater reserves.
- > STA found widespread community observations of coastal erosion – and that the risks of tropical cyclones, sea level rise and storm surge would make this worse in the future, and impact on the many coastal resorts – which are the backbone of the industry. The STA also found that dryer / hotter periods would impact on the small-scale water supplies generally used by small tourism ventures.
- > PUMA learned that the spatial plan for Apia did not reflect the risks of hazards such as flooding, storm surge or cyclones.

These studies led the agencies to develop new sector plans to integrate climate change impacts in the sectors – including specific strategies for how to adapt in future – in contrast to what was in place previously (i.e. climate change was either only mentioned as a general risk or not at all).

- > All of the sectors engaged in NAPA4 have developed new sector plans that take account of climate change risks and identify strategies for adapting / reducing the risks. The cross-sector collaboration also influenced the new national development plan, lifting the priority of climate change in national development objectives, and identifying real practical action that the government can take. This was one of the major outputs from NAPA4.
- > As a result of the studies, STA altered both their planning and practice to integrate climate risks – including a new sector plan and strategies to diversify tourism away from coasts; providing training and access for tourism operators to CLEWS; and developing an early warning system tailored to operators needs (e.g. for alerting them to when a dry spell is expected which they translate to a manual gauge system encouraging water conservation by tourists).

- > MNRE has since studied the risks of climate change at a landscape scale, identifying management strategies ‘from Ridge to Reef’, for example to reduce the risks of flash flooding and water pollution by protecting forests in upland catchments (most flooding in Apia is caused by fast runoff from steep catchments).

Agencies are implementing or are seeking funds to implement the plans and strategies:

- > STA has leveraged funds from GEF (through UNDP) to implement the climate change strategies they developed in their sector plan (NAPA5). They have developed a CLEWS specifically for the sector and are working with tourism operators to implement small grants, taking practical steps to reduce risks.
- > Working with DMO, FESA developed a CLEWS for fire hazards that has been highlighted by the Pacific International Emergency Management Association (including Pacific Island nations, Australia and New Zealand) as an example of best practice in the Pacific.
- > The new rain gauges and groundwater monitoring equipment installed by NAPA4 has improved the Meteorology Division’s monitoring capability, enabling them to develop and provide better CLEWS. The continuing interaction with the sector agencies is helping them tailor the CLEWS to specific sector needs – acknowledging that more work is needed in some sectors (health, agriculture and water).

Unexpected benefits have emerged. For example, with access to better data from NAPA4 and assistance from through the Australian regional climate program and the Bureau of Meteorology (The Climate and Oceans support Program in the Pacific – COSSPac), the Meteorology Division has developed a CLEWS model for the hydro-power station (providing a substantial component of Samoa’s energy), enabling the operators to adjust turbine activity based on the outlook for rainfall.

Aid investment quality

Relevance – was this the right thing to do?

Climate change is a high priority for the GoS – and is seen as a development issue with impacts across the economy. As a result of the NAPA4, there is greater awareness and it is a higher priority for the sectors engaged in the project. Their engagement has influenced national priorities – resulting in more detailed, informed attention to climate change in the current national development plan (2012-16). It is an emerging priority for communities.

NAPA4 aligns with Australian aid program priorities; and with the Samoa Partnership Aid Investment Plan. Increased donor activity in the sector has seen a renewed focus by Australia on ‘integrating’ climate change across the partnership program (e.g. in infrastructure, health, education etc.), and improved linkages with Australian regional investment in climate change – through which Australian science agencies are building local capacities. Climate change is a clear area of Australian strength in the region – the Meteorology Division stressed the value of their cooperation with the Bureau of Meteorology (though e.g. the regional COSSPac, the Pacific Climate Change Science Program (PCCSP) and Pacific-Australia Climate Change Science and Adaptation Planning program (PACCSAP).

Effectiveness – did the approaches achieve the objectives?

Despite having ambitious targets at the beginning, NAPA4 partners were able to adjust the design and expectations to achieve the broad objectives and make progress towards tangible outcomes. Inter-agency partnerships and networks that were previously not strong around climate change, have been strengthened and some are enduring (e.g. the Meteorology Division and the STA). Others require further work (e.g. Meteorology Division. and SWA).

Awareness raising and community consultations (managed through the Ministry of Women, Community and Social Development) successfully engaged Village Councils, women and (to a lesser extent) people with disabilities, in discussions about climate change risks – some for the first time. Positive outcomes of the awareness raising emerged (e.g. anecdotal evidence of reduced fires because communities are more aware of the fines / implications of burning rubbish, and have access to a specific fire CLEWS; also the fire stations built on Savaii have become incident control centres which communities now go to for information about fires).

The studies and planning conducted by the sectors have improved the evidence base for reducing climate risks and building resilience in key development sectors of Samoa. The resulting downstream investment (e.g. NAPA5) is likely to grow because the plans place the agencies in an excellent position to attract and leverage funds from donors and multilateral funds – which are expanding in the Post Paris 2016 environment.

In meeting the objectives, the project managers addressed a number of difficult challenges and risks – some of which persist:

- > The Meteorology Division cites a need for closer and ongoing engagement with the sectors so that they can get the information needed to tailor CLEWS to the specific sectoral needs (e.g. as per the relationship with STA). There are gaps in the sectors of water (floods and hydrological drought); agriculture (timely, relevant information to farmers); and health (based on the linkages between climate change and climate variability impacts and health).

