



ACP-EU BUILDING SAFETY AND RESILIENCE
IN THE PACIFIC PROJECT

Activity Report 2016



Pacific
Community
Communauté
du Pacifique



ACP-EU BUILDING SAFETY AND RESILIENCE IN THE PACIFIC PROJECT

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Prepared by the BSRP team, Geoscience Division of the Pacific Community



Pacific Community (SPC) 2016

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FOREWORD

DEPUTY DIRECTOR GENERAL, DR AUDREY AUMUA

BSRP Activity Report for European Union

Disaster risk reduction and climate change adaptation are critical to ensuring the Pacific region is best prepared for the potential hazards that so many countries are vulnerable to. The Building Safety and Resilience in the Pacific project (BSRP) is dedicated to determining country based priorities and vulnerability to risk whilst working to strengthen the resilience of countries to these hazards with significant and broad ranging success based on these priorities.

It is with pleasure that I present to you the 2016 Activity Report for the Building Safety and Resilience in the Pacific project (BSRP) that has made significant strides in meaningfully reducing the impact of disaster across the region focused not only on the lives of Pacific Islanders but also the livelihoods, social and environmental impacts caused by disaster and the impact of climate change on the region.

Most notably, the BSRP project was critical in funding support for the development and now endorsement of the Framework for Resilient Development in the Pacific (FRDP) launched at the Pacific Platform for Disaster Risk Reduction in October and endorsed by Pacific Leaders in September. This framework was supported by a Steering Committee comprising of representatives from Pacific Island Countries and Territories (PICTs), civil society and private sector representation. It was developed by a Technical Working Group providing technical advice and support to this process and comprises representatives from the Pacific Community (SPC), the Secretariat of the Pacific Regional Environment Programme (SPREP), Pacific Island Forum Secretariat (PIFS), United Nations Office of Disaster Risk Reduction (UNISDR), United Nations Development Programme (UNDP), and the University of the South Pacific (USP). This FRDP is a credit to the partners involved and certainly a momentous piece of work that will strive to make meaningful impacts in reducing disaster on PICTs whilst reducing the impact of climate change. In parallel to the FRDP endorsement, the BSRP Project has been delivering activities on the ground in 15 Pacific Island Countries. The project was designed in line with the previous regional framework for managing disaster risk and therefore is being implemented with a similar approach to that of the FRDP.

2016 was a challenging year for the BSRP Project Management Unit. There were a number of disaster events in several countries across the region, most notably Cyclone Winston, the largest recorded cyclone in history to hit a Pacific Island nation causing widespread devastation to Fiji to be followed by a tropical depression in December causing significant flooding across Fiji and a devastating landslide in Qamea causing widespread damage but thankfully no loss of life. These disasters occurred while the North Pacific faced drought conditions with a State of Emergency declared in the Republic of the Marshall Islands and drought declarations in Palau and the Federated States of Micronesia all significantly impacting the region.



Dr Audrey Aumua
Deputy Director General
Pacific Community (SPC)

These disasters naturally hampered implementation along with other challenges faced by the team noted in the report but these challenges have been overcome and most critical is the fact the team have genuinely supported country based activities that reduce the impact of disaster in diverse and broad manners that will benefit the region into the future.

Some highlights include:

Key Result Area 1 – Effective preparedness, response and recovery: Disaster Risk Management buildings have been designed in preparation for construction and/or upgraded in 7 countries (Fiji, FSM, Palau, Samoa, Nauru, Tonga and Timor Leste). These buildings will improve coordination during emergency response operations, enable the collection of critical data and/or provide a safe shelter for communities affected by disasters.

Key Result Area 2 – Institutional Strengthening: In the Cook Islands, Nauru, Palau, Samoa and the Republic of the Marshall Islands, National Disaster Risk Management (NDRM) Plans/ Frameworks have been drafted, reviewed by stakeholders and submitted to respective NDRM Councils for review and approval. In Nauru, this has led to the creation of a National Emergency Service; a new Ministry responsible for DRM coordination which had not existed prior to 2016 and the formal endorsement of the revised National Disaster Risk Management Act.

Key Result Area 3 – Improved knowledge: Tsunami signs directing the public to safe zones have been erected in FSM, Palau and Samoa. Databases have been developed in PNG and the Cook Islands to support officials to understand and endeavour to meet the needs of people living with disabilities during disaster response. 15 high risk communities in Makira and Isabel Provinces in the Solomon Islands have received training to enable them to establish flood early warning systems sourced from locally supplied materials and built on technical expertise provided by JICA.

Key Result Area 4 – Improved understanding of hazards and the reduction of underlying risks: Landslide mapping of vulnerable areas on the Highlands Highway, an important economic transport route, has been carried out in Papua New Guinea. In Vanuatu, a borehole drilling rig has been purchased to improve the Government's capacity to carry out exploratory work and establish wells in water scarce communities. Construction materials have been purchased to establish nursery sites in Veitogo (Tonga) and Nimpal (FSM) for improving food security and, in Tonga, coastal protection.

Key Result Area 5 – Improved Partnerships: Emergency preparedness and response capacity has been meaningfully strengthened in 5 countries (Kiribati, Samoa, Niue, Vanuatu and Timor Leste) through the signing of agreements with Australasian Fire and Emergency Service Authorities twinning partners; this has enabled delivery of 5 fire trucks, essential equipment and training on how to use them. Training to strengthen Vanuatu's capacity to respond to fires was delivered in October '16 and then utilised in November '16 to contain a major building fire and successfully reduced damage from this event.

I commend the BSRP Team for their hard work and commitment to support their national counterparts and communities throughout the region to manage the risks posed by hazards and a changing climate and look forward to monitoring their progress in 2017 and beyond.



INTRODUCTION

The Building Safety and Resilience in the Pacific (BSRP) project is a €19.37 million project supported by the European Union (EU) and the ACP Secretariat, implemented by the Pacific Community (SPC). This project directly responds to the African, Caribbean and Pacific (ACP) group of states' and the EU's priorities identified under the 2009 European Union Strategy for Supporting Disaster Risk Reduction but has been designed and is being implemented in line with country based priorities to help create a safer, more resilient Pacific region.

The BSRP project has finalised its third year of implementation focused on reducing disaster risk and supporting climate change adaptation whilst strengthening the capacity of disaster agencies across the region in better preparing for, responding to and recovering from hazard events in the Pacific region.

Pacific vulnerability to disaster

The Pacific region is at risk of being struck by disaster in part due to the region's high exposure to hazards¹ such as cyclones, droughts, landslides, floods, earthquakes, tsunamis and volcanic eruptions. Geographically the region is exposed to these hazards but in addition to this, the regions capacity to manage disaster risk is undermined by the fact that many Pacific Island nations within the project are also developing countries. The reality of this is that countries rely on small economies and subsistence farming, many island nations cover vast distances with numerous islands and face access issues. Many communities across the region live in poverty. These challenges make preparing for, responding to, and recovering from disaster more difficult for both individual countries and the region as a whole.

¹UNU-EHS (2016) *World Risk Report, Platz der Vereinten Nationen 1, Bonn*

Throughout 2016 a number of countries within the project experienced the impacts of disasters. The most significant for the region was the destruction left when Tropical Cyclone (TC) Winston made landfall in Fiji in February as the strongest recorded cyclone ever to hit the Southern Hemisphere and the second strongest ever recorded globally. Cyclone Winston also affected Tonga, Vanuatu, Tuvalu, Niue. In Fiji, the cyclone intensified and caused destruction in Vanuabalavu, Koro Island, Vanua Levu and Viti Levu before moving out to the Yasawa and Mamanuca chains of islands. Sustained 230 km/h winds hit the country and many are still reeling from the destruction. Those affected suffered further when a tropical depression (TD04F) in December 2016 caused widespread flooding, landslips and devastation to already damaged homes still recovering from Cyclone Winston. The reality of disasters, whether they be huge rare events such as TC Winston or smaller more common events such as TD04, highlights the critical need to support efforts to increase resilience in Pacific Island nations.

Cyclone Winston hit Fiji just as other countries in the region were dealing with their own disasters in 2016. The Republic of the Marshall Islands, Palau and the Federated States of Micronesia all declared drought as a result of the El Niño occurring in recent years along with areas of Papua New Guinea, particularly parts of the highlands, affected by localised drought conditions and more recently localised cases of flooding following heavy rain. The Solomon Islands experienced a 7.8 magnitude earthquake on December 9th which caused damage to buildings and localised tsunami waves to affect remote communities with the initial threat of a widespread tsunami not eventuating. Vanuatu experienced many earthquakes in 2016 with a 6.2 magnitude quake affecting the country in July.

The relevance of the BSRP Project intended results are revealed as critical when faced with the reality of these events. The occurrence of such hazards is not expected to reduce in the Pacific anytime soon, indeed, the added risk presented by a rapidly changing climate is expected to increase their likelihood.

Cook Islands		Papua New Guinea	
Federated States of Micronesia		Samoa	
Fiji Islands		Solomon Islands	
Kiribati		Timor-Leste	
Marshall Islands		Tonga	
Nauru		Tuvalu	
Niue		Vanuatu	
Palau			

THE PROJECT AT A GLANCE

Objective

Reduce the vulnerability to, as well as the social, economic and environmental costs of disasters caused by natural hazards, thereby achieving regional and national sustainable development and poverty alleviation in ACP Pacific Island states.

Purpose

To strengthen the capacity of Pacific Island countries to address existing and emerging challenges with regard to the risks posed by natural hazards and related disasters, while maximising synergies between disaster risk reduction and climate change adaptation.

Expected results of the project

- 1. Countries helped to prepare for, respond to and recover from disaster** by developing national and regional response plans, end-to-end early warning systems, emergency and evacuation centres, increased access to safe drinking water and the mitigation of disasters such as drought.
- 2. Strengthened institutional support for disaster risk management and climate change adaptation** by helping develop joint national action plans while also integrating DRM and CCA into national and sector-based strategy, planning and budgets.
- 3. Improved knowledge, public awareness, training and education** by building meaningful understanding of disaster risk, exposure to risk and exposure to real-time risk and disaster information through regional and local databases. This also includes strengthening human and technical capacity in a range of priority areas, production of knowledge products and related awareness.
- 4. Improved understanding of natural hazards and reduction of underlying risks** by addressing gaps in baseline scientific, technical, social and economic understanding of hazard impact, and addressing underlying risks created by changing social, economic and environmental conditions and resources.

5. Increased coordination through creating partnerships in disaster risk management and climate change with a dedicated focus on the development of a regional strategy to address this. Enhanced support for the Pacific Islands Emergency Management Alliance (PIEMA) whilst increasing hazard risk management, knowledge management and supporting efficient financing whilst building on the work programmes of all CROP agencies (Council of Regional Organisations of the Pacific).

Key stakeholders

- **National governments** are key partners in the BSRP project, with the team working alongside national disaster management offices to help strengthen response planning, early warning systems and decision-making tools to better coordinate disaster response and preparedness, as well as training personnel and reducing the long-term cost of disaster.
- **Communities** are also key beneficiaries, with activities designed to help people understand disaster risks and hazards better, so that they can reduce the impact on their lives and protect themselves and their families better. Resilience strengthening at community level, including schools, is paramount in this project to ensure communities can engage with early warning systems and understand the risk of disaster in real time, helping prevent the loss of life.
- **Civil society organisations (CSOs)** are critical for communicating information to many communities across the Pacific region and as such are effective partners in the BSRP project. The involvement of CSOs varies based on the needs of communities and their capacity to respond to disaster, but they are critical for community awareness and outreach.
- **Utility companies** and the private sector are responsible for much of essential infrastructure needed before, during and after disaster strikes, and they often have skills and capabilities that governments do not possess. A strong partnership with such groups brings additional national capacity to bear, and more importantly, provides technical capability in finding and maintaining solutions into the future.



REGIONAL WORK

Framework for resilient development in the Pacific (FRDP) endorsed

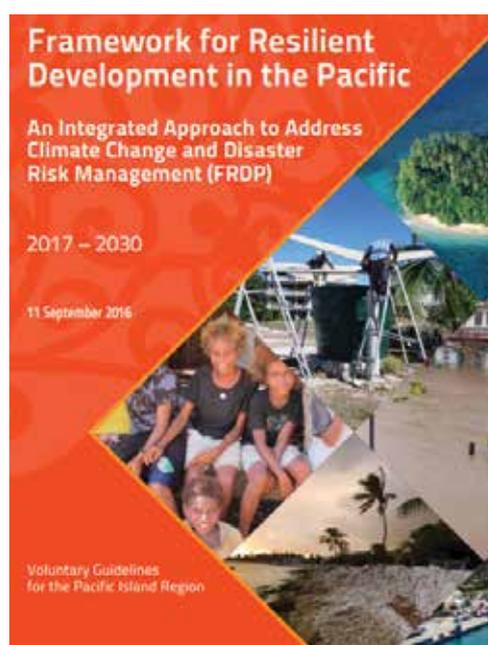
In 2016, The Framework for Resilient Development in the Pacific: An Integrated Approach to Address Climate Change and Disaster Risk Management (FRDP) was endorsed by Leaders during the 47th Pacific Island Forum meeting in the Federated States of Micronesia and officially launched at the Pacific Platform for Disaster Risk Management in October 2016. This framework provides high level strategic guidance to different stakeholder groups on how to enhance resilience to climate change and disasters in ways that have measurable and relevant impacts for Pacific Island Countries and Territories (PICTs) and their communities. The FRDP endorsement is one of the first and most exhaustive frameworks created globally to address country needs at a regional level and is an innovative, well developed framework that will provide clarity for countries into the future. It is a document designed to guide stakeholders from community level to national and regional government levels how to generate the best solutions to support PICTs to become more resilient to disaster and climate change.

In 2016, The Framework for Resilient Development in the Pacific: An Integrated Approach to Address Climate Change and Disaster Risk Management (FRDP) was endorsed by Leaders during the 47th Pacific Island Forum meeting in the Federated States of Micronesia and officially launched at the Pacific Platform for Disaster Risk Management in October 2016. This framework provides high level strategic guidance to different stakeholder groups on how to enhance resilience to climate change and disasters in ways that have measurable and relevant impacts for Pacific Island Countries and Territories (PICTs) and their communities. The FRDP endorsement is one of the first and most exhaustive frameworks created globally to address country needs at a regional level and is an innovative, well developed framework that will provide clarity for countries into the future. It is a document designed to guide stakeholders from community level to national and regional government levels how to generate the best solutions to support PICTs to become more resilient to disaster and climate change.

New framework to build resilience to climate change and disasters in the Pacific Islands

Pacific Leaders' endorsement of the The Framework for Resilient Development in the Pacific (FRDP), the world's first integrated regional framework to build resilience to climate change and disasters, has been applauded by Pacific regional and international organisations.

The Framework aims to ensure that climate change and disasters are understood as a development challenge with priority actions to address vulnerability to climate change and disasters and build resilience across all sectors.