- > Data sharing between agencies (sometimes constrained by different data formats and management systems) and lack of data or digital data, currently limit the development of sector specific CLEWS – e.g. health data remain in written records – limiting their application in studies of climate change risks and impacts and their input to digital systems such as CLEWS. Other limitations include a lack of priority / awareness by beneficiaries (e.g. farmers; communities).
- > Although NAPA4 resulted in warnings being translated into the Samoan language for the first time, there is still a very large disconnect between the information the Meteorology Division is able to provide and the needs of some stakeholders and communities. For example, churches have requested information for their congregations from the Meteorology Division but find the long term projections (20+ years) and technical language disengaging. This issue has a two-way impact of limiting community awareness and timely access to weather and climate information; and restricting stakeholder / community knowledge available to the Meteorology Division that could be useful for tailoring information to their needs.
- > The central need for community consultations across the sector planning activities, and discussions on access to land for the meteorological stations purchased under NAPA4, was not factored in sufficiently to planning – with the result that original schedules had to be adjusted.

In relation to these challenges, there are risks / limitations associated with CLEWS generally and specifically those developed under NAPA4:

- > ***Translating to forms / products that are understood*** – CLEWS provided by technical agencies might not be timely or understood by the broader community.
- > ***Tailoring to specific sector / community*** needs – The CLEWS might not be easily integrated in every-day decision-making – e.g. a seasonal rainfall outlook might be provided when what is needed is advice on what this means for the choice of crop.
- > ***Translating complex technical information*** – Climate outlooks are probabilistic in nature. Communicating and using probabilistic information is typically extraordinarily difficult. Progress through NAPA4 is clear but difficulties remain.
- > ***Reaching the population*** – Warnings might not reach remote communities.
- > ***Identifying appropriate action*** – Action plans that use the CLEWs might be inadequate to address the risks.

Efficiency – could it have been done for fewer resources?

The modality of delivering through government systems was successful. It engaged the agencies in a cross-sector collaboration that enabled them to align with their priorities and practices and to integrate the NAPA4 with their mainstream activities. In relation to other donor activity, by delivering through partner government systems, the coordinators were able to efficiently integrate NAPA4 with other aid activity (specifically the other NAPA investments) and leverage complementary investment in a crowded, complex arena – which would have been more difficult in a separate project modality.

Procurement system issues (lack of familiarity with the system and some inflexibility to deal with technical specifications) delayed some activities (e.g. equipment and technical assistance).

Coordination was generally strong (see challenges below), largely because of the willing engagement of the majority of partner agencies and the skills and hard work of the coordinator (MNRE GEF Division). It may have benefited from dedicated resourcing of coordination positions. Coordination challenges related to the capacity of agencies to enable staff to consistently engage and meet reporting deadlines; and to the position of MNRE as implementing agency – coordinating across-sectors. Variation in capacity across the agencies meant that some (e.g. MNRE, STA) were able to engage more than others (e.g. FESA).

The flexibility of DFAT was universally cited as a positive factor – enabling the agencies to adjust activities according to what was working and what else was needed, in order to achieve the outcomes. Reporting requirements (six-monthly) were considered to be appropriate and systems not overly bureaucratic.

The Steering Committee (SC) functioned well in general (meetings were held less regularly in the last year of implementation). Allocation of funding to agencies based on work plans was an effective approach but could have been more efficient had a clear set of criteria been provided to partners and the SC. The SC facilitated reallocation of funds during the project; which had benefits for agencies that were not progressing as well as others, but limited some of the activities planned by more advanced agencies.

The project was audited but the review team has not cited the audit document. We understand that the audit was favourable – and there was a modest underspend.

Sustainability – will it have lasting impact?

NAPA4 build awareness and capacities in the partner agencies and other stakeholders around climate change risks and resilience. By working through government systems, it also engendered a high level of engagement and built capabilities in procurement, coordination and reporting that will position the agencies well to access and manage future finance.

The networks across agencies are largely enduring – connecting vulnerable sectors (e.g. fire and tourism) with the Meteorology Division, enabling their access to tailored CLEWS and other climate and weather information. These plans and networks provide a platform for further investment and implementation that while promising, is not without challenges:

- > The issue of asset maintenance is ongoing for FESA and the MNRE – the Met Division lacks a maintenance budget for equipment; even though FESA has a budget for maintenance of the fire trucks, they anticipate issues in future, particularly with accessing spare parts.
- > The NAPA4 agencies are actively accessing resources for implementation of the plans. Their dependence on donor finance for implementation limits their capacity to build on the NAPA4 outcomes and locks them into negotiated outcomes and management systems – which may not be the most effective for sustaining NAPA4 achievements.
- > Some agencies are less engaged than others – more work is needed to engage agriculture, water and health in climate change risk reduction and resilience building.

Since NAPA4, some agencies have successfully accessed funding for implementation of the new sector plans and strategies for climate change (e.g. STA through NAPA5). Opportunities for further implementation include though the expanding bilateral donor and multilateral investment in resilience building in the Pacific (e.g. Green Climate Fund).

NAPA4 engaged with the private sector- through STA's partnership with tourism operators and sector engagement with communities. These associations have potential to leverage resources for implementing the sector plans (e.g. assistance from larger tourism operators in implementing effective CLEWS).

Gender and disability inclusion

Samoa is outstanding in the region in relation to engagement of women in positions of leadership in the public sector. Most of the managers we consulted were women (generally in positions of Assistant CEO). Some of the more male-dominated sectors- e.g. fire and emergency services are recruiting more women.

Women were engaged in project activities including community consultations through the Ministry of Women, Community and Social Development. However, it is unclear whether these reached further into communities and civil society organisations beyond the Village Councils.

The interaction between governments and communities on climate change needs to be ongoing but is constrained by isolation and communications issues. Recent upgrades to telephone networks / infrastructure and ongoing employment of radio to communicate climate change awareness material will help to improve channels of communication.

Project reporting disaggregates sex in statistics on participation in activities – women were well represented in most. Beyond this engagement, is not clear that project activities specifically targeted women and girls or people with disabilities but this is more relevant for the implementation activities that will follow NAPA4.

Our meeting with Nuanua O Le Alofa – People with Disability Organisation highlighted their ongoing advocacy work and role in engaging people with disabilities in disaster risk reduction and climate resilience. Through the DMO, they are consulted on disability inclusion, including providing advice on making CLEWS and other disaster warning systems more accessible – (e.g. sirens are not effective for hearing impaired people, and colour scales are not accessible to vision impaired people). They are currently launching a toolkit with DMO, which as a partner in NAPA4, will integrate this in post-NAPA4 activities, intersecting with the DFAT-funded Samoa Disability Program – assisting Samoa to ratify the UN Convention on disabilities – Article 11 pertaining to disaster risk reduction.

Monitoring and evaluation

Monitoring and Evaluation (M&E) in a formal sense is an area that would have benefited from specific resources and capacity building early in the project. While project reports are comprehensive, and demonstrate results – the lack of an overall M&E system meant that coordinating and collating reports was difficult. The lack of systematic monitoring also meant that collecting and reporting important contextual success stories, unexpected benefits and NAPA4-wide outcomes was a missed opportunity (the sum of the parts).

Safeguards

The project strengthened Samoa's engagement in environment sector (through capacity building and preparation of the SOE report). The outcomes for environment were positive. In effectively integrating climate risks across the partner agencies, NAPA4 had a positive impact on risk management in these sectors. It did not work directly with children or resettlement.

Annex 1: Climate Early Warning Systems

Introduction

An important objective of NAPA4 was to increase the prudent use of Climate Early Warning Systems (CLEWSs) in industry and communities through:

- > Strengthening links between the Samoa Meteorology Division (SMD) and other agencies and sectors
- > Build capacity in other agencies and sectors to understand and build EWSs that better meet the needs of the people they service, including communities and the tourism sector.

What is an early warning system?

An early warning system is comprised of:

- > A prediction of a hazard ahead of time
- > Transmission of a warning for that hazard ahead of time
- > Reception and understanding of the warning by people affected by the hazard, or people who can act on behalf of those people, prior to the hazard occurring
- > Action taken to reduce damage or loss from the impending hazard by those people in response to the warning, or by others on behalf of those people.

Precise definitions may vary from person to person, but this is the definition we adopt here.

Early warning systems exist for:

1. Short-term events
 - a. Severe weather, including tropical cyclones
 - b. Tsunamis
 - c. Flood
 - d. Coastal inundation
2. Seasonal (3months)– 6months events that includes
 - a. Rainfall, temperature, and sea-level, fire risk, dam levels, disease outbreak risk, streamflow
3. Decades – century
 - a. Climate change projections information.

Note that information on decades and longer (3) are not normally regarded as an “early warning system”. However, they display all the hallmarks of an EWS as described above.

In NAPA4 the elements in (2) are referred to collectively as “Climate early warning systems” or “CLEWS”. This is the definition adopted by the Samoa Meteorology Division and the definition we adopt here. Note that a reasonable argument could be made to include all of 1-3, or perhaps 1-3 with 1b excluded, in the definition of CLEWS.

The Samoa Meteorology Division is the primary source of early warnings in Samoa. It provides EWs for 1a and b, and both 2 and 3. The Division also possesses the bulk of Samoa's technical expertise needed to produce and communicate early warning systems.

How do early warning systems work?

Early warning systems are based on three different approaches:

- > Mathematical models encapsulating the physics of the system that causes the hazard, initiated with observations – e.g. severe weather predictions, including tropical cyclones
- > Statistical prediction models – e.g. seasonal rainfall and temperature prediction models in the Met Division
- > Past experience of lagged relationships – e.g. Traditional Knowledge

Methods 2 and 3 are not fundamentally different. They operate on the same principle: both exploit knowledge about the relationship between a hazard and an observable, preceding, harbinger or forerunner event or events

Annex 2: Terms of Reference

Purpose

This Terms of Reference sets out consultant services required to undertake an independent evaluation of Australia's aid funding to the Government of Samoa to support implementation of the National Adaptation Program of Action in particular for addressing its fourth priority area – i.e. 'Climate Early Warning Systems' (NAPA4).

The evaluation will assess the extent to which Australian aid has assisted the Government of Samoa to achieve the vision, outcomes and objectives of NAPA4.

It is envisaged that the findings of this evaluation will help inform the future of DFAT support in this area.

Background

Increasing resilience and adaptation capacity to adverse impacts of climate change is a priority for the Government of Samoa. To address this, the National Adaptation Program of Action (NAPA) for Samoa was developed and endorsed for implementation in 2005, which was a step forward in fostering collective action and efforts to tackle climate change. Nine priority areas of adaptation needs were identified under the NAPA. Australia, among other development partners supported the Government of Samoa implement its NAPA priority areas.