The FRDP provides high level voluntary guidance to national governments and administrations, the private sector, civil society organisations, Pacific communities, regional organisations, and development partners.

The FRDP advocates for the adoption of integrated approaches, whenever possible, for addressing climate change and disaster risks, in order to make more efficient use of resources, to rationalise multiple sources of funding, and for more effective mainstreaming of risks into development planning and budgets.

The Framework is closely aligned to implementing global agreements such as the Paris Agreement, the Sendai Framework for Disaster Risk Reduction and the Sustainable Development Goals to help build a more sustainable and safer region.

A new Pacific Resilience Partnership (PRP) will coordinate cooperation as well as implement and monitor the FRDP. The Pacific Island Forum Leaders approved a Working Group to establish the structure of the Partnership.

The FRDP was developed in response to recommendations from the Pacific Platform for Disaster Risk Management and Pacific Climate Change Roundtable in 2011 and endorsed by the Pacific Island Forum Leaders in 2012. An extensive and inclusive consultation process was undertaken over the last three years with Pacific Island countries and territories (PICTs). Input was also received via regional meetings, sector dialogues and an online tool that drew submissions from around the world.

The development of the FRDP was supported by a Steering Committee comprising of representatives from PICTs, civil society and the private sector. A Technical Working Group provided technical advice and support to this process and comprises representatives from the Pacific Community (SPC), the Secretariat of the Pacific Regional Environment Programme (SPREP), Pacific Island Forum Secretariat (PIFS), United Nations Office of Disaster Risk Reduction (UNISDR), United Nations Development Programme (UNDP), and the University of the South Pacific (USP).

The development of the FRDP has been supported with funding from various sources including: the European Union through the Building Safety and Resilience in the Pacific (BSRP) project and Global Climate Change Alliance (GCCA); the Australian Government (DFAT) through the International Climate Change Initiative (ICCAI) and funding for SPREP and SPC; the Government of Sweden support for the Pacific Climate Change Roundtable through SPREP; and United States Agency for International Development (USAID) through the USAID Institutional Strengthening in Pacific Island Countries to Adapt to Climate Change (ISACC) project.

The Framework for Resilient Development in the Pacific: An Integrated Approach to Address Climate Change and Disaster Risk Management (FRDP) was endorsed by Leaders during the 47th Pacific Island Forum meeting in the Federated States of Micronesia.



Pacific Islands Emergency Management Alliance

Background

The Pacific Islands Emergency Management Alliance (PIEMA) was officially created in 2014 as a part of the Building Safety and Resilience in the Pacific Project. PIEMA was developed with a range of key stakeholders invested in best-practice emergency management both within the Pacific Island region and with other supporting countries such as Australia, Guam and New Zealand. PIEMA was endorsed by the founding members consisting of the regions National Disaster Management Directors, Pacific Islands Chiefs of Police and the Pacific Islands Fire and Emergency Services Association. Informal agreements, known as twinning arrangements, had been operational since 2005 but the creation of PIEMA ensured a centralised body to coordinate, support and facilitate best-practice emergency management. This initiative supports activities to be implemented with partners and Pacific Island countries across the region in a more coordinated manner.

PIEMA's formation was also heavily supported by the Australasian Fire & Emergency Services Council (AFAC), the UN Office for the Coordination of Humanitarian Affairs (UNOCHA) and the New Zealand Ministry for Civil Defence and Emergency Management (MCDEM). PIEMA has a membership of 21 countries and 15 agencies, through coordination by SPC.

This alliance aligns with the BSRP project objectives on increased resilience in disaster and climate change along with increased coordination to support best-practice in the region. As a result, the PIEMA alliance helps ensure this becomes reality and is committed to a safer Pacific through support for the emergency services sector. *It strengthens the capacity of key national response agencies in Pacific Island countries and territories. It focuses on building trust, leadership and teamwork in response agencies, whilst creating common language, systems and doctrines to ensure consistent and credible information is collected and used in times of crisis.*

At present there has been a key focus on increasing and strengthening twinning arrangements between emergency services agencies worldwide and Pacific Island countries. This structure formalises relationships between agencies such as the Queensland Fire and Emergency Service and the country of Papua New Guinea to access support, training, infrastructure and other country based support where required. There are a total of 11 formal twinning arrangements, 6 have been formally created since the beginning of PIEMA and is expected to increase to every Pacific Island country in the coming years following the endorsed Strategic Agenda for the alliance (SA2020).

2017 snapshot

Training of emergency service agencies and supporting the future direction of these agencies across the region is at the forefront of PIEMA's work. This includes the development of policies such as the Strategic Roadmap for Emergency Management developed in Niue in 2015 which began implementation in 2016.

This also includes the support of critical infrastructure such as access to transport in times of emergency. In Vanuatu, two fire trucks donated by the ACT Fire and Emergency Services Authority (ACTESA) were shipped to the country. Training was completed with the entire Vanuatu Fire Brigade of the Vanuatu Mobile Force and the Australian team ensured local mechanics were also trained on the repairs and servicing of these state-of-the-art fire trucks. In addition, to support the longevity and sustainability of this work, a Fire Act has been developed in Vanuatu and is awaiting government endorsement to ensure this agreement and long-term relationship is formalised in line with best-practice emergency management for the country of Vanuatu.

Key work

- 2 firefighting appliances were donated to Vanuatu Fire Brigade by their AFAC Twin Partner, ACTFRS, including equipment and PPE, valued at 100,000 AUD and freight supported by BSRP. 38,000 AUD
- 1 Domestic Fire appliance purchased by Tuvalu Government with BSRP funding to replace aging fire trucks on Funafuti. 45,000 AUD along with firefighting hoses and adaptors 40,000 AUD
- 3 Mobile Emergency Operations Centres (MEOC) vehicles procured through BSRP funds. 1 for Kiribati and 2 for Tonga. Vehicles are now operational in country. Additional MEOC equipment is expected to be installed in 2017 ie radios, signage, etc
- *Vanuatu Fire Act drafted and submitted to GOV.* Draft Act on the establishment of a national fire and rescue service is now completed and is awaiting endorsement by Cabinet and COM before taken to Parliament
- *Samoa Fire Reduction Strategy presented in partnership between MFB, SFESA and DMO.* In progress, to be further strengthened this year, linked to the Wild Fire Strategy done in 2012. This Strategy includes the strengthening of fire investigation and analysis.
- Niue SREM Action Plan endorsed by GON and implementation of key activities undertaken
- *Started Samoa SREM with one workshop with stakeholders which has now established a baseline from which the SREM document and action will be extrapolated. 20,000 WST*
- SA2020 launched at 2nd PIEMA Meeting in Brisbane
- *Documentary outlining this work and its critical aspect has been completed and will be ready for launch by July 2017*

Key training and capacity building in 2016

This work also supports the training on standard operating procedures, search-and-rescue and firefighting skills and partners involved with PIEMA worked alongside SPC and Pacific Island countries to deliver a wide array of capacity support in 2016.

- 20 Niue Emergency Services personnel (Police, Fire, Outside Services) attended a 2 week Basic Rescue and RAR Course facilitated by 2 trainers from KN Training and funded by the GON and supported by PIEMA and BSRP
- 15 Vanuatu Fire Officers underwent a 1 week refresher with 2 ACTFRS trainers on Basic Firefighting, Rescue and Pump operations under PIEMA/ AFAC Twinning Arrangements
- 5 Nauru Firefighters seconded to Tasmania FRS for 2 weeks to undergo refresher training under PIEMA/AFAC Twinning Arrangements
- 30 Pacific Island Delegates attended a workshop on the development of SAR and USAR in the Pacific, convened by PIEMA and supported by QFES and AFAC.
- 30 Pacific Island delegates attended the 2016 AFAC Conference held in Brisbane, Australia
- 8 Pacific Island Fire Chiefs attended the 11th PIFESA Annual Meeting held in Brisbane Australia
- 20 Pacific Island Delegates (DMO, Fire Chiefs, Police Chiefs) attend the 2nd PIEMA Meeting held in Brisbane, Australia
- Vanuatu PIEMA MOU between ACTFRS + VFB + NDMO signed

Looking ahead

PIEMA has had an exceptional and ground-breaking year and will continue this work into 2017 with the aim of creating 4 strategic roadmaps for emergency management (SREM) in the Cook Islands, Kiribati, Samoa and Vanuatu. It is also working to create training on highly technical emergency management systems for Fiji, Samoa and PNG and will support in other capacity building across the region as requested and supported by the beneficiary countries.

PIEMA continues to gain traction as a committed alliance working alongside partners from around the world with beneficiary countries on the key priorities of each country. This work is strongly led by country focal points and directly requested. In 2017, PIEMA will work to expand its long-term ability to continue to facilitate this critical work in generating a safer pacific region in emergency management and will expand the partners it is working with to ensure this work is country led and supports best-practice in a sustainable manner.

Training and Capacity work for 2017

- Four Strategic Roadmaps for Emergency Management (SREM) created and being implementation
- Implement the roll out of search and rescue CAT 1 program with AFAC partners through the national fire service & DMO in Samoa
- PIFESA Annual Conference and meeting to be held at alongside the 2017 AFAC Conference in Sydney, Australia
- PICP Conference 2017 participation as an official observer and supporting the PICP members with emergency management contingency planning.
- Pacific Humanitarian Partnership 2017 working alongside OCHA
- RDMM 2017 supported with SPC
- UNCivil Military Coordination (CMCOORD) Course support 2017 to be held in Fiji in partnership with OCHA
- Australian Interagency Incident Management System adaptation and implementation for Fiji, Samoa and PNG
- Fire Service Act Vanuatu for COM approval and submission to Parliament



Campaigns/Communications

Key achievements

- 300% increase in direct media coverage both internationally and nationally
- Two completed documentaries supporting disaster resilience and work undertaken by the project
- Development of technical, evidence based communications strategies supporting increased disaster resilience across the region.
- Disaster resilience toolkit for businesses developed with key stakeholders to be launched by May 2017
- Engagement of a communications team taking the team from 1 person to 3 with two additional support crew.
- Website designed and published
- Baseline testing on disaster awareness messages for communities in Fiji and redesign of national communications campaign underway
- Baseline testing for regional disaster awareness

Communications snapshot

It has been a record year for the project in terms of communications with an increase in media coverage of more than 300% in both international and national media sources. The structure of the communications team has also been redeveloped to best fit the needs of the countries within the projects and ensure long-term behaviour change strategies are being implemented across the project and within communications strategies regionally.

Making the message relatable with evidence

An increased communications capacity has been engaged with the allocation of funding for a communications assistant, graphic designer and film team to help capture the stories and challenges of those facing the risk of hazards and disasters in the region whilst ensuring highly technical information is communicated in a way that key stakeholders can engage with and understand. This structure is a new approach to communications in the project and region and one that identifies the gaps and trends and ensures we can support countries and the region in better understanding disaster risk and climate change into the future. An example of this work is being undertaken in Fiji at present with focus group sessions held with key partners (UNICEF, NDMO, MoH) to understand what channels of communication (i.e. TV, radio, social media) were used before, during and after Cyclone Winston and preferences for the style of information required to better prepare for disaster. As a result research findings show 53% of respondents

relied on social media prior to phone towers being damaged in the cyclone. This is an example of how trends are changing the way messages need to be sent to communities prior to disaster. As a result of collated findings a new national campaign with streamlined messages developed by all four partners has been developed and is expected to be finalised in 2017 after being tested with communities across the country to ensure it increases understanding of how to prepare for disaster.

Supporting private sector critical for disaster resilience

In addition, the communications advisor with a small team undertook exploratory research with private sector agencies on what information they require before, during, and after disaster due to finding there were limited disaster preparedness resources within the region. Considering the financial impact the private sector has on the economies across the region, ensuring the sector is supported in how best to prepare for, respond to, and recover from disaster is critical and the impact of the work being undertaken by the communications team is creating an evidence-based toolkit of resources to support the private sector in being disaster ready whilst understanding the financial impact disaster has on business. It is expected this work will be launched in July 2017.

Media strengthening for Climate Change and DRR

A training for communications experts bringing together climate change and disaster risk resilience communications experts was developed and completed to increase the networking between projects and programmes regionally. As a result of this networking increased partnerships and understanding of existing projects has been strengthened across the region.

Broad communications work

It has been a hugely successful year for the communications team within the project. The expansion of the team from 1 person to a core team of 3 with a designer and communications assistant has increased country level support more broadly. In addition, it ensures highly technical work being created as part of the project is supported with clear, easy-to-understand knowledge products to increase understanding of this work more broadly. In addition, a website was developed and launched in 2016, 75 independent media articles were published promoting the work of the project, all funding for printing was secured, a Joint Regional Media Training was developed to be implemented in 2017, a regional integrated marketing campaign will be developed along with more easy-to-understand disaster awareness resources and tools in addition to increased media work. In addition to this, three documentaries have been completed for the project and will be published during 2017 along with the distribution of targeted promotional items to increase branding of the project and increase understand of disaster risk reduction.