Australia's support focused on the fourth priority area – i.e. 'Climate Early Warning Systems' (NAPA4). The implementation of effective early warning systems would significantly assist Samoa to develop and action appropriate and sustainable sectoral and community activities to adaptation to minimise the adverse impacts of climate change. NAPA4 aims to achieve the following objectives:

- > To upgrade technical early warning systems and associated technical capabilities to monitor and warn against climate and extreme events.
- > To build sectoral and public capabilities to understand and use climate and early warning hazard information.
- > To improve adaptation measures for vulnerable communities, including coastal infrastructure and development of early warning systems.
- > To improve capacity building through the review of the Environment Sector Plan.

NAPA4 is supported under the Samoa-Australia Partnership for Development. The program is delivered through partner government systems with the Ministry of Natural Resources Environment and Meteorology as the implementing agency. Due to the cross cutting nature of climate change, NAPA4 integrates five of the key priority areas of NAPA including water, forest, climate services, land use planning, and tourism. Australia provided AUD2.1 million as grant funding to the Government of Samoa to support the implementation of NAPA4 from 2010-2015. Other Australian funded regional programs and Australian Departments also provided separate but related assistance to the Government of Samoa aimed at improving climate early warning systems.

Objectives

The objective is to evaluate the impact and effectiveness of Australia's assistance in supporting Samoa to address its NAPA4 priority needs. The evaluation will examine all the achievements, challenges and lessons learned from the implementation of NAPA4.

The following evaluation questions are to be considered in accordance with DFAT evaluation standards:

- > **Effectiveness / Impact**
 - To what extent did Australian aid assistance achieve target outcomes of NAPA4?
 - Were outcomes expected from Australian funding appropriate given the scale and type of investment?
- > **Efficiency**
 - What role did the modality of aid have in supporting the achievement of outcomes in the most efficient way?
 - Did Australia's investment represent value for money in achieving the outcomes?
- > **Sustainability**
 - Will the benefits achieved from Australian funding continue beyond the period of Australia funding?
 - If not, what other actions / approaches could Australia or Samoa have taken to improve the sustainability of outcomes?
- > **Monitoring and Evaluation**
 - Was the quality of monitoring, reporting and evaluation of sufficient quality to provide the necessary performance information both partners required to track progress and understand results?
- > **Gender and Disability**
 - To what extent did Australian aid funding adequately address the different needs of men, women, boys and girls, including those with disability?

Scope of services

To address the objectives of this Terms of Reference, two internationally recruited evaluators will undertake analysis of written documentation and reporting relevant to the Samoa National Adaptation Programme of Action and Australian support in particular to its implementation. The evaluators will be comprised of an Evaluation Expert and a Specialist in Climate Early Warning Systems (CLEWS). Both are expected to travel to Samoa to consult with Australia's Department of Foreign Affairs and Trade and relevant stakeholders of the Government of Samoa.

Prior to travel to Samoa the evaluators will be required to submit an evaluation plan which describes in detail the evaluation methods and approaches.

Skill and roles of evaluation team

The Evaluation Team will comprise of two members: the Team Leader who is an evaluation expert with the necessary evaluation, sector and contextual understanding of Samoa to undertake the following roles:

The Team Leader will lead the evaluation process, including participating in the initial briefing, assigning tasks and responsibilities to the other team member, and presenting preliminary evaluation findings in the Aide Memoire. The Team Leader will be an experienced evaluator of development programs, preferably with some experience in evaluating climate change programs and experience in Samoa or the Pacific. The Team Leader will bear primary responsibility for delivering the following outputs, and will marshal the expertise of the CLEWS Expert and Country Specialist to those ends:

- > Develop the overall approach and methodology for the evaluation;
- > Manage, compile and edit inputs from the CLEWS Expert and Country Specialist, ensuring high quality of all reporting outputs;
- > Produce the Aide Memoire;
- > Produce the draft Evaluation Report; and
- > Produce the final Evaluation Report.

Under direction of the Team Leader, the **CLEWS Specialist** will be responsible for providing specialist technical advice, written inputs and other inputs as required by the Team Leader.

The Evaluation Team will be accompanied by a **local counterpart** from the relevant ministry of the Government of Samoa. The local counterpart will support the evaluation team with:

- > Coordination and preparation of consultation phase of the evaluation in Samoa in consultation with DFAT and relevant GoS stakeholders;
- > The meaning of culturally –nuanced messages and insights conveyed during the in-country interviews;
- > The policies, priority and interest of the Samoan Government, and their implications for the evaluations and;
- > The wider social, political and cultural context of Samoa, and their implication for the evaluation.

Evaluation timeframe and outputs

The evaluation timeframe below is indicative – final agreed timeframes will be negotiated based on acceptance of an evaluation plan and will be outlined in the scope of services to a service order.

The evaluation process is expected to commence in February 2016. The timing and duration for the scope of services is up to 21 input days for the Team Leader, and up to 15 input days for the CLEWS Expert.