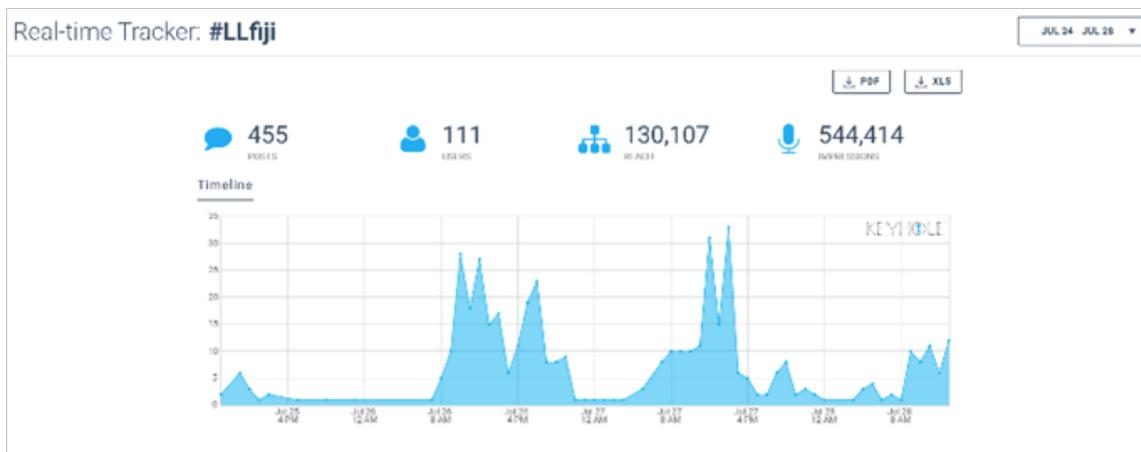


Figure 1 Social media statistics #LLfiji at Lessons Learned Workshop

Looking ahead

The upcoming year is another exciting year with:

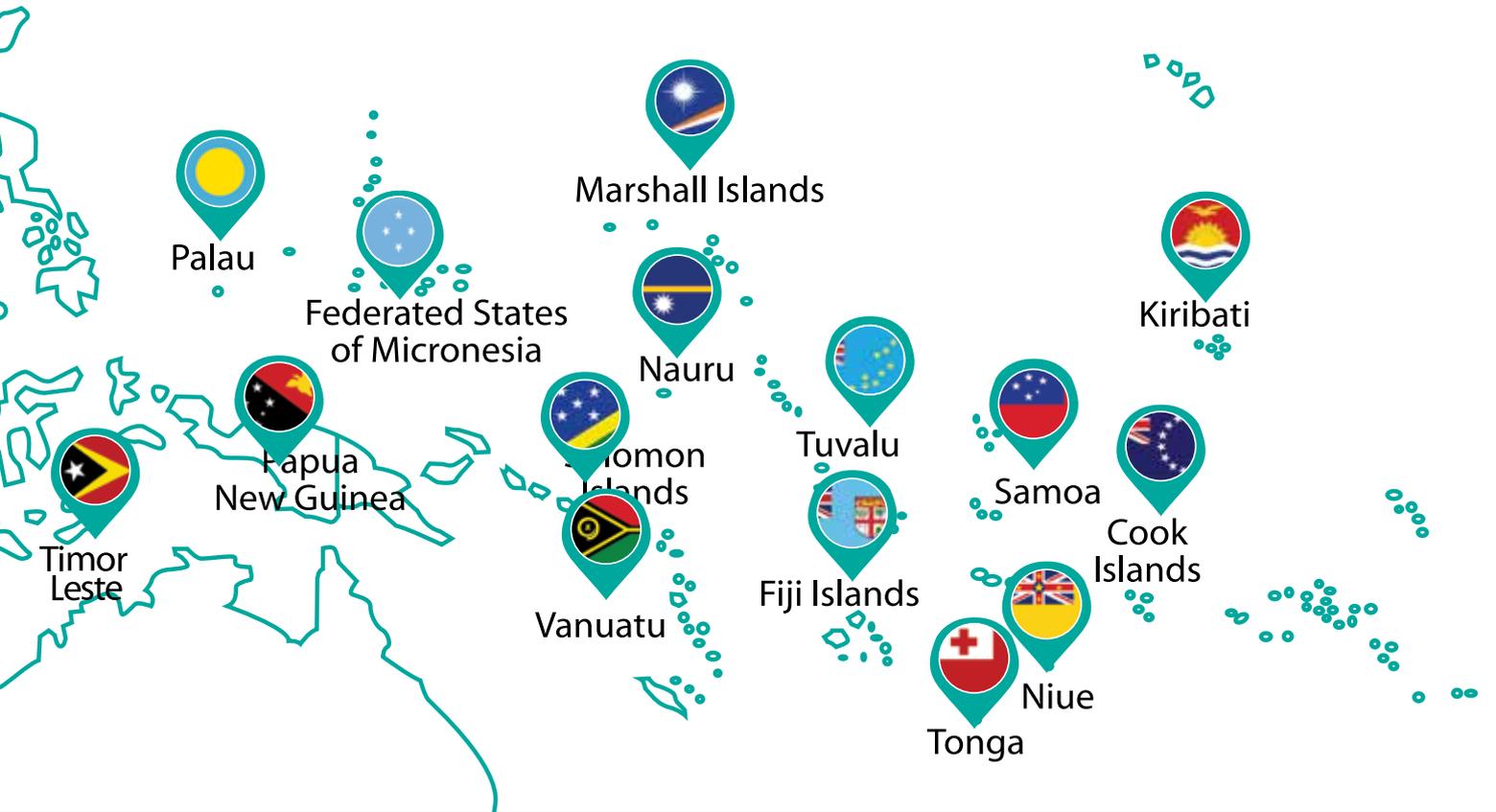
- *Launch of the newly designed disaster awareness campaign for Fiji (Get Ready, Disasters Happen);*
- *The launch of the private sector toolkit;*
- *The published of three documentaries outlining work of the project and important disaster resilience tools;*
- *Development of 6 key documentaries to support outcomes of the project;*
- *Development of in-depth case-studies of work completed under the project and increased disaster awareness information through website.*

Partnership development leads to increased disaster awareness

Tropical Cyclone Winston is the largest recorded cyclone in Fiji's history. It caused widespread devastation with more than 44,000 homes, 220 schools centres destroyed or damaged and more than 62% of the population were directly affected. The BSRP project supported the Fiji Government to hold research based workshops across the country to bring communities, first responders, trained emergency managers and anyone involved in the disaster or responsible for the response and recovery together. Four workshops across the four affected divisions of the country were held and a national 'Lessons Learned Workshop' was held in Suva encompassing all key stakeholders including UN partners and non-government organisations such as a culmination of this work.

To ensure a broader audience was able to understand the lessons learned from the magnitude of this disaster and help participants tell their stories of survival, a social media team was created consisting of Lisa Kingsberry, Elenoa Salele, Vivita Matainimeke, and Jessica Rigamoto (USP). This team ensured people's messages of resilience were recorded on specially made perspex boards along with recommendations for better disaster preparedness, response and recovery into the future but ensuring a widespread audience could engage with the work and communicate their comments directly to the team. This campaign was run via the hashtag #LLFiji on Facebook and Twitter across all of the events with the final event resulting in more than 130,000 people engaging with the social media campaign. 455 unique users sending messages and tweeting about the work and many two-way connections and discussions about disaster resilience, better ways to prepare, and recommendations moving forward.

This social media campaign was based in evidence collected from the workshops and ensured a larger voice for those within the room and those that had shared their recommendations on what support was needed to be more disaster resilient into the future. This social media campaign supported the review of the communications section with a clear focus on the structure and style of disaster awareness messages and a clear need to increase the use of social media platforms to engage with key audience across the Pacific region. It also highlighted the innovative work to a broader audience and is part of the communications section of the report expected to be published and launched in early 2017 outlining key recommendations on how the country has learnt from the disaster and recommendations moving forward for disaster resilience, recovery and response.



COUNTRY UPDATES



COOK ISLANDS

The Cook Islands comprises 15 islands, and an exclusive economic zone of 1.8 million km². The country is home to just under 15,000 people (2011 census), but has experienced significant population decline since 1996, with large numbers of Cook Islanders migrating to New Zealand, Australia and other countries in search of education and employment opportunities. The Cook Islands are self-governing, in an associated state relationship with New Zealand.

Despite limited natural resources, remoteness from major trade and industrial centres, and a diminishing labour force, the Cook Islands is among the best performing Pacific economies with a GDP of around NZD300 million, and GDP per capita of NZD9,308. Tourism is the primary driver of the economy, with approximately 100,000 visitors per annum. Pearl farming, agriculture, fishing, financial services and the registration of ships are other important productive sectors.

The Cook Islands is located south of the equator in an area known for the frequent occurrence of tropical cyclones, and is affected by an average of 16 tropical storms each year. The country has been affected by devastating cyclones multiple times in the last few decades. For example, in 1997 Tropical Cyclones Martin and Pam caused 22 fatalities, 19 of which were on Manihiki Atoll, where wind and storm surge destroyed nearly every building on the island, incurring about USD48 million in losses and crippling the local economy. More recently, in 2010, Tropical Cyclone Pat wrought widespread damage on the island of Aitutaki. The cost of the recovery and reconstruction came to NZD9.5 million.

Additional natural hazards faced by the Cook Islands include flooding, drought, fish poisoning and sea surge, as well as the effects of global warming such as sea-level rise, ocean acidification and coral bleaching; health and natural-resource based hazards such as pandemics and invasive

Project snapshot 2016

Key achievements

- Completion of Southern Group geoportal survey and training/awareness programmes with targeted islands of the country. This survey will ensure increased information during disaster specifically for people with disability and their required needs in times of evacuation. Increased work in 2017 to focus on Northern Islands.
- Support in mainstreaming DRR and CCA with island mayors supporting training to increase their understanding of disaster preparedness, response and recovery.
- First aid training for local Puna's to increase disaster resilience.

alien species; and technological hazards such as aircraft crash, industrial fire and hazardous material spills. According to a recent study there is a 40% chance that in the next 50 years (100 year mean return period) one or more events in a calendar year will cause casualties exceeding 145 people in the Cook Islands².

Climate change and DRM are firmly embedded in the Cook Islands Sustainable Development Plan 2011–2015, and one of the eight priority areas is dedicated to 'resilience'. DRM is governed by the Disaster Risk Management Act (2007) and the Disaster Risk Management Arrangements (2009).

The joint national action plan for disaster risk reduction and climate change adaptation (JNAP) is increasingly seen by sector stakeholders as the main planning document for DRM and climate change adaptation (CCA) in the Cook Islands and is beginning to serve as an important coordination mechanism for programme and funding alignment. A JNAP Programme Management Unit has been established to facilitate joint planning and coordination of the many CCA and DRM programmes happening in the Cook Islands.

Detailed outcomes

R1 - Effective preparedness, response and recovery: responds to the need for national and regional response plans, end-to-end early warning systems (EWS), emergency and evacuation centres, access to safe drinking water to mitigate against drought.

- National Building Code, Building Standards and Regulations under review in direct response to severe damage caused by Tropical Cyclone Pat in Aitutaki in 2010. The contracted firm has started work with timeline for national consultations and submission of final report scheduled for mid-2017 NZD 80,000
- Emergency Warning Sirens maintenance and national awareness including a sire test conducted at the beginning of the tropical cyclone season for national awareness, testing and maintenance. NZD 4,000
- First aid training for local Puna's continued into 2016 with a total of 6 completed including first aid kits and best training response targeting disaster risk management at local levels in partnerships with Red Cross. NZD 12,400
- A database to create individual disaster plans for people with disability across the country has been developed through a detailed survey. This supports improved preparedness and response for the most vulnerable communities across the country and supports easy access to information in times of disaster. NZD 8,360

²Pacific Catastrophe Risk Assessment and Financing Initiative, 2011. ADB/World Bank.

R2 - Strengthened institutional arrangements for DRM and CCA: responds to the need for JNAPs as well as to the integration of DRM and CCA into national and sector strategies, planning and budgetary processes.

- Update national Disaster Risk Management Plan: Technical advisor contracted for review of Cook Islands National Disaster Risk Management Plan and arrangements from 2009 through selected technical advisor after review and evaluation by Emergency Management Cook Islands. This review will now occur in line with country based priorities, lessons learned from recent disasters in line with best-practice models. The Review was completed by December 2016 and submitted to the NDRM Council for approval. This is anticipated to occur in 1st/2nd quarter 2017 NZD 15,000

R3 - Improved knowledge, information, public awareness, training and education: the emphasis is on building awareness of risks and risk exposure through the provision of hazard and risk information through regional and local databases, strengthening human and technical capacity in a range of priority areas, production of knowledge products and related awareness.

- DRM training for all new Mayors: funding support from BSRP for Cook Islands Mayoral meeting. This meeting included DRM related workshop for the newly appointed island mayors including risk issues, DRM plans, capacity development, help to review and revise island plans where necessary and support mayors for mainstreaming of DRM at community level. NZD 24,000
- Joint National Action Plan 2011-2015 updated and printed for distribution, visibility and promotional products printed and shipped (pens with disaster information). This contributes to increased awareness within government and externally on critical DRM/CCA strategies within the country. NZD 10,000
- Northern Islands Group survey/vulnerability mapping undertaken by Emergency Management Cook Islands team shipping transport company engaged and evaluation completed for contract awarding. Procurement and international tendering process for the transport need is one of the major challenges in accessing remote communities where transport is highly difficult. This will fund the Cook Island Police vessel Te Kukupa for deployment and retrieval of survey teams across the entire northern group. NZD 97,000

R5 - Enhanced partnerships in DRM and climate change: responds to the need for an integrated regional strategy for DRM and climate change, strengthening of PIEMA, enhanced hazard risk management, enhanced information management, facilitation of financing and integration of DRR into the work programmes of CROP agencies (Council of Regional Organisations of the Pacific).

- EMCI supported logistics for the Cook Is National DRM and CCA platform to focus on more comprehensive understanding of risk and integration of DRM and climate risk into mainstreamed government agencies. This was discussed as part of training for Cook Islands national representatives NZD 4,000
- To strengthen coordinated emergency management response and best-practice preparedness and disaster response Cook Is Police involved in Pacific Islands Emergency Management Alliance (PIEMA) biennial training, Australian Fire and Emergency Services Authority (AFAC), and Pacific Islands Fire and Emergency Service Authority (PIFESA). NZD 12,000

Looking ahead

- Completion of Building Code
- Renovation of emergency evacuation centres
- Continued support of Puna's in first aid training
- Continued work with women's groups on disaster awareness and understanding necessary technology
- Continued implementation of People with Disability (PWD) database into 2017.
- Development of Strategic Roadmap for Emergency Management for Cook Islands expected
- Completion of GEOPORTAL expected in 2017 with remote northern island survey work to occur in 2017

Success story

Disaster Risk Management human rights approach

As part of the work of the BSRP project, the Cook Islands team has been working to create a detailed map of the needs of People with Disability (PWD) in times of disaster. The aim of the work is to create a Geoportal database that highlights people with disabilities in particular areas and the specific needs required in the case of evacuation before disaster and how best to respond after disaster.

The work has been extensively researched in partnership with the Cook Islands Girl Guides Leaders in partnership with the National Disability Council who were trained to complete the 150 surveys across the country with people with disability to understand their unique needs in times of disaster. The survey was carried out over a 4 month period as part of this volunteer work and the findings input into a GIS mapped Geoportal database to be utilised by the Emergency management teams in country and the local village leaders.

The work is being continued in 2017 with the finalisation of the database and survey work with the Pa Enea Managers to complete the Southern Group of Islands survey work in the coming year.

Once completed the NDMO team will work to increase the understanding of respective emergency management teams in how to access and utilise this information to ensure people with disabilities are provided with the appropriate disaster prevention interventions and responses in times of future hazards.



FEDERATED STATES OF MICRONESIA

Situated in the western Pacific Ocean, the Federated States of Micronesia (FSM) consists of 607 islands and 2.6 million km² of ocean. The country comprises the four separate states of Yap, Chuuk, Pohnpei and Kosrae, with a total population of 106,104 (2013 estimate).

The location of FSM makes the impact of typhoons (tropical cyclones) a prevalent issue. In early 2015 Super Typhoon Maysak struck the country, and many communities are still recovering from the devastation. The typhoon caused 4 deaths and 10 injuries, and many lost their access to food and water. Yap and Chuuk were most directly affected, and there was extensive impact on agriculture with 90% of the banana, breadfruit and taro crops destroyed. The expected damage bill is USD8.5 million.

Formerly a part of the US Trust Territory of the Pacific Islands, FSM entered into a compact of free association with the US when it became independent in 1986. The compact provides for defence and economic assistance from the US as well as for assistance following disasters. The US Agency for International Development (USAID) is the US agency responsible for DRM support to FSM; it implements programmes through the International Organisation for Migration, which has a regional office in Pohnpei.

Project snapshot 2016

Key achievements

- 57 Tsunami evacuation signs installed in Pohnpei
- 3 state EOCs were strengthened to enhance response
- Joint State Action Plan for Disaster Risk Management and Climate Change developed for Pohnpei and Chuuk States
- Emergency communication in outer islands provided with consistent power supply

FSM is prone to natural and man-made hazards, and has had 15 presidential disaster declarations in the past 26 years. Hazards affecting individual states as well as those affecting all of FSM include: coastal erosion, rising sea level, storm surge and tsunami; dam failure; drought; earthquake; epidemic; flood; rain-induced landslide; tropical cyclone; wildfire; and man-made hazards (hazardous material incidents and terrorism).

In 2013 FSM adopted the Nationwide Integrated Disaster Risk Management and Climate Change Policy and the Climate Change Act which mandated the development of the Joint State Action Plans as well as mainstreaming of disaster risk and climate change threats into planning at national and state levels. All four states have since developed their Joint State Action Plans for DRM and CC, which detail activities designed to build resilient communities.

The adoption of the National Disaster Response Plan in 2016 will strengthen the coordination mechanism during response to disasters and ultimately enhance safety.

Detailed outcomes

R1 - Effective preparedness, response and recovery: responds to the need for national and regional response plans, end-to-end early warning systems (EWS), emergency and evacuation centres, access to safe drinking water to mitigate against drought.

- 57 tsunami evacuation installed in key areas on main island Pohnpei to benefit 34,000 people residing in the area. USD 6,720
- Mobile Emergency Operations Centre vehicle procured for Pohnpei: supports rapid response and community engagement on DRR/CCA for Pohnpei for future disaster and awareness in response to national action priorities. USD 42,645
- Mobile Emergency Operations Centre vehicle procured for Chuuk State for rapid response and community awareness. USD 30,250
- Mobile Emergency Operations Centre vehicle procured for Yap State population 11,376. USD 39,665
- Mobile Emergency Operations Centre vehicle procured for National Emergency Operation Centre USD 27,082
- Emergency communications support through installation of solar and deep cycle battery to power HF and VHF radio equipment in outer islands of Chuuk and Yap State to ensure consistent access to disaster information. The logistics of organising a boat and technical from the National Department of Communication delayed the process but project is now completed USD 5,000
- Power supply secured for Pohnpei State Emergency Operations Centre through procurements and installation of standby generator USD 20,000
- Yap State Emergency Operations Centre refurbished to replace timber infested with termites

so it can be used to coordinate disaster risk management activities but materials being delivered delayed from Philippines USD15,693.80

- Emergency Operation Centre managers for Yap and Chuuk recruited on 2 year appointments USD 42,148 and USD 43,000 respectively

Coordinator support

Long-term support to increase disaster risk management understanding and mainstreaming of DRR and CCA across Yap and Chuuk States in FSM. These roles will support implementation at country level of critical work and increase understanding and will then be rolled into the FSM government structure to continue to support this work into the future.

These roles will be embedded into government once the two year contract is delivered and these roles will focus on the delivery of the Joint State Action Plans in Disaster Risk Management and Climate Change Adaptation.

Recruitment of the Yap state EOC Manager for 2 years to better coordinate DRM activities for the 11,376 population of the state	USD42,148
Recruitment of the Chuuk State EOC Coordinator for 2 years to better coordinate DRM activities to benefit the 48,654 population of the state	USD43,000

R2 - Strengthened institutional arrangements for DRM and CCA: responds to the need for JNAPs as well as to the integration of DRM and CCA into national and sector strategies, planning and budgetary processes.

- Joint state action plans developed in line with country priorities for Chuuk and Pohnpei, developed and endorsed
- Supported Pohnpei State government to establish a Fire and Emergency Service Division to support delivery of disaster risk management
- 4th FSM National Platform and 5th FSM Environment Summit convened and supported by BSRP project to consolidate mainstreaming and enhance safety and resilience

R3 - Improved knowledge, information, public awareness, training and education: the emphasis is on building awareness of risks and risk exposure through the provision of hazard and risk information through regional and local databases, strengthening human and technical capacity in a range of priority areas, production of knowledge products and related awareness.

- Increased awareness of disaster across all 4 states through International Day for Disaster Reduction focused on reducing vulnerability for communities USD 30,000
- Publication of typhoon information brochure in the FSM telecom telephone directory with relevant information required USD 3,000
- Emergency Operation Centre training conducted at Kosrae and Pohnpei for 22 (USD 19,064) and 25 (USD 12,725) participants respectively
- Post disaster needs assessment (PDNA) training for 46 participants from 4 states representing the infrastructure, social and productive sectors USD 79,414

R4 - Improved understanding of natural hazards and the reduction of underlying risks: addresses gaps in baseline scientific, technical, social and economic understanding of hazard impact and addresses underlying risks created by changing social, economic and environmental conditions and resources.

- Community climate change adaptation programme to increase water storage capacity through construction of an additional water reservoir at Pehleng community Pohnpei state to benefit 2,215 people in the community USD 23,000
- Spatial data framework developed to strengthened collection, storage, management and access of data across states during calamities USD17.900
- Construction materials purchased to establish nursery site in Nimpal community, Yap State for improving food security. USD 11,000

Looking ahead

- Finalisation and adoption of spatial data framework
- International Disaster Reduction Day 2018 celebrated in all 4 states to create awareness of disasters and how impacts can be reduced

Success story

Joint State Action Plan for DRM and Climate Change for all 4 states developed

The impact of disasters and climate change is a reality for the region. The Federated States of Micronesia is currently experiencing a crippling drought that is threatening the small atolls within the 4states and communities are feeling the real impact on their food, water, coastline and environment.

In response, the national leadership had proactively attempt to identify ways to reduce the impact on its people by developing the Joint State Action Plan on Disaster Risk Management and Climate Change with support from the European Union funded and Pacific Community (SPC) implemented Building Safety and Resilience in the Pacific (BSRP) project.

Extensive consultations in all 4 states include representatives of government departments, community leaders, Non-Government Organisations, women groups, youth groups, people with disabilities and private sector.

Informed by these consultations all 4 states had developed their Joint State Action Plan and is envisaged to be implemented in the next four years and to be reviewed to ensure it continues to be relevant to changing impacts of climate change.



FIJI ISLANDS

A total of 333 islands make up the archipelago of the Fiji Islands, with a land area of 18,270 km² spread over 1,281,122 km² of exclusion economic zone. The country has a population of 858,038 (2014 estimate). Fiji has one of the most developed economies in the Pacific, with diverse forestry, fishing and agriculture sectors, and significant contributions from mining and tourism.

Fiji is exposed to both hydro-meteorological and geotechnical hazards. The country is in the cyclone region, averaging three events every two years with a severe event (category 3–4 cyclone) every three to four years. Indications to 2050 are for an increase in severe cyclone systems though the number per year may not vary. Rising sea level, extreme precipitation, storm surges and thunderstorms have caused devastating flood damage in recent years. About every 5 years, an El Niño southern oscillation (ENSO) event occurs and can result in severe droughts; an ENSO state was declared in the region in 2015.

Climate change impacts and disasters are felt nationwide, from the interior of the high islands to the maritime islands fringing the main islands. Heavy erosion, landslides and sediment transportation from the hills appear as damaging sedimentation in the coastal waters and reefs. Subsistence and cash crop farmers are being increasingly affected by floods and soil losses, while coastal dwellers are being affected by coastal erosion and losses in biodiversity.

31 per cent of the national population was classified as being poor³ in 2008/09, down from 35 per cent in 2002/03. While poverty in urban areas dropped dramatically from 28 to 18 per cent (a reduction of 34 per cent) over this period, poverty in rural areas increased by 6 per cent from 40 to 43 per cent. Moreover, children are disproportionately affected by poverty, with half of all families with two or more children living in poverty.

Disaster Risk Management is governed by the 1998 Natural Disaster Act which articulates the institutional arrangements from national, divisional and district level. Recent adoption of international and regional guidance instruments such as the World Humanitarian System, Sendai Framework for DRR and Framework for Resilient Development in the Pacific warrants the review of the Act.

³Children in Fiji: 2011 An Atlas of Social Indicators, UNICED (2011)

Project snapshot 2016

Key achievements

- Refurbishment of Emergency Operation Centres in Nadi and Lautoka to increase coordination and management before, during and after disaster. This supports approx. 320,000 people.
- Relocation of the Tukuraki Community almost completed with expected final work to be completed in early 2017 and community move in.
- Procurement of water tank that has alleviated water problems in Western division as a result of previous dry weather conditions.
- Conduct of Lessons Learnt Workshop to understand recommendations from all key stakeholders on disaster risk management for major disasters into the future.

Detailed outcomes

R1 - Effective preparedness, response and recovery: responds to the need for national and regional response plans, end-to-end early warning systems (EWS), emergency and evacuation centres, access to safe drinking water to mitigate against drought.

- Drought alleviation during dry periods caused by El Nino weather conditions for longer term management. 250 water tanks purchased and in the process of being installed for the Western, Northern, Central and Eastern Divisions. FJD 374,553
- Strengthened emergency operations support through refurbishment of Nausori, Lautoka and Nadi EOCs to ensure emergency communications systems could connect with national communications systems in times of need. Better coordination and management at both national and district level for Nausori (FJD 27,595) Nadi (FJD 49,750) and Lautoka (FJD 42,486).
- Village relocation due to ongoing disaster threat and damage. Tukuraki Community relocation process began with the construction of 10 new cyclone resistant homes and includes an evacuation centre for more than 100 people in the new community once completed. Currently the community resides in temporary houses and during bad weather takes shelter in a cave that is 15 minute drive away from the new community location. The final retaining wall and drainage will be completed in early 2017 and the community will move once finalised. FJD 600,000
- Financial process for procurement of emergency vehicle for Fiji NDMO to be used as transport for community awareness and as a mobile emergency operations centre. Procurement completed awaiting delivery of vehicle and handover in early 2017. FJD 90,000
- Lessons Learned from Cyclone Pam detailed work across the country including all divisions and national level to understand the challenges, what went well and how response to disaster can be improved and more coordinated into the future. Final cabinet paper to be finalised and endorsed in early 2017 with documentary outlining the work FJD 73,000

R2 - Strengthened institutional arrangements for DRM and CCA: responds to the need for JNAPs as well as to the integration of DRM and CCA into national and sector strategies, planning and budgetary processes.

- Pacific Islands Emergency Management Alliance learning tour to Indonesia to study management of disaster, possibility of customising it to Fiji and proposal to make NDMO a statutory authority. FJD 25,000
- Advertising and selection of a firm to review of DRM Act and Plan was completed in 2016. Endorsement by the Fiji Government for this work is expected in early 2017 with review to occur in 2017.

R3 - Improved knowledge, information, public awareness, training and education: the emphasis is on building awareness of risks and risk exposure through the provision of hazard and risk information through regional and local databases, strengthening human and technical capacity in a range of priority areas, production of knowledge products and related awareness.

- Engagement of in country coordinator for delivery of project has increased the speed of delivery and overcome challenges in regards to procurement and finance. FJD 90,000
- Server storage capacity for critical baseline community vulnerability assessments procured for National Disaster Management Office for the Integrated Vulnerability Assessment (IVA) data being collected as part of the project. FJD 33,250
- Development of documentary outlining the lessons learned from Cyclone Pam to support cabinet paper, documentary on Tukuraki community relocation in the process of completion and editing expected early 2017.
- Redesign of disaster awareness materials with key partners UNICEF and Ministry of Education led by the NDMO communications team and SPC support. New campaign in line with tested understanding of messages post Cyclone Winston and the need for increased disaster messaging in line with the expected audience.
- Engagement of team to deliver an Integrated Marketing and Communications campaign once completion of new messages in line with testing is completed for 2017 disaster season.

R4 - Improved understanding of natural hazards and the reduction of underlying risks: addresses gaps in baseline scientific, technical, social and economic understanding of hazard impact and addresses underlying risks created by changing social, economic and environmental conditions and resources.

- Community vulnerability mapped by engagement of technical advisor to support field officers in establishing open source cloud based database to store and update detailed IVA assessments of communities to report on all social, economic, risk, hazard vulnerability on climate change and DRR.
- Conduct Integrated Vulnerability Assessment (IVA) for 3 provinces, Cakaudrove, Bua, Macuata. Once the assessments are compiled the information will be shared among stakeholders to assist them in prioritising projects related to Climate Change(CC) and Disaster Risk Reduction (DRR).

R5 - Enhanced partnerships in DRM and climate change: responds to the need for an integrated regional strategy for DRM and climate change, strengthening of PIEMA, enhanced hazard risk management, enhanced information management, facilitation of financing and integration of DRR into the work programmes of CROP agencies (Council of Regional Organisations of the Pacific).

- Development of baseline tested disaster awareness campaign in progress led by NDMO in partnership with SPC, UNICEF and Ministry of Health in line with tested messaging and understanding post Cyclone Winston.

Looking ahead

- Completion of Tukuraki village relocation and official opening of new community expected by July 2017
- Review of National Disaster Management Act and Plan
- Refurbishment of Emergency Operations Centre for Northern and Eastern Divisions.
- Continued development of Integrated Vulnerability Assessment (IVA) tool to ensure increased understanding of community disaster risk and strategic development

Success story Tukuraki

Total project cost: FJD \$600,000

The community of Tukuraki was devastated in 2012 when a landslide occurred in the highlands of the Ba district of Fiji. The landslide killed a family of four including two small children and left the community without homes as the land was deemed too unstable to allow them to continue to live at the site.

The families moved to a makeshift community and were then hit by Cyclone Evan only 10 months after the landslide had destroyed their homes. The community took shelter in a nearby cave to protect themselves from the cyclone. The communities risk to cyclones became a reality again in 2016 when Cyclone Winston skirted around their makeshift homes again causing widespread damage.

As a result of this communities' exposure to hazards such as these the Fiji Government, in partnership with the BSRP project, deemed it a priority to support an immediate relocation to a safe site. The new community of Tukuraki is now almost complete with final work to be completed by July 2017 providing an evacuation centre, 10 homes for the community of 100 and a sanitation block. This work has received widespread coverage and interest with a front-page story in the Fiji Times and an investigative piece by the Australian Broadcasting Corporation (ABC) in September.

Fiji relocates villages vulnerable to natural disasters as part of Cyclone Winston rebuild



PHOTO: Tukuraki Village seen swamped under dirt after a landslide. (Supplied: Janet Lotawa)

As Fiji continues to rebuild after Cyclone Winston devastated large parts of the country in February, entire villages are being relocated because of their vulnerability to natural disasters.