Task / Outputs	Description	Team Leader	Climate Change Expert
Document review	Establish understanding of context and identify information that needs to be collected during the in-country component to address the scope of services and term of reference of the review. Key documents will be provided by DFAT and MNREM.	2	1
Design mission work-plan	<p>The evaluation team shall develop a detailed work-plan for the overall assignment, which includes an evaluation plan prepared in accordance with <i>DFAT M&E Standard 5 – Independent Evaluation Plans</i> and submitted for approval by DFAT and GoS.</p> <p>This includes participation in a preliminary briefing via teleconference with DFAT to discuss the objective, plans and expectations of the evaluation. It also includes coordinating and facilitating meetings with relevant stakeholders in preparation for the in-country mission.</p>	2	1
In-country mission (including travel days)	Consultations in Samoa with key stakeholder meetings including preparation and presentation of an aide memoire (of no more than 5 pages) to DFAT and GoS on the last day of the in-country mission which provides anticipated key findings and recommendations arising from in-country consultations.	10	10
Draft Evaluation Report	Evaluation Team shall undertake data analysis and prepare and submit a draft evaluation report for review within two weeks of the aide memoire.	5	2
Final Evaluation Report Document	Preparation of final evaluation report following receipt of comments on the draft evaluation report.	2	1
TOTAL		21	15

Evaluation plan

This plan will be prepared in accordance with DFAT Monitoring and Evaluation Standard 5 – Independent Evaluation Plans and will outline the scope and methodology of the evaluation.

The plan will include the methodology to be used for assessing the outcomes of the program; the process for information collection and analysis, including tools such as questionnaires and / or questions to be asked during discussions; identification of any challenges anticipated in achieving the evaluation objectives; allocation of tasks of the Evaluation Team; key timelines; a consultation schedule identifying key stakeholders to be consulted and the purpose of the consultations; and other activities / research to be undertaken.

Aide memoire

On the last day of the in-country mission, the Evaluation Team will submit and present an aide memoire of up to 5 pages with key findings. The aide memoire will be prepared in a simplified and readable manner. The indicative timeframe for in-country consultations includes approximately one day to work on the aide memoire and present it to DFAT and GoS.

Reporting

At the conclusion of the evaluation, the team will produce the following reports:

The first draft of the evaluation report should be submitted to the relevant DFAT officer at Samoa Post for DFAT and GoS review and comments approximately two weeks after the end of the in-country visit. The evaluation report should contain an executive summary, and the body of the report should be a clear and concise summary of the evaluation findings, implications and recommendations. The report should be written in plain English in a way which will be understood by a wide range of stakeholders. Annexes should be limited to those that are essential for explaining the text.

The final evaluation report should be submitted to DFAT within 14 days of receiving final comments from DFAT on the draft report. The evaluation report must be prepared in accordance with DFAT Monitoring and Evaluation Standard 6 – Evaluation Reports (DFAT standard to be provided).

Annex 3: Evaluation plan

Purpose

An independent evaluation of the Australian aid investment in the Government of Samoa National Program of Action 4 (NAPA4) project, Climate Early Warning Systems, was commissioned by the Department of Foreign Affairs and Trade (DFAT) in May 2016 to assess progress towards the vision, outcomes and objectives.

The evaluation will draw out findings and key lessons to inform future aid investment programming by DFAT.

Background

Increasing resilience and adaptation capacity to adverse impacts of climate change is a priority for the Government of Samoa. To address this, the NAPA for Samoa was developed and endorsed for implementation in 2005, which was a step forward in fostering collective action and efforts to tackle climate change. Nine priority areas of adaptation needs were identified under the NAPA. Australia, among other development partners supported the Government of Samoa implement its NAPA priority areas.

Australia's support focused on the fourth priority area – i.e. 'Climate Early Warning Systems' (NAPA4). The implementation of effective early warning systems would significantly assist Samoa to develop and action appropriate and sustainable sectoral and community activities to adaptation to minimise the adverse impacts of climate change. NAPA4 aims to achieve the following objectives:

- > To upgrade technical early warning systems and associated technical capabilities to monitor and warn against climate and extreme events.
- > To build sectoral and public capabilities, to understand and use climate and early warning hazard information.
- > To improve adaptation measures for vulnerable communities, including coastal infrastructure and development of early warning systems.
- > To improve capacity building through the review of the Environment Sector Plan.

NAPA4 is supported under the Samoa-Australia Partnership for Development. The program is delivered through partner government systems with the Ministry of Natural Resources Environment and Meteorology (MNREM) as the implementing agency. Due to the cross cutting nature of climate change, NAPA4 integrates five of the key priority areas of NAPA including water, forest, climate services, land use planning, and tourism. Australia provided AU\$2.1 million as grant funding to the Government of Samoa to support the implementation of NAPA4 from 2010-2015. Other Australian funded regional programs and Australian Departments also provided separate but related assistance to the Government of Samoa aimed at improving climate early warning systems.

Objective

The objective is to evaluate the impact and effectiveness of Australia's assistance in supporting Samoa to address its NAPA4 priority needs. The evaluation will examine all the achievements, challenges and lessons learned from the implementation of NAPA4.

Scope

The terms of reference for the evaluation set evaluation questions relating to effectiveness (the extent to which outcomes have been achieved); efficiency (modality, timeliness and value for money); sustainability (impact beyond the life of the project); monitoring and evaluation (how well were the interventions and achievements tracked and reported, and did this contribute to learning); gender and disability (how inclusive were the interventions and benefit streams):

- > **Effectiveness / Impact**
 - To what extent did Australian aid assistance achieve target outcomes of NAPA4?
 - Were outcomes expected from Australian funding appropriate given the scale and type of investment?
- > **Efficiency**
 - What role did the modality of aid have in supporting the achievement of outcomes in the most efficient way?
 - Did Australia's investment represent value for money in achieving the outcomes?
- > **Sustainability**
 - Will the benefits achieved from Australian funding continue beyond the period of Australia funding?
 - If not, what other actions / approaches could Australia or Samoa have taken to improve the sustainability of outcomes?
- > **Monitoring and Evaluation**
 - Was the quality of monitoring, reporting and evaluation of sufficient quality to provide the necessary performance information both partners required to track progress and understand results?
- > **Gender and Disability**
 - To what extent did Australian aid funding adequately address the different needs of men, women, boys and girls, including those with disability?