Forty-six communities have been marked for

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RELATED STORY: [In pictures: Tropical Cyclone Winston leaves trail of destruction in Fiji](#)

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http://www.abc.net.au/news/2016-09-09/fiji-relocates-villages-as-part-of-cyclone-winston-rebuild/7831630?_sm_au_=iDVdss0ZrQVfBV4Q



KIRIBATI

Kiribati is made up of 33 islands, divided among three island groups, with a total population of 103,500 (2013 estimate). The capital on Tarawa atoll has 47% of the population. With an average of 8,000 people per km², these islands are amongst the most densely populated areas on earth. Only 18% of the population is permanently employed. A household census of Betio and Bairiki villages in November 2009 found that per capita income for 70% of the residents was less than USD1.75/day.

Worldwide, Kiribati is well known for its vocal stance against climate change. A sea-level rise of more than 7.5 cm since 1990 is slowly affecting the country's landmass. The government has already purchased land in Fiji for residents who may be forced to leave due to the impacts of climate change.

Many of the risks to which Kiribati is exposed are related to climate change, including coastal erosion, inundation, increased salinization, inadequate water supplies and waste disposal. The social and economic ramifications of these and many other hazards are multiplied when overlaid with the high levels of vulnerability of people due to the lack of infrastructure, low human development indicators, and high population growth rate.

Early in 2015, Tropical Cyclone Pam caused extensive damage to parts of the country. The cyclone reached category 5 status on 12 March, and struck the low-lying atolls of Kiribati on 13 March as winds peaked at 250 km/h accompanied by destructive waves and floods. A preliminary damage assessment done by the Kiribati Government found the southernmost islands of the Gilbert group (Tamana and Arorae) to be the most affected by the cyclone. BSRP is working with the Kiribati Agriculture Department to undertake assessments of damage caused to the agriculture sector and to provide disaster relief for the agriculture sector on the most affected islands.

Project snapshot 2016

Key achievements

- Coordinator engaged for project in Kiribati in mid-2016 ensuring HR gap at Disaster Management Office was supported with critical focus on project delivery and implementation.
- Printing of revised curriculum integrating sustainable development and CCA/DRM concepts as determined by Kiribati National Expert Group. Year 2 and Year 3 students targeted in line with existing educational frameworks and supported by Kiribati Ministry of Education.
- Development of GIS mapped land zoning to encourage safer development and understanding of safer residential areas for communities of Tarawa. Training attachments with Geoscience GIS Unit and field work in Tarawa and Kiritimati on data collection also supported this work.

Detailed outcomes

R1 - Effective preparedness, response and recovery: responds to the need for national and regional response plans, end-to-end early warning systems (EWS), emergency and evacuation centres, access to safe drinking water to mitigate against drought.

- Emergency communication capacity significantly increased between Abaiang Health Centre and islets of Ribono and Nuotea with procurement and installation of 3 HF radio sets enabling emergency communications between the islets and main Health Centre on Abaiang AUD 14,500
- Mobile emergency operations centre for the DMO team to assist in boosted response and coordination in times of disaster with procurement of vehicle equipped with necessary communications infrastructure and signage. AUD 49,500

R2 - Strengthened institutional arrangements for DRM and CCA: responds to the need for JNAPs as well as to the integration of DRM and CCA into national and sector strategies, planning and budgetary processes.

- Coordinator engaged for project in Kiribati in mid-2016 ensuring HR gap at Disaster Management Office was supported with critical focus on project delivery and implementation. AUD 34,000 ongoing for 2 years.
- Local community disaster risk management capacity development developed with signing of workplan by OB/DMO and Ministry of Internal Affairs for collaboration with BSRP to establish Island Disaster Councils for all islands in Kiribati. AUD 175,000

R3 - Improved knowledge, information, public awareness, training and education: the emphasis is on building awareness of risks and risk exposure through the provision of hazard and risk information through regional and local databases, strengthening human and technical capacity in a range of priority areas, production of knowledge products and related awareness.

- Disaster risk management for children and schools through partnership with Ministry of Education for printing of revised curriculum integrating sustainable development and CCA/DRM concepts as reviewed by the Kiribati National Expert Group on DRM and Climate change. Year 2 and Year 3 students targeted in line with existing educational frameworks and supported by Kiribati Ministry of Education. FJD 42,000
- Sustainable education of children in DRM through supporting Kiribati Teachers College to conduct training workshops with teachers on Tarawa and Kiritimati in climate change and hazard risk in line with updated curriculum and through a group learning experience with technical support by Kiribati Teachers College. AUD 10,000

R4 - Improved understanding of natural hazards and the reduction of underlying risks: addresses gaps in baseline scientific, technical, social and economic understanding of hazard impact and addresses underlying risks created by changing social, economic and environmental conditions and resources.

- Scientific development of GIS mapped land zoning to ensure safer sustainable development and understanding of safer residential areas for communities of Tarawa. Training attachments with Geoscience GIS Unit and field work in Tarawa and Kiritimati on data collection also supported this work in line with both effective DRR tools and CCA. AUD 25,000

Looking ahead

- Roll out of Disaster Committee establishment for all Kiribati Islands
- Legislative reviews including Review of the National DRM Plan and Health Quarantine Ordinances and development and approval of a National Marine Oil spill plan
- Refurbishment and upgrade of the Cassidy Airport MET observing centre on Kiritimati Island completed.

Success story

Name of person/s and organisations involved	Improved emergency communications at local level for Abaiang.
Details of the story – explain why this is important.	HF radios to link communications between the surrounding islets of Abaiang (Nuotea and Ribono) with the Abaiang Health Centre
Key outcomes achieved.	Better emergency communications at local Island level
How this is supported by BSRP project	Funding for procurement of HF radios
What does this mean for the project in the future	Contributes to the larger Whole of Island approach multi donor effort on Abaiang
Contact details of people involved in story. Email and phone numbers.	Tebikau Noran – Min of Health (tnoran@gmail.com)



REPUBLIC OF THE MARSHALL ISLANDS

The Republic of the Marshall Islands (RMI) is in the northern Pacific and consists of 29 low-lying coral atolls with 1,156 individual islands and islets. The Marshall Islands became a republic in 1986. The country has a population of approximately 72,000 people (2015) with 30,000 living in Majuro, the country's capital.

The Marshall Islands' hazards and vulnerabilities are linked to both physical and social characteristics of its islands and people, in addition to ongoing unsustainable development practices. Key drivers of the country's vulnerability include rapid population growth and over-population in urban centres; environmental degradation and unsustainable development; localised pollution including contamination of water supply and waste management issues; climate change impacts including sea-level rise; limited resources (food, water and fuel); and limited economic potential due to its size and location.

The country's national strategic development plan, Vision 2018 (produced by the RMI Government in 2001), provides an overarching framework for sustainable development. Containing 10 sustainable development goals, Vision 2018 contains strong links to DRM and climate change.

The country's JNAP was developed in 2013 for 2014–2018. The JNAP links in with existing strategies, both national and donor led, as well as linking strongly with the National Climate Change Policy which was endorsed in 2011.

Project snapshot 2016

Key achievements

- Installation of 217 water tanks on outer islands to support future drought resilience in remote areas
- Support for Post Disaster Needs Assessment report for drought across the country and future DRR/CCA strategies to reduce impact
- Installation of 22 water tanks at Arno Island for victims of the 2014 sea inundation

Detailed outcomes

R1 - Effective preparedness, response and recovery: responds to the need for national and regional response plans, end-to-end early warning systems (EWS), emergency and evacuation centres, access to safe drinking water to mitigate against drought.

- Drought resilience for future drought conditions due to installation and monitoring of 217 water tanks to households on the outer islands impacted by 2013 drought intended to benefit 6000 people with training of local community in maintenance and installation also conducted and monitoring to ensure tanks installed effectively. USD 20,000
- 22 water tanks procured for Arno Rearlaplap due to inundation by seawater into ground water table in 2014 as future disaster resilience measure. USD 34,723
- Critical post disaster needs assessment post drought in RMI conducted and supported by BSRP team through a detailed scoping mission. PDNA expected to be released in early 2017 outlining key priorities for future DRR and CCA strategies backed by clear, applied scientific methodology. USD 6,000

R2 - Strengthened institutional arrangements for DRM and CCA: responds to the need for JNAPs as well as to the integration of DRM and CCA into national and sector strategies, planning and budgetary processes.

- Joint National Action Plan continued support for coordination to be funded to support in country based priority focus with the expectation this staff coordination will be absorbed into government in the coming 2 years as an ongoing position. USD 36,900
- Disaster Risk Management Plan reviewed to incorporate key learnings from 2013 and 2016 drought and to imbed the FRDP framework focused on increased priority based DRR and CCA for resilience of 53,158 people residing in RMI. USD 25,000

R3 - Improved knowledge, information, public awareness, training and education: the emphasis is on building awareness of risks and risk exposure through the provision of hazard and risk information through regional and local databases, strengthening human and technical capacity in a range of priority areas, production of knowledge products and related awareness.

- Support JNAP Coordinator in attending the Community Based Disaster Risk Reduction (CBDRR) training at Palau. To increase long-term support for DRR and support mainstreaming across government and community.

Looking ahead

The Marshall Islands portion of the project is advanced in terms of expenditure of allocation. As a result the coming year will be focused on ensuring DRR/CCA support to increase mainstreaming across government and working to ensure the work is generating expected outcomes through monitoring and evaluation.



NAURU

The coral island atoll of Nauru has a population of 14,000 people and sits very close to the equator in the eastern Pacific Ocean. The country has a 20 km² land area with an exclusive economic zone of 308,502 km². Nauru's economy is based primarily on phosphate mining, but the global economic crisis seriously impacted this industry in 2009. The country is now heavily dependent upon the sale of fishing licences and foreign aid from countries like Australia.

In terms of hazard risk, Nauru's position close to the equator means it is outside the area of frequent occurrence of cyclones. It is also within a very quiet area for seismic activity with a very small chance of earthquake impacts in the next 50 years. Nauru's country risk profile by the World Bank found that "Nauru is expected to incur, on average, less than 2 thousand USD per year in losses due to earthquakes and tropical cyclones. In the next 50 years, Nauru has a 50% chance of experiencing no economic losses and no casualties, and a 10% chance of experiencing a loss exceeding 0.2 million USD and no casualties."⁴

However, the impacts of climate variability, sea-level rise and warming, drought conditions during El Niño and out-of-season torrential rains during La Niña are increasing. Rising sea levels are causing coastal erosion and salinity of groundwater. Long droughts are affecting fruit trees, coconut and breadfruit trees leading to low yields. Sedimentation and sea warming are badly affecting the health of corals and leading to losses in biodiversity. Mining activities on 70% of the island severely restrict agricultural activities. Land tenure is also sensitive and contentious. The country is becoming heavily reliant on importation of food to supply its population.

In recent years the Nauru Government enacted DRM legislation and drafted a national DRM plan. The DRM Act stipulates DRM to encompass natural, manmade and technological hazards.

⁴Country Risk Profile. 2011.

World Bank. <http://documents.worldbank.org/curated/en/2015/05/24560951/nauru-country-risk-profile>

Project snapshot 2016

Key achievements

- Building design for the first ever national emergency service building completed with construction to begin in 2017. This will house all key emergency response agencies, the weather officer and the national disaster management team.
- National Disaster Act reviewed

Detailed outcomes

R1 - Effective preparedness, response and recovery: responds to the need for national and regional response plans, end-to-end early warning systems (EWS), emergency and evacuation centres, access to safe drinking water to mitigate against drought.

- Nauru National Emergency Service building design including Weather Office, NEOC and NES HQ to coordinate all DRM activities across the country completed. AUD 120,000 This a huge achievement for the country as this particular activity was challenging in 2015 due to the creation of the national emergency services only being a new department last year.

R2 - Strengthened institutional arrangements for DRM and CCA: responds to the need for JNAPs as well as to the integration of DRM and CCA into national and sector strategies, planning and budgetary processes.

- National Disaster Management Act reviewed and adopted in Parliament to incorporate creation of National Emergency Service which is the new Ministry responsible for the coordination of DRM in Nauru which had previously not existed before 2016. AUD 10,000

R3 - Improved knowledge, information, public awareness, training and education: the emphasis is on building awareness of risks and risk exposure through the provision of hazard and risk information through regional and local databases, strengthening human and technical capacity in a range of priority areas, production of knowledge products and related awareness.

- Support two NES officers attending the Emergency Operation Centre (EOC) training at Kosrae with FSM participants. This training is designed to increase skills in managing and organising an EOC prior to activation and coordination during activation AUD 6,000

Looking ahead

- Building of new Emergency Services Complex underway and increased support for communications.

Success story

Revised National Disaster Management Act 2016 enacted in Parliament

The National Disaster Risk Management Act of 2008 had been tested and proved ineffective in coordinating responses to a few events that had threatened the island nation. The creation of the National Emergency Service by Cabinet necessitate the review of the Act to ensure that the new entity is sound legal standing and can improve coordination of response. The enactment by Parliament is a significant milestone and should realise effective and efficient responses.



NIUE

The world's smallest independent nation, the raised atoll of Niue has a population of 1,190 people (2014 estimate⁵). Niue has approximately 259 km² of land and an EEZ of 390,000 km². The capital is Alofi, which is located on the western side of the island. A total of 14 villages are scattered across the island, and a 64 km circuit road passes through all the villages. Niue's coastline is rocky and rugged, with steep cliffs, caves, deep chasms and blowholes. Niue is also home to one of the world's largest coral reefs.

Niue is a self-governing state in free association with New Zealand. Being a coral atoll, Niue's soils are marginal, and intensive agriculture is difficult due to shallow soil, low nutrient content and poor soil structure. Taro, cassava, sweetpotato and yams are commonly grown, while livestock such as chickens, pigs and a small number of cattle support subsistence livelihoods.

Niue is vulnerable to climate risks such as tropical cyclones and droughts; geological risks such as earthquakes and tsunamis; and human-induced risks such as disease outbreaks and contamination of the water supply. Niue's risk profile is inherently linked to its isolation. Traditional coping strategies have tended to make way for an increased reliance on external support, as New Zealand fulfils its obligations to provide support to Niue in times of disaster. Climate change is likely to exacerbate most of Niue's risks.

Niue has no surface water and relies upon groundwater resources and rain catchments. Groundwater is recharged via rainfall infiltration and rainfall currently exceeds the rate of extraction. However, Niue's porous soil means that the underground freshwater is vulnerable to contamination from both human causes (e.g. agricultural chemicals) and natural sources (e.g. seawater). Waste management is an additional source of risk of contamination.

Inadequate waste management in the livestock sector also poses a threat to water quality. Deforestation poses a risk to the stability of Niue's shallow soils.

⁵2014. Central Intelligence Agency. *World Factbook*.

Project snapshot 2016

Key achievements

- Jointly facilitated one Basic Rescue Course with NZ Fire Service & PIEMA. 15 Officers trained from Police, Fire and Support Services. This is the first training of its kind in Niue and establishes an Emergency Response Team (ERT) capability
- Disaster coordinator engaged for the NDMO
- Implementation plan for Strategic Roadmap for Emergency Management developed

Detailed outcomes

R1 - Effective preparedness, response and recovery: responds to the need for national and regional response plans, end-to-end early warning systems (EWS), emergency and evacuation centres, access to safe drinking water to mitigate against drought.

- *Jointly facilitated one Basic Rescue Course with NZ Fire Service & PIEMA. 15 Officers trained from Police, Fire and Support Services. This is the first training of its kind in Niue and establishes an Emergency Response Team (ERT) capability. NZD \$5,000*

R2 - Strengthened institutional arrangements for DRM and CCA: responds to the need for JNAPs as well as to the integration of DRM and CCA into national and sector strategies, planning and budgetary processes.

- *The Disaster Coordinator position was funded in 2016 by BSRP ensuring that Niue had a dedicated focal point for DRM activities in support of the Niue Police Chief. NZD 32,000*

R3 - Improved knowledge, information, public awareness, training and education: the emphasis is on building awareness of risks and risk exposure through the provision of hazard and risk information through regional and local databases, strengthening human and technical capacity in a range of priority areas, production of knowledge products and related awareness.

- Developed the Niue SREM Action Plan to support the implementation of the 2015 Niue SREM framework. NZD 5,000

R5 - Enhanced partnerships in DRM and climate change: responds to the need for an integrated regional strategy for DRM and climate change, strengthening of PIEMA, enhanced hazard risk management, enhanced information management, facilitation of financing and integration of DRR into the work programmes of CROP agencies (Council of Regional Organisations of the Pacific).

- 2 persons attended the 2016 PIEMA Meeting together with the AFAC Conference and Pacific Fire Chiefs Meeting in Brisbane, Australia. NZD 5,000

Training

Basic Rescue Course Niue	June	15	Provide training in basic skills of firefighting, road accident rescue and	KRA 1
Recruit Firefighter Course NZ	May	2	Trains participants in recruit level firefighter training focused on structural fires	KRA 1

Looking ahead

- Construction of NEOC during 2017 is key final project to be implemented in Niue under the BSRP project.



PALAU

The Republic of Palau is a small, independent island nation located in the northern Pacific, and is under a compact of free association with the US. Palau's population is approximately 20,956 (2011 estimate). The country has shown recent economic growth rates of 8%, reflecting increased tourism within the country along with related industries in communications, wholesale and retail trade, and financial intermediation. Tourism is predicted to continue to increase for the coming years.

Hazards that have had the greatest impact on Palau in the past are typhoons (tropical cyclones) and storm surges. Storm surges and the resultant saltwater inundation of taro fields and water tables are a pressing concern and appear to be linked to climate change and sea-level rise. The majority of the population lives along the coast, which is also where most critical infrastructure is located. The main hospital is located very close to the sea, and the causeway connecting it to the mainland is vulnerable to storm surge and/or tsunami. Technological hazards, such as the bridge collapse in 1997 and the fire that gutted the main power plant in 2011, are additional concerns.

In late 2012, Typhoon Bopha struck Palau and affected hundreds of people, destroying 70 homes and displacing 131 people. Soon after in 2013, Super Typhoon Haiyan impacted the islands again, especially the northern-most state of Kayangel, destroying 39 homes and some parts of Babeldaob Island. The impact of these cyclones is still being felt by communities in Palau.

Palau has a national DRM framework developed in 2010 which promotes a multi-hazard approach to managing hazards and vulnerability. Palau consists of 16 states and each state is currently in the process of developing its own DRM plan. Many of the key agencies and sectors have emergency plans in place. Palau does not have a national climate change policy or plan and is relatively unprepared for climate change.

Despite the existence of DRM policies and plans, Palau is relatively poorly prepared for reducing hazard risk and coping with disasters. This is in part due to its historical reliance on the US for disaster response and humanitarian support. Awareness is however growing (particularly at political and operational levels) of the need to invest in preparedness and risk reduction. Recent technological disasters have also helped to improve awareness of the linkages between poorly planned development and hazard risk. Palau is heavily dependent on marine-based tourism and the need to protect this industry is understood.

Project snapshot 2016

Key achievements

- Integrated approach to development of community based disaster resilience framework to determine training of communities across 16 states of Palau. Expected to begin implementation in March with endorsement expected by February 2017.
- Installation of signs at tsunami evacuation safe areas in line with GIS mapped evacuation centres in safe zones across 15 states. Final state of Koror to be implemented in 2017.

Detailed outcomes

R1 - Effective preparedness, response and recovery: responds to the need for national and regional response plans, end-to-end early warning systems (EWS), emergency and evacuation centres, access to safe drinking water to mitigate against drought.

- Emergency communications strengthening with sites located for 2 HF radio repeaters on the Department of Justice tower and installation of 3 VHF transceivers to be completed for outer island states of Kayangel, Peleliu and Angaur in early 2017. These sites will be able to now communicate back to base before, during and after disaster once final installation is completed. Radio also installed on NEMO boat to increase access to these areas in search and rescue and CBDRR work. USD 17,445
- 30 tsunami evacuation zone signs installed at safe areas that are more than 10 meters above sea level. Design, shipping and installation completed with final 25 being installed in Koror State in early 2017 once permit approvals provided by necessary government bodies USD 34,725
- Storage facility on NEMO site for critical disaster response materials completed. Concrete basement and roof for 2 x 20 feet container for storage. USD 38,430

R2 - Strengthened institutional arrangements for DRM and CCA: responds to the need for JNAPs as well as to the integration of DRM and CCA into national and sector strategies, planning and budgetary processes.

- Policy development with review of Disaster Risk Management Framework to incorporate key learnings from Typhoon Bopha and Haiyan to ensure country priorities' responsive to critical needs. USD 40,869
- State Disaster Plans in line with National Disaster Risk Management Framework developed for all 16 states to increase coordination and implementation in line with national DRM plan. State disaster coordinators trained and supported in developing plans with continued work to establish these plans and integrate into the NDRMF in 2017 as part of CBDRM work. USD 40,869

R3 - Improved knowledge, information, public awareness, training and education: the emphasis is on building awareness of risks and risk exposure through the provision of hazard and risk information through regional and local databases, strengthening human and technical capacity in a range of priority areas, production of knowledge products and related awareness.

- A total of 19 School simulation of disaster exercises completed with schools across the country in partnership with the Ministry of Education through the support of the NEMO team trained in more effective disaster management. Increased relationship building with MoE as a result of other work to support drought response in 2015 and 2016 has led to this work now being planned as twice yearly with simulations and assessment of school drills expected to also include private schools during 2017. No budget expenditure.
- Reprinting of 2,000 copies each of the Information, Education and Communication (IEC) brochures for typhoon, tsunami, drought and Marine Advisory which was distributed to all 3,159 students attending elementary and high schools. USD 3,140
- Conduct Community Risk Reduction training to 43 participants with 27(63%) males and 16 (37%) females from the state and national departments. USD 19,957
- Development of the Community Based Disaster Risk Reduction Framework to guide the community vulnerability assessment, development of community DRR Action plans and Community Evacuation Plan to benefit the 17,581 (2012 Census) population. USD 64,000
- Conduct IDM training 19 participants with 5 males and 14 females from the 16 states prior to the review of the state disaster plans USD 12,700

Looking ahead

- •CBDRM implementation once framework endorsed with all 16 states to be trained in disaster risk management, climate change adaptation.
- Development of priority based communications support with communications team in line with potential website, disaster materials and documentaries.
- Monitoring and evaluation of delivery of outcomes.

Success story

Palau schools remain open as drought worsens (story from early 2016) – follow up with documentary

Schools in Palau remained open as the country of Palau faced its worst drought in almost a decade due to the installation of water tanks in schools to combat future drought concerns. The 800 gallon tanks, installed into 5 schools, supplied water during the enforced rationing hours in early 2016 as the water supply to the country was being regularly switched off during this time from 9am until 5pm, covering most of the schooling day.

The European Union (EU) funded the tanks and installation last year in partnership with Palau's National Emergency Management Office (NEMO) as part of the Building Safety and Resilience in the Pacific project implemented by the Pacific Community (SPC).

The Acting Coordinator of the National Emergency Management Office (NEMO) Wayman Towai said reports from the schools once the drought broke provided clear outcomes to ensuring health concerns were managed and schools remained open during this prolonged disaster. "We installed these tanks in 2015 as a way of mitigating future dry weather and within a year the drought had worsened and were critical in keeping schools across the country open without any health concerns, this is critical for our country and shows we can reduce the impact of these predicted weather events," he said.

“MrTowai said the main island has two reservoir for water supply and one was completely empty while the other was struggling to supply water through old water lines for the needs of the communities. He said these water tanks ensured children could continue to access education throughout the drought and has also ensured long-term drought resilience in the future”.

The Minister of Education, Mr. Sinton Soalablai, reported this to the National Emergency Committee (NEC) as it was meeting to discuss the need to declare a state of emergency in the country due to the level of severity this drought has caused to water supply.

“Education is critical for children to continue and without water the risk of sickness and health in schools is very high so these tanks ensure the supply can continue for critical water needs,” he said.

“These tanks are critical for our schools and we are really thankful to be working in partnership with NEMO to ensure the impact of the drought is minimised on school students,” he said.



PAPUA NEW GUINEA

The most populous country in the Pacific region, Papua New Guinea (PNG) has a population of approximately 7.3 million people (2011 estimate), and a total of 600 islands with 462,840 km² of landmass. PNG has more than 820 different languages and is home to one of the most diverse cultures in the world.

The Oceanic nation occupies the eastern half of the island of New Guinea and is located in the 'Pacific Ring of Fire'. The country has high exposure to hazards such as volcanoes, earthquakes, landslides, tsunamis, tropical cyclones, flooding and coastal erosion. PNG ranks in the top six countries for the percentage of population exposed to earthquake hazard and has the highest percentage of population exposed to severe volcanic risk. Landslide hazard is also particularly high in PNG⁶.

PNG suffered some of its worst natural disasters from 1990 to 2000, including the Rabaul volcanic eruptions in 1994, drought impacts of the El Niño in 1997–1998, and the Aitape tsunami in 1998.

In line with this risk, PNG has scaled up its DRM efforts in recent years. A Disaster Management Act was created in 1984 but was not implemented effectively, however renewed focus on this area has resulted in work being directed toward DRM, DRR and CCA. The country's 2050 National Plan aims at attaining sustainable development through DRM and CCA⁷.

⁶Global Facility for Disaster Risk Reduction and Recovery. PNG. (2016). <https://www.gfdr.org/sites/gfdr/files/region/PNG.pdf>

⁷GFDRR. PNG. (2016). <https://www.gfdr.org/sites/gfdr/files/region/PNG.pdf>

Project snapshot 2016

Key achievements

- Landslide Hazard and mapping of highlands highway PHASE II complete with vital data produced and local communities targeted for dissemination of disaster risk messages.
- Database developed to support officials to identify and register People with Disabilities (PWD) to ensure their requirements are understood and responded to during disaster response

Detailed outcomes

R1 - Effective preparedness, response and recovery: responds to the need for national and regional response plans, end-to-end early warning systems (EWS), emergency and evacuation centres, access to safe drinking water to mitigate against drought.

- Innovative development of database for People with Disability (PWDs) to identify and register persons with disabilities to ensure effective disaster response, in line with specific requirements. Pilot work in remote provinces of Pomio District, East New Britain and Kandarian-Glouster District, Bali-vitu, West Nakanai, Mosa and Kimbe Urban LLGs, under Talasia District, West New Province and Sothern Region which includes Central, Milne Bay, Western, Northern (Oro), and Gulf Province, and National Capital District, Central province completed.
- Official launch of this database and training with EU representatives, SPC coordination for BSRP team and widespread media coverage.

R3 - Improved knowledge, information, public awareness, training and education: the emphasis is on building awareness of risks and risk exposure through the provision of hazard and risk information through regional and local databases, strengthening human and technical capacity in a range of priority areas, production of knowledge products and related awareness.

- PNG Red Cross Society mapping plan to undertake traditional DRM knowledge documentation in the Province of Manus as part of a pilot project that will be extended to other Provinces in PNG expected to be implemented in 2017. PGK 54,000
- Training and capacity building coordinated with the Queensland Fire Emergency Services through introduction to and exercises and accredited training in the Australasian Interservice Incident Management Systems (AIIMS). PGK 300,000
- BSRP funded printing of awareness materials in English and Tok Pidgin to be distributed by the National Disaster Centre nationally and at DRM awareness events. 2000 posters each for Tsunami, Landslides, Volcanos and Droughts. PGK 50,000

R4 - Improved understanding of natural hazards and the reduction of underlying risks: addresses gaps in baseline scientific, technical, social and economic understanding of hazard impact and addresses underlying risks created by changing social, economic and environmental conditions and resources.

- Final delivery of Seismic Sensors, accelerometers, data loggers and additional supporting equipment for the Port Moresby Geophysical Observatory. Improved warnings for earthquakes and tremors in portable sensors that can be transported to seismic areas to detect aftershocks. AUD 80,000
- Continuation of work initiated under EDF 9 on landslide hazard mapping of vulnerable areas of the highlands highway, Simbu Province, geotechnical testing and dry season monitoring undertaken as part of phase II and awareness with local communities also carried out.

Addressing landslide hazard risk on important economic transport routes through the highland highways and assisting local communities in hazard risk knowledge along the highway. PGK 198,000

Looking ahead

- Support for the establishment of dedicated NEOC with associated TA support from QFES, wider AFAC, PIFESA and SPC. BSRP will support the contracting of TA to be tasked with preliminary design, initial cost estimates, land acquisition and approval. Actual construction likely to be funded through other donor support. This will go a long way in raising the profile of NDC and boosting their capacity. Technical support by BSRP team, SPC, PIFESA and AFAC.
- Upgrading volcano monitoring instrumentation for the Rabaul Volcano Observatory (RVO)
- Roll out of support to the University of PNG for i) Centre for Disaster Reduction (CDR) of UPNG Assistant Coordinator position support through BSRP ii) Comprehensive Hazard & Risk Management (CHARM) Course Coordinator position support iii) Development of the Graduate Course in Geohazards Management in coordination with UPNG and the Department of Mineral Policy & Geohazards Management (DMPGM)

Success story



Women from Babaka performing at the Official opening of Central province's persons with disabilities survey/data collection training on Monday. The participants were from the four districts of the province – National pic by HELEN TARAWA

Accurate data vital: Solomon

By HELEN TARAWA
 ACCURATE data and statistics for persons with disabilities are important for planning processes, Secretary Community Development and Religion Secretary Anna Solomon says.
 Speaking at the opening of the first Central province persons with disabilities survey/data collection training of trainers workshop at Babaka on Monday, Solomon said: "One of the biggest gaps in the disabilities policies is statistics, data. I cannot use the 15 per cent global estimation; PNG is not like other countries.