These questions will form the basis of the evaluation.

Audience

The primary audience for the evaluation is DFAT program staff at Post, who commissioned the evaluation as part of their quality assurance process, and to inform future programming.

The Government of Samoa, particularly the managing and implementing agencies are an equally important audience, having an interest in the outcomes and lessons as they apply to the design and implementation of comparable future work.

Communities, other beneficiaries and other stakeholders also have a stake in the evaluation and its outcomes, and will be consulted where possible.

Team

The evaluation will be conducted by a specialist team from Griffin nrm Pty Ltd, comprising:

- > Dr Kate Duggan (Team leader and climate change adaptation specialist)
- > Dr Scott Power (Climate early warning systems (CLEWS) specialist)

The team will adopt a collaborative approach, working with Post and project managers to develop and conduct a constructive evaluation process so that the outcomes are as useful as possible for these audiences.

Methods

Evaluation standards

The methods for the evaluation are designed to meet current DFAT standards², for:

- > Enabling a collaborative approach;
- > Meeting the needs of the primary audience according to the terms of reference;
- > Encompassing a range of data collection methods and triangulation across different methods to corroborate findings;
- > Addressing privacy and ethical issues;
- > Providing professional analysis and assessments; and
- > Offering independent advice and recommendations.

Methods of inquiry

The evaluation will employ various methods of inquiry to examine:

- > **Progress** against project objectives and contribution to program outcomes
- > The **relevance** of the investment locally and in the broader context
- > The **effectiveness** of the development processes employed – skills, knowledge and capacity building; partnerships and collaborations
- > The **efficiency** of the investment and management arrangements
- > The **sustainability** of outcomes
- > **Lessons** – what worked, what didn't and why

The evaluation will also examine performance and lessons in relation to:

- > **Monitoring and evaluation** – were the systems in place to facilitate timely reporting of progress and results, analysis of achievements and lessons, and learning to inform this and future projects

² Department of Foreign Affairs and Trade 2014, *Detailed Description of Standards for Evaluation Plans*

- > **Inclusive development** – were marginalised and vulnerable members of the community included, including women and girls, and people with disabilities?; were appropriate guidelines and standards for inclusive development met?; and
- > **Safeguards** – were people’s natural and cultural assets and values protected?; were relevant local and Australian safeguard standards met?

The methods of inquiry will include:

- > A review of documents, including the NAPA document, NAPA4 completion report, Independent Review and Needs Assessment for Australian Climate Change, Environment and Disaster Risk Management Activities in the Pacific Report ,and other documents as suggested by DFAT and GoS
- > An interview with the primary audience; the program managers at Post
- > A roundtable discussion with managing and implementing partner agencies and other stakeholders
- > Interviews with beneficiaries
- > A focus group discussion of preliminary findings at the conclusion of the field visit

This range of methods will provide an assessment of progress, enabling and constraining factors, challenges, issues and lessons, built up collaboratively from evidence collated across the project.

Community resilience pathways

The evaluation will adopt a ‘pathways to community resilience’ approach, acknowledging that the ultimate goal of the NAPA is a long-term undertaking, and that the project was expected to contribute to its attainment in measureable but incremental ways. This approach views the development process in three phases:

1. **Skills, tools and capacity building** – facilitated by the project implementation team and expected to take up the bulk of available time and resources, this phase engages and empowers agencies and communities with the attributes, skills and tools they need to begin to understand and manage the risks that climate change poses to their lives and livelihoods locally, in ways that also benefit them directly in the short and long-term. This phase enables agencies and communities to identify solutions and strategies, and test them out. It positions agencies and communities to take the next steps towards engaging with networks and politically, to influence policy, planning and resourcing for local implementation of strategic action.
2. **Policy, planning and enabling** – facilitated by the project implementation team through engagement of communities with government and civil society services and networks, to influence adaptation policy and planning systems in community practice and at a more strategic level. There may be evidence of project activities and interventions influencing change in the way development planning is conducted at community and larger scales, for example in the information and strategies available to communities and in the networks and resources supporting community planning.
3. **Adoption, implementation and scale out** – of project outcomes may not yet be evident at scale but there may be evidence of this emerging, for example if networks are fostering and advocating their wider application, and mobilising resources for testing / implementation by other communities or agencies.

These phases map out a plausible pathway to impact, for communities engaged in building adaptive capacities and reducing the risks of climate change. It enables the evaluators to identify causal linkages between activities of the implementing team, the changes in behaviour of boundary partners or change agents, and the potential benefits for participating communities.

The approach enables the evaluators to map out the expected pathway to impact and make informed judgements about where the project has got to and the likely future impacts on beneficiaries. It can also establish the critical activities and changes that occurred along the pathway, what worked well and why and what fell below expectations. This analysis will highlight valuable lessons for future programming.

The linkages between the three phases are critical. The evaluation will look at the role of the projects in creating these, and for evidence of networks, partnerships, and institutional mechanisms (policy and mandates) that could be expected to mobilise resources for wider application and impact of program outcomes in future.