"We don't want to use the global measurement, we must do ours and see how many there are."
 "I want to leaders in the country to know how many (people with) disabilities are in their electorate."
 "People with disability have seen that they have rights just like you and me."
 "Now it's the rights-based approach, it's that model where we are looking at where let's just advocate for your rights, you are citizens just like everybody else."
 Solomon said the policy that the Government had delivered last year was related to a rights-based

approach and the vision was to remove barriers and make the rights real.
 "We are now talking about a whole country approach where we start removing those barriers. So every agency in the work that they do there are barriers that they will have to remove when they build the roads, when they build the schools and when they build the hospitals."
 The workshop at Babaka this week is funded by the European Union (Fiji) under its building, safety and resilience pacific project.



Bombeiros team trying out fire jackets donated by the Northern Territory Fire and Rescue Service through existing PIEMA twinning arrangement.

TIMOR-LESTE

Timor-Leste is one of the most populated countries in the BSRP project, with a population of more than 1.2 million people. One of the newest countries in the world, Timor-Leste became independent from Indonesia in May 2002. Its land mass includes the eastern half of the island of Timor, the Oecussi (Ambeno) region on the northwest portion of the island of Timor, and the islands of Palau Atauro and Palau Jaco.

Timor-Leste has 13 administrative districts, namely Aileu, Ainaro, Baucau, Bobonaro, Covalima, Manufahi, Oecussi, Dili, Ermera, Lautem, Liquiça, Manatuto and Viqueque. The country is further subdivided into 65 sub-districts, 442 sucos (villages), and 2,225 aldeias (hamlets)⁸.

In terms of population distribution, the three most populated districts are Díli, Baucau and Ermera which are home to about 43% of the population. Díli district alone has about 234,331 people (an increase of 33.3% since 2004). The three least populated districts are Manatuto,

⁸National Statistics Directorate and United Nations Population Fund, 2011. "Population and Housing Census of Timor Leste, 2010. Volume 2: Population distribution by administrative areas"
Climate Change in the Pacific: Scientific Assessment and New Research. Ch. 2 Climate of Western Tropical Pacific and East Timor (2011). URL: <http://www.pacificclimatechangescience.org/wp-content/uploads/2013/08/Ch.-2.-Climate-of-the-Western-Tropical-Pacific-and-East-Timor.pdf>

Project snapshot 2016

Key achievements

- Ability for the Timor Leste National Disaster Operation Centre to access BMKG's Earthquake and Tsunami warnings. The general public of Dili which is around 200,000 and businesses would be able to access tsunami and earthquake warnings real time which is critical for timely evacuations.

Aileu and Manufahi (with 13% of the population). The average household size is 5.8 and the proportion of the population living in rural areas is about 70.4%.

Timor-Leste's topography is dominated by a massive central mountainous backbone that rises to 3,000 meters and is dissected by deep valleys. On the northern side the mountains extend almost to the coast, but on the southern part the mountains taper off some distance from the coast, which provides areas of coastal plain. Up to 44% of the area has a slope of 40%.

Timor-Leste's climate is affected by the West Pacific monsoon, which is driven by large differences in temperature between the land and the ocean.

According to the Pacific Climate Change Science Program (PCCSP) report⁹, temperatures have warmed in Timor-Leste and will continue to warm with more very hot days in the future. Rainfall data for Dili Airport show a clear decreasing trend in annual and dry season rainfall since 1952, however there are data gaps. Rainfall patterns are projected to change over this century with more extreme rainfall days but little change in drought frequency. By the end of this century projections suggest decreasing numbers of tropical cyclones. Sea level near Timor-Leste has risen and will continue to rise throughout this century. Ocean acidification has been increasing in Timor-Leste's waters, and will continue to increase and threaten coral reef ecosystems.

As with many other countries in the region, Timor-Leste is prone to disasters triggered by natural hazards. The main hazards are hydro-meteorological. Heavy seasonal rain is normally marked by flash flooding and landslides that can destroy fragile road networks, isolate communities and disrupt economic activities. Storms with strong winds occur very frequently and are problematic for the flimsy constructions that characterise the houses of the rural communities. On the other hand, a long dry season can cause drought, provoking wildfires and food scarcity which have affected districts and villages in different parts of the country. However, these recurrent hazards are mostly localised and involve a relatively small number of families per event. Threats from geological hazards also exist, although these are rare events. However, earthquakes and possibly tsunamis are challenges that need to be considered because of the potential they have to cause significant damage.

Detailed outcomes

R1 - Effective preparedness, response and recovery: responds to the need for national and regional response plans, end-to-end early warning systems (EWS), emergency and evacuation centres, access to safe drinking water to mitigate against drought.

- Initial Visit of NDMD-Director, Chief of NDOC and 2 Meteorology Staffs Visited BMKG Indonesia in April 18 – 22, 2016. The visit was expected NDMD National Director and NDOC Chief have ideas on how to facilitate the Early Warning System that will be installed in Timor Leste through the use of technology within Indonesia. Planning and implementation work to continue in 2017

- Training on Early Warning System technology for 15 National Disaster Management Disaster team and NDOC staff including how to analyse information before being disseminated to decision makers and operation of the technical support system including mobile SMS technology. USD 5,000
- Increased technical support through a computer supported to NDOC Early Warning System room to utilize maintain for monitoring of Warning Receiver System for early warning of tsunamis plus Apple computer and update for remote system monitoring and warning receiver systems. USD 99,070
- Room upgrade for National Disaster Operations Centre USD 4,500 completed
- Community consultation for construction of Viqueque and Covalima evacuation centres conducted in March 2016. Key stakeholders and decision makers were involved in to ensure effective planning of the construction in line with evidence-based best practice. Both evacuation centre construction designs were also completed to be built in Municipality of Covalima and Viqueque in 2017. Total cost USD USD 5,766

R2 - Strengthened institutional arrangements for DRM and CCA: responds to the need for JNAPs as well as to the integration of DRM and CCA into national and sector strategies, planning and budgetary processes.

- *MOA between Timor Leste Fire and National Disaster Management Directorate and Northern Territory Fire and Emergency Services (NTFES) signed. As a result of the twinning arrangement, the first donation of 480 fire jackets was received by the Timor Fire Service and it is now used by the Timor Fire Service officers. At a cost of \$500/jacket and pants, the donation costs around AUD240,000. The NTFES also played host to 6 Timor Leste Fire, Civil Protection and National Disaster Management Directorate officials on a learning tour of NT training and support facilities. Challenges Using English for communication can be a barrier as most Timorese speak Portuguese, Bahasa (Indonesian) and Tetum.*
- *Professional development in emergency management with training by Northern Territory Fire Service as part of MoU signed at the start of the year. 5 officers trained in the Northern Territory. USD 4,560*

R3 - Improved knowledge, information, public awareness, training and education: the emphasis is on building awareness of risks and risk exposure through the provision of hazard and risk information through regional and local databases, strengthening human and technical capacity in a range of priority areas, production of knowledge products and related awareness.

- *Internet Capacity for the Timor National Disaster Operation Centre improved to 1Mbps which is equal to 1,000,000 bits of data every second. It enables the National Disaster Operation Centre to accept the data provided by the Indonesian Tsunami Early Warning and Earthquake monitoring systems. Badan Meteorologi, Klimatologi, dan Geofisika's (BMKG) monitoring stations are in the islands near Timor and in the Timor region that is still part of Indonesia. Timor is able to access BMKG Indonesia's seismology and sea level monitoring stations after a government to government meeting in Jakarta in April 2016 facilitated by SPC. In that meeting, BMKG also offered the JISVIEW software free of charge to Timor Leste. The JISVIEW is the key software that enables Timor National Disaster Operation Centre to directly access the data from the BMKG earthquake and tsunami monitoring stations. Challenges: Sometimes the internet drops or slows down and data is not received.*

R4 - Improved understanding of natural hazards and the reduction of underlying risks: addresses gaps in baseline scientific, technical, social and economic understanding of hazard impact and addresses underlying risks created by changing social, economic and environmental conditions and resources.

- Mainstreaming long-term evacuation centres across the country with agreement made with Ministry of Solidarity Social and Municipality Administrator. This work led to a mandated letter from Ministry of Solidarity Social to provide information on disaster management to 12 municipalities to manage emergency response and integrate into the government plan to authorise local government to handle emergency issues and response locally. USD 93,000

Training

Training Name and Country	Date of Training	Number of attendees	Outcomes achieved? Document, strategic plan? How is this measurable?	KRA that this fits with? (Key result area 1-5 of which this has achieved).
Exploration visit to Northern Territory Emergency Service by Timor Leste Fire, Civil Protection and National Disaster Management Directorate officials.	6-8th April, 2016	Six	A good understanding of the operations carried out in the Northern Territory Emergency Management Service and also the technical tools they use. This is important so that some standards can be maintained through the twinning arrangement.	Three

Looking ahead

- Two emergency evacuation centres (municipality Covalima and Viqueque) to be built in 2017.
- Tsunami siren establishment for Early Warning System with NDMD to determine progress for implementation in 2017
- Increased emergency management capacity with continued work with Northern Territory government. Northern Territory Government will Visit to Timor Leste in January 15 – 19 for Capacity Assessment, then Formal Ceremony for Fire Services Uniform handover to the Bombeiros members. First aid training also included.
- NDOC Refurbishment – uniform for NDMD personnel.
- Tsunami exercise test – communications exercise, training on forecast and others. Work with NDMD and NDOC team to provide training after early warning systems established
- Media Training on DRM and Climate Change communication, develop knowledge products for dissemination. Public engagement training and work with NDMD and NDOC team with involved of media in Timor-Leste



SAMOA

Comprised of two large volcanic islands (Upolu and Savai'i) and several smaller islands with a total land area of approximately 2,935 km², Samoa lies in the southwest Pacific with an exclusive economic zone of 120,000 km² of ocean. The population of Samoa is 187,820 (2011 census) with approximately 76% of the population living on Upolu island. The country's capital of Apia is a port city located on Upolu and has a population of 36,000 people. Samoa's main source of income is from agriculture and fisheries followed by tourism and remittances from families overseas. GDP per capita is roughly USD3,000.

Both islands are mountainous and 70% of the population live in low-lying coastal areas. The country is exposed to a number of natural and technological hazards. Some of these hazards are seasonal, such as tropical cyclones, floods and droughts. Others are ever-present threats such as earthquake, volcanic eruption, tsunami, epidemics, industrial hazards and exotic plant or animal diseases. Samoa's country risk profile developed as part of the Pacific Catastrophe Risk Assessment and Financing Initiative indicated that Samoa is expected to incur on average USD10 million per year in losses due to earthquakes and tropical cyclones in the next 50 years. There is a 50% chance that losses of USD130 million and casualties of more than 325 people will be experienced in the next 50 years.

Recently, Samoa has been affected by tropical cyclones, flooding, fires, oil spills and a highly destructive tsunami which devastated the south coast of Upolu in 2009. The latter catastrophe affected more than 5,000 people with a death toll of 143 and the total cost of damage and losses, at USD124 million, was equivalent to more than 22% of Samoa's GDP. Eight people lost their lives during Cyclone Ofa (1990), with 195,000 people affected and the cost to the economy

Project snapshot 2016

Key achievements

- Finalisation of designs for the SAR Facility and NEOC facility
- Signing of the Twinning Arrangements MOU between MFB, SFESA and DMO
- Review and revision of the National Disaster Management Plan, the DRM National Action Plan, recommendations for updating the Disaster and Emergency Management Act and preparation of a guideline document to enable CCA/DRM to be mainstreamed into sector planning development

USD200 million. Thirteen people lost their lives during Cyclone Val (1991), 88,000 people were affected, and the cost was USD278 million. In 2012, Tropical Cyclone Evan made landfall resulting in the loss of 12 lives, the destruction of 700 houses and damage to almost 1,000. The total cost of damage and loss following Evan was estimated to be USD203.9 million. These tropical cyclones and the 2009 tsunami emphasise Samoa's vulnerability as a small island state with a concentration of settlements and infrastructure in the coastal zone.

Apart from the hazards mentioned above, Samoa is also dealing with climate change and sea-level rise, environmental degradation, pollution, coastal erosion, water quality and resource management. All are important environmental issues which if not managed properly will increase disaster risks in Samoa.

Detailed outcomes

R1 - Effective preparedness, response and recovery: responds to the need for national and regional response plans, end-to-end early warning systems (EWS), emergency and evacuation centres, access to safe drinking water to mitigate against drought.

Key Result Area 1 – “Effective preparedness, response and recovery”

- National Emergency Operations Centre (NEOC) and office equipment. Kramer Ausenco have been contracted to carry out the design and construction supervision for the NEOC and the search and rescue training facility. The technical specifications of the NEOC and the Works Bidding document for its construction have been submitted and approved.
- 5 Desktops, 1 Toughbook for field work and 2 hard drives have been purchased for the current NEOC.
- A review of the Emergency Radio Network (ERN) was completed in 2015. An assessment of the findings from that review was carried out in 2016 to determine equipment and upgrades required to address the challenges identified through the review. A contract has been signed with MCS Digital to cover all costs related to switching the system to a linked capacity, plus mode of operating which will improve user accessibility to, and functionality of, the ERN and additional repeater sites will be erected to provide redundancy for the Network thereby making it more resilient.
- Strengthen the emergency alliance between the DMO, Fire Service and Police through capacity building in search and rescue and multi-agency simulations. Designs have been prepared for the Search and Rescue (SaR) Training Facility at Faleata Fire Station compound and documents prepared to tender for construction companies to bid for the work. This activity will enable SaR training to be undertaken in-country at a built for purpose facility.

R2 - Strengthened institutional arrangements for DRM and CCA: responds to the need for JNAPs as well as to the integration of DRM and CCA into national and sector strategies, planning and budgetary processes.

- Strengthened institutional arrangements for Disaster Risk Management. Review and revision of the National Disaster Management Plan and development of DRM/CCA guideline for sector based plans. This also includes review to strengthen disaster risk reduction through the DEM Act and existing safeguards in other legislation including political advocacy for recognising the economic value of disaster risk reduction. This will be done in a participatory manner through multi-stakeholder consultations, review and update of National Disaster Management Act and NDMO Action Plan and modification of Disaster and Emergency Management Act including 14 sector plans for mainstreaming. This is linked directly to the Samoa Development Strategy.

R3 - Improved knowledge, information, public awareness, training and education: the emphasis is on building awareness of risks and risk exposure through the provision of hazard and risk information through regional and local databases, strengthening human and technical capacity in a range of priority areas, production of knowledge products and related awareness.