Limitations

The evaluation methodology is designed to provide the best possible information in the available timeframe and resources. However, there are limitations that could impact on the findings:

- > **Time and resources:** the rigour of the data gathering and analysis processes will be constrained by the time available.
- > **Judgements:** the evaluation will be limited to rapid qualitative methods of inquiry, and rely on the professional judgement of the evaluators to interpret stakeholder perspectives.
- > **Access:** the program covers a vast geographic area and the evaluation team can only expect to gather indicative perspectives from a limited range of stakeholders / locations.
- > **Measurement:** the evaluators will primarily rely on evidence collected from project managers and stakeholders to assess compound indicators such as 'capacity', 'knowledge and awareness', and 'empowerment'.
- > **Attribution:** the projects are implemented in a complex context in which multiple factors contribute to and / or detract from the anticipated changes, making definitive attribution of changes to particular interventions challenging.

The 'enhancing community pathways to resilience' approach adopted in the evaluation is expected to lessen many of these limitations by examining evidence and causal linkages between project activities / investment and likely outcomes in the immediate and longer-term.

Reporting

The evaluation will produce the following reports, according the DFAT evaluation reporting standards³:

³ Department of Foreign Affairs and Trade 2014, *Detailed Description of Standards for Evaluation Reports*

- > An agreed evaluation plan (as outlined in this document)
- > An Aide Memoire for the field mission
- > A draft evaluation report
- > A final report reflecting feedback and discussions

Evaluation framework and questions

The evaluation framework below summarises the headline evaluation questions and indicators of success for each development phase. This framework will guide data collection for all of the inquiry methods.

Project level evaluation questions (below) will guide a structured discussion during interviews with project teams. These will be developed iteratively with the program managers and may be added to or adjusted to accommodate specific questions raised in the upfront review of program and project document.

Evaluation framework

Questions	Development phase		
	Skills, tools and capacity building	Policy and program enabling	Adoption, implementation and scale out
Evaluation questions:	Who are the implementation team ?	Who are the change agents ?	Who are the beneficiaries ?
What evidence is there that the interventions produced the planned outputs and outcomes? What was unexpected?	What did the implementation team produce (e.g. goods and services)?	What are people doing differently as a result (e.g. planning and allocating resources)?	How have communities benefited (e.g. enhanced adaptive management)?
How did the project improve awareness / understanding of the risks and drivers of vulnerability to climate change? What factors are enabling or	The team has leadership, trust, and a shared vision and plan for an alternative pathway; knowledge and skills are built and shared in participating communities	Strategies, plans and / or agreements are produced to reduce local climate risks and vulnerabilities	Adaptation strategies are tested and modified to reduce local climate risks and vulnerabilities

Questions	Development phase		
	Skills, tools and capacity building	Policy and program enabling	Adoption, implementation and scale out
hindering this development?			
How did the project empower / strengthen agency and community capacities to take the lead, anticipate and adapt to the impacts of climate change? What factors are enabling or hindering this development? How were marginalised members of the community included?	Communities are empowered to take ownership of the problem, to develop their own solutions and advocate for change	Government and / or civil society policies, planning systems and mandates are modified to integrate new knowledge and solutions	Adaptation strategies are adopted and scaled out by other members of the community and other communities
How did the project facilitate partnerships to mobilise knowledge and resources and engage politically?	Communities are engaged with government and civil society to mobilise knowledge and resources	Cross-scale networks are expanded to mobilise knowledge and resources	Programs are coordinated across jurisdictions to ensure complimentary action at different scales
		Resources are made available for implementation	
Outcomes	Community self-organisation and capacity to anticipate and adapt to change locally are enhanced	Community, government and civil society development planning systems are modified to support adaptation planning and strategies	Community based strategies for adaptation are adopted, adapted and implemented in other vulnerable communities

Interview questions for the implementing team

Role and responsibilities

1. What was your role in the project?

Progress towards outcomes and objectives:

2. Can you summarise the project's achievements? What were the standout successes? Were these in line with expectations? What was unexpected and why?
3. In percentage terms, how would you rate the achievement of the project objectives (you can either do this for each objective or overall)?
 - a. 100%
 - b. 75-100%
 - c. 50-75%
 - d. 25-50%
 - e. 0-25%
4. To what extent did Australian investment contribute to these achievements?
5. What are people doing differently as a result of the Australian investment? How are people benefiting?
6. What evidence do you have that your project has built community resilience? Is there evidence of leadership emerging, greater organisation and preparedness, people taking responsibility, capacity to anticipate and plan for impacts?
7. Is there evidence of wider networks and partnerships emerging between communities and government / civil society, influencing planning and mobilising resources on a more strategic scale?

Relevance:

8. Is climate change adaptation a priority for your target communities? How do you know this?
9. Is it a priority for government? Is this changing? In what direction?
10. How / why would you rate the local demand for this type of work: High Medium Low

Efficiency:

11. How much of the budget was spent?
12. Could the outcomes have been achieved with fewer resources / how?
13. Can you describe the major challenges and issues in project management? How did you manage them? Was this effective?

Effectiveness:

14. In terms of your delivery approaches – what worked well and why; what didn't work so well and why?
15. What capacity building approaches did you employ? What evidence do you have that agencies and communities have been empowered, are more aware, and have new knowledge and skills to reduce climate risks and / or mitigate emissions?
16. What did the project partnerships do to connect communities with knowledge and resources they need for adaptation / mitigation? Are these partnerships working? What is enabling and hindering them?

Sustainability:

17. What evidence do you have that the project outcomes are sustainable beyond the life of the project? What is enabling and hindering this? What other approaches could have worked better to achieve lasting impact?

Inclusive development:

18. What strategies did you employ to ensure that women and girls, and people with disabilities were included in project activities and can benefit from the outcomes? What else could be done to ensure inclusive development?

Safeguards:

19. Was the impact of project activities on people's natural and cultural assets assessed? In the case of potential negative impacts, did the project managers comply with local and Australian environment protection law?
20. Could the activities result in resettlement or social upheaval? If so, did the project managers comply with local and aid program standards to protect people and their assets?

Monitoring and evaluation

21. Do we know what was achieved and how? Were results regularly reported to managers? Did the reports lead to adaptive change to the project?

Lessons:

22. What would you do differently next time knowing what you know today?

What next:

23. What else is needed to achieve the project objectives and contribute to the program outcomes?

Story time:

Thinking about Australia's investment, can you briefly tell us about one of the rewarding / inspiring / insightful experiences you have had working on this project? What is significant about this experience? Do you agree to this story being cited in our evaluation report? Yes
No

Interview questions for the stakeholders and change agents

Outcomes

1. What was your role in the project?
2. What are you doing differently as a result of the project interventions?
3. How is this impacting on the work you do?
4. How do you think this will impact on communities you are serving?
5. What else could be done to make the project activities have greater impact in your agency?

Interview questions for beneficiaries

1. What was your role in the project?
2. What are you doing differently as a result of the project interventions?
3. Has / How has your community benefited from the project?
4. Do you expect these benefits to last / grow in the future? Why?
5. What else needs to be done to make the project activities have greater impact in you community?

Annex 4: Meeting schedule

Time	Consultation	Attendance	Contacts
Monday 20 June 2016			
9.00-10.00AM	Mission briefing at Australian High Commission (Confirmed)	Rosemary McKay (Dep. High Commissioner) Clyde Hamilton (First Secretary)	Clyde.Hamilton@dfat.gov.au Bob.Ale@dfat.gov.au
10.30-11.30AM	Ministry of Finance (Confirmed)	Lita Lui (ACEO Aid Coordination)	Lita.lui@mof.gov.ws
1.00-2.00PM	Ministry of Natural Resources and Environment (MNRE)	Suluimalo Amataga Penaia (CEO)	amataga.penaia@mnre.gov.ws
2.30 – 3.30Pm			
4.00-5.00PM	MNRE Water Resources (TBC)	Malaki Iakopo (ACEO)	malaki.iakopo@mnre.gov.ws
Tuesday 21 June 2016			
9.00-10.00AM	MNRE PUMA	Fetoloai Alama (ACEO) Kirisimasi Seumanutafa (Principal) Ferila Brown (Principal)	fetoloai.alama@mnre.gov.ws kirisimasi.seumanutafa@mnre.gov.ws ferila.brown@mnre.gov.ws
10.30-11.30AM	MNRE DMO (Confirmed)	Muliagatele Filomena Nelson (ACEO)	filomena.nelson@mnre.gov.ws
1.00-2.00PM	MNRE Capacity Building and Sector	Tuiolo Schuster (ACEO)	tuiolo.schuster@mnre.gov.ws

Time	Consultation	Attendance	Contacts
	Coordination (Confirmed)	Frances Reupena (ACEO)	fran.reupena@mnre.gov.ws
2.30-3.30PM	Ministry of Women Community and Social Development	Fuimapoao Naea Beth Onesemo (CEO) Lemalama Taaloga Faasalaina (ACEO) Faafetai Koria (ACEO)	beonesemo@mwcsd.gov.ws tfaasalaina@mwcsd.gov.ws fkoria@mwcsd.gov.ws
4.00-5.00PM	Samoa Water Authority	Seugamaalii Jammie Saena (General Manager) Tafeamaalii Phillip Kerslake (Technical Division)	Jammie.Saena@swa.gov.ws Philip.Kerslake@swa.gov.ws
Wednesday 22 June 2016			
9.00-10.00AM	Samoa Tourism Authority	Papalii Sonja Hunter (CEO) Faamatuainu Suifua (ACEO)	hunter@samoa.travel suifua.faamatuainu@samoa.travel
10.30-11.30AM	Fire Services and Emergency Authority	Lelevaga Fouina Mupo (Commissioner) Nia Vaifale (ACEO)	f.mupo@sfesa.ws nia.vaifale@sfesa.ws
1.00-2.00PM	NUANUA O LE ALOFA People with Disability Organisation (Confirmed)	Mataafa Fuatino Utumapu (Manager)	manager.nola@nola.org.ws
2.30-3.30PM	SPREP (Confirmed)	Fata Sunny Seuseu	sunnys@sprep.org
4.00-5.00PM	UNDP (Confirmed)	Jaime Aguinaga Yvette Kerslake	jaime.aguinaga@undp.org yvette.kerslake@undp.org

Time	Consultation	Attendance	Contacts
Thursday 23 June 2016			
10.30-11.30AM	MINISTRY OF AGRICULTURE (Confirmed)	Lafaele Enoka (Sector Coordinator)	lafaele.enoka@maf.gov.ws
1.00-2.00PM	MNRE Meteorology Division (TBC)	Tile Tofaeono (Principal)	tile.tofaeono@mnre.gov.ws
2.30 – 5.00PM	SITE VISITS	TBC	
Friday 24 June 2016			
9.30-11.30AM	Overview of mission findings – Stakeholder Roundtable		All Stakeholders
2.30-3.30PM	Debrief – Australian High Commission TBC		Bob.Ale@dfat.gov.au