- Conduct training programs to increase knowledge and skills of DRR and response management. Samoa adopted the Post Disaster Needs Assessment (PDNA) methodology as its preferred way of calculating the cost of disasters and defining recovery strategies. To allow the Government of Samoa to effectively lead future PDNAs it is necessary to build capacity through the provision of training on the PDNA methodology to key personnel. In 2014, the Government of Samoa requested SPC's support to facilitate a multi-sector training in the PDNA methodology. In 2015, the same support was requested to provide training specifically for representatives of the Tourism sector. The training conducted in 2016 continues this sector-based focus by providing training to representatives of the Ministry of Agriculture and Fisheries (MAF). During previous PDNAs in Samoa, MAF did not use a standardised assessment form to collect data on the effects of a disaster. This was acknowledged to be a shortcoming and one that could be addressed through the PDNA training, in order to improve the quality and consistency of initial damage data collected following future disasters in Samoa. 30 participants were involved in this training.

R4 - Improved understanding of natural hazards and the reduction of underlying risks: addresses gaps in baseline scientific, technical, social and economic understanding of hazard impact and addresses underlying risks created by changing social, economic and environmental conditions and resources.

- Mt Vaea hazard assessment conducted including 156 participants to assess the potential hazards and risks that are currently present for communities and disaster reduction strategies for future hazards/disasters. This consultative process included gaining evidence from communities on their past experiences and historical accounts of previous disasters in the area and utilising this data along with other mapping and modelling data to create site specific risk assessments and provide training to staff on risk assessments for Mt Vaea area. Mt Vaea is utilised for residential development, recreation and provision of communication services. The terrain, geological conditions and hydro-meteorological conditions combine to create an area that is prone to hazards.

R5 - Enhanced partnerships in DRM and climate change: responds to the need for an integrated regional strategy for DRM and climate change, strengthening of PIEMA, enhanced hazard risk management, enhanced information management, facilitation of financing and integration of DRR into the work programmes of CROP agencies (Council of Regional Organisations of the Pacific).

- Attendance at DRM/CC related trainings and conferences. In May 2016 the NDMO Director was supported to attend the World Humanitarian Summit in Istanbul. The purpose of the summit was to generate commitments to reduce suffering and deliver better for people around the globe. In addition, representatives of NDMO and the Samoa Fire Service were supported to attend the PIEMA, PIFESA and AFAC meetings in Brisbane and the NDMO identified a representative to attend the Pacific Resilience Week. A senior representative of the Samoa Fire Service undertook a visit to fire fighting training facilities in Melbourne and Brisbane to inform the design of the SaR Facility.

Looking ahead

- Construction of the NEOC and SAR training facility: The consultants who are currently being contracted will prepare ToRs for the companies that will carry out the construction projects. Contracting for the companies will be the next step.
- A review of the current risk outreach materials prepared by the NDMO will be carried out. Activities will include: identify dates for in-country consultations, prepare training materials, train data collectors, design a system for assessing the data and use this to inform future design of awareness materials.
- In-country fire investigation capacity will be improved. Activities will include: identify a SFESA focal point, arrange and fund training and secondments with Melbourne Fire Authority, support finalisation of the SAR training facility, design suitable SAR training programmes using the new facility.
- Hazard and risk mapping of selected sites will be carried out. Activities will include: liaison between NDMO and GSD specialists to design research and secondment/capacity-building activities to enable critical data to be collected, analysed and applied in terms of high risk sites/communities.
- Upgrading of the ERN to improve data stability and ensure redundancy in the network.
- Review of National Disaster Management Plan, Disaster and Emergency Management Act, 14 sectorial guidelines for DRM/CCA, Action plan for DRM in country being reviewed or developed in consultation process in early 2017. Endorsement and implementation expected to June 2017



SOLOMON ISLANDS

The archipelago of the Solomon Islands is made up of 992 islands of which approximately 300 are populated. The southern Pacific country's land mass is 28,000 km² with an estimated ocean area of more than 1.3 million km². The total population, based on 2015 estimates, is 622,469 and is predominantly Melanesian (94.5%) with around 3% Polynesians along with Micronesian and European/Chinese groups accounting for the remaining 2.5%.

Economically, the country is within the bottom quartile of nations due to a per capita GDP below USD2,000 per annum¹⁰. However, Solomon Islanders enjoy a high degree of subsistence security, are generally not malnourished, and have a life expectancy of 63 years¹¹.

The country is divided into nine provinces: Guadalcanal, Central, Western, Isabel, Malaita, Makira, Temotu, Choiseul and RenBel (Rennel and Bellona Islands). The capital city, Honiara (estimated population 73,000 in 2014), is located on the island of Guadalcanal.

In terms of risk, Solomon Islands is exposed to a wide range of hazards due to being surrounded by ocean and also being located on the 'Pacific Ring of Fire.' Solomon Islands currently has eight active volcanoes, and is also directly at risk of tropical storms, saltwater intrusion, flood events, storm surges, sea-level rise, land erosion, tsunami and earthquakes. Over the past 30 years there have been seven major natural hazard events: two large earthquakes, two tsunamis (in 2007 and 2013) and four tropical cyclones, which have directly impacted well over 100,000 people and caused approximately 170 deaths. In addition, the period of civil unrest in 1998–2003 displaced an estimated 35,000 people, resulted in 200 deaths and had a cost of SBD250million in humanitarian relief and property losses.

¹⁰Gough K. V, Bayliss-Smith, T, Connell, J & Mertz, O (2010) "Small island sustainability in the Pacific: Introduction to the special issue." *Singapore Journal of Tropical Geography*, 31, pp 1–9.

¹¹Gough K. V, Bayliss-Smith, T, Connell, J & Mertz, O (2010) "Small island sustainability in the Pacific: Introduction to the special issue." *Singapore Journal of Tropical Geography*, 31, pp 1–9.

Project snapshot 2016

Key achievements

- Community based disaster risk management committees established in 20 communities identified as being at high risk from flooding in Makira and Isabel provinces. Alert systems will be established in those communities in partnership with the Solomon Islands government and JICA to generate localised early warnings during flood events.
- Simulation exercise to test recently developed guidelines for post-disaster damage assessments. The aim is for initial assessments to be better coordinated and results processed in a timelier manner following disasters. €1,000

There are a number of issues to consider in terms of underlying factors that increase vulnerability. First and foremost is the inequality that exists between men and women in terms of natural resource management, decision-making and the freedom to make choices about their own lives. This inequality limits the extent to which women are consulted and subsequently involved in DRM activities and the extent to which their roles and responsibilities are considered in efforts to build resilience. This resonates with the lack of engagement of young people, a significant omission in a country with over a third of the population under the age of 15. Rapid urbanisation and growing informal squatter settlements have led to a large, highly vulnerable population in Honiara. Informal settlements have limited access to basic services and receive little or no support to improve drainage systems which results in flooding and remains an ongoing challenge. As is the case in other Melanesian countries, the issues of land entitlement continue to pose large and very complicated challenges for Solomon Islands and result in most informal settlements being created in areas that are prone to natural hazards.

Detailed outcomes

R1 - Effective preparedness, response and recovery: responds to the need for national and regional response plans, end-to-end early warning systems (EWS), emergency and evacuation centres, access to safe drinking water to mitigate against drought.

- Procurement of 1 4x4 truck for the NDMO at Honiara. €
- Procurement of 5 provincial EOC Boats €
- Preparatory work for construction of the National Emergency Operations Centre including review of NEOC to be conducted in 2017/2018
- A 'Post-Disaster Assessment Guideline Review' workshop and simulation exercise, co-funded by BSRP and UNOCHA, was carried out in June. The assessment exercise was followed by live trial of the Kobo assessment application tool. Participants experienced asking questions, filling in the form that was in the device and uploading it on the main server (computer) and this was automatically collated and results presented to the exercise participants. It will revolutionise how future disaster data will be collected and analysed in the Solomon Islands; a revised Post-Disaster Assessment Guideline that is standard and can be used by government, NGOs and partners to carry out post disaster assessments. Following the 2016 earthquake and tsunami in Makira Province assessment personnel used the Kobo tool operationally for the first time. The use of the product proved to be very effective and assisted the NDMO and other stakeholders to appreciate the impacts.

R2 - Strengthened institutional arrangements for DRM and CCA: responds to the need for JNAPs as well as to the integration of DRM and CCA into national and sector strategies, planning and budgetary processes.

- Community Based Disaster Risk Management training completed for Makira and Isabel provinces resulting in development of Community Disaster Plans
- Strengthen end-to-end early warning systems for last mile message dissemination and understanding. First workshop carried out to commence review of warning/alert messaging through the media

R3 - Improved knowledge, information, public awareness, training and education: the emphasis is on building awareness of risks and risk exposure through the provision of hazard and risk information through regional and local databases, strengthening human and technical capacity in a range of priority areas, production of knowledge products and related awareness.

- Five Solomon DRM practitioners working with the National Disaster Management Office have completed their post graduate certificate in DRM through distance learning with the Fiji National University.

R4 - Improved understanding of natural hazards and the reduction of underlying risks: addresses gaps in baseline scientific, technical, social and economic understanding of hazard impact and addresses underlying risks created by changing social, economic and environmental conditions and resources.

- Implement small scale infrastructure projects in line with priorities identified through community based risk assessments (Isabel and Makira CBDRM work)

R5 - Enhanced partnerships in DRM and climate change: responds to the need for an integrated regional strategy for DRM and climate change, strengthening of PIEMA, enhanced hazard risk management, enhanced information management, facilitation of financing and integration of DRR into the work programmes of CROP agencies (Council of Regional Organisations of the Pacific).

- Representation at meetings , trainings and conferences (include sponsorship of NDMO Staff to undertake DRM post grad course)

Looking ahead

- Implementation of the NEOC construction to be carried out during 2017/2018
- Continuing roll out of the community-based risk management activities in Makira and Isabel
- Improve risk messaging content and community understanding. Convene focus groups and general public two-way communication to ensure effective content development of messages.

Success Story

Early warning alert system installed at Makira and Isabel Provincial Disaster Offices

A shallow 7.8 magnitude earthquake struck Makira in December 2016 causing wide spread damages to infrastructures and generate tsunami waves. The tsunami waves caused damages along the coastlines but no lives claimed due to timely issuance of warning combined with greater community awareness on safety. The first tsunami alert at Makira was raised through the alert system installed by the Makira Provincial Disaster Office that was installed with funding support from the Building and Safety Resilience in the Pacific project. The Provincial Disaster Office used the alert to coordinate evacuation to higher grounds with the Police and other response agencies.



Tonga

The Kingdom of Tonga is made up of 176 islands with a population of 103,036 people (2011 census) on 36 inhabited islands. The Tonga archipelago has a combined land area of 747 km² and an EEZ of 649 km². Tonga has about 17,500 households, of which 77% are rural.

Tonga is exposed to both hydro-meteorological and geological hazards. It is in the cyclone region, averaging three events every two years with severe (category 3–4) cyclones every three to four years. In recent years two cyclones have had impacts on many of the islands of Tonga, with Cyclone Ian causing widespread damage in January 2014 followed by Cyclone Ula which caused minimal damage in early January 2016.

Increasing sea-level rise, extreme precipitation, storm surges, whirlwinds and thunderstorms are causing record flood damages, landslides in the hilly terrains and coastal erosion. Tonga has active terrestrial volcanoes and a seabed region of high submarine volcanic activity. It was also hit recently by regional tsunamis.

Tonga is a low-income country with remittances from overseas very important to many; 22% live below the national poverty line. During the financial year 2009–2010, remittances declined from 30% of GDP with estimates that the real value has fallen 50% due to inflation. The continuing global economic downturn will further reduce remittances and push more people into hardship and poverty.

Tonga places great importance in integrating disaster risk consideration into sustainable development. The national DRM institutions and their capacity need strengthening. There are weaknesses in the current national emergency management office (NEMO) staffing and organisational structure, resulting in critical shortcomings in NEMO's role to coordinate government and non-government DRM programmes and their implementation.

Project snapshot 2016

Key achievements

- Collaborative efforts with the World Bank PRP Project to finalise contracting of TA to carry out design and supervision on construction for the new purpose built emergency operations centre.

Detailed outcomes

R1 - Effective preparedness, response and recovery: responds to the need for national and regional response plans, end-to-end early warning systems (EWS), emergency and evacuation centres, access to safe drinking water to mitigate against drought.

- CBDRM Workshop held on Island of Va’vau. Officers of the Districts of Va’vau and 39 Town Officers participated with intended outcomes being “development of a process leading to locally owned strategy for preparedness and risk reduction” and development of District Plans which are in final draft. Addressing the need for clear roles for CBDRM actors in Tonga and for coordinating the many CBDRM actors and their different approaches and tools TOP 23,000
- Eua Island CBDRM Workshop held with Town and District Officers and community members meeting and discussing local level preparedness and DRR with development of emergency plans at community level achieved. Addressing the need for clear roles for CBDRM actors in Tonga and for coordinating the many CBDRM actors and their different approaches and tools. TOP 24,000
- *Tender process completed and firm selected for design and supervision of Joint NEMO/MET centre.* A major project that brings together the MET and NEMO offices for better coordinated EWS and national level EM preparedness in a purpose built facility on less vulnerable locations i.e Matakieua. FJD 998,000
- *Site selected and prepared for nursery construction at Veitogo, Tongatapu with the main works being land levelling for the eventual establishment of a nursery at Veitogo for coastal replanting schemes set up.* Establishment of nursery for cultivating appropriate species for coastal replanting as well as food security. TOP 4,000
- *Design works completed for refurbished MET forecasting centre at Fua’amotu International Airport. The MET centre is to be refurbished through BSRP funding in 2017 to be able to remain operational in CAT 5 TC conditions.* More resilient EWS and weather forecasting through refurbished MET facilities. TOP 4,000

R2 - Strengthened institutional arrangements for DRM and CCA: responds to the need for JNAPs as well as to the integration of DRM and CCA into national and sector strategies, planning and budgetary processes.

- *Development of CBDRM Framework through regional TA contracted by BSRP – consultations held across Island groups for framework development and feedback and stakeholder input.* Addressing the need for clear roles for CBDRM actors in Tonga and for coordinating the many CBDRM actors and their different approaches and tools. The TA will draft the actual CBDRM Framework for Tonga and finalise the process for approval. USD 9,000

R3 - Improved knowledge, information, public awareness, training and education: the emphasis is on building awareness of risks and risk exposure through the provision of hazard and risk information through regional and local databases, strengthening human and technical capacity in a range of priority areas, production of knowledge products and related awareness.

- GIS lab establishment through procurement of ICT equipment and refurbishing of office space for network and cabling for set up of. geohazards and disaster information database collation and storage. TOP 67,000

R4 - Improved understanding of natural hazards and the reduction of underlying risks: addresses gaps in baseline scientific, technical, social and economic understanding of hazard impact and addresses underlying risks created by changing social, economic and environmental conditions and resources.

- Reforestation report completed through BSRP supported TA. The report looks at coastal erosion and ways to combat coastal erosion and reduce impacts of rising sea levels and sea spray through appropriate coastal replanting and establishment of nurseries to support coastal replanting and food security. Analysis of coastal vegetation and associated hazard risk as well as resilient communities through recommendations for planting schemes for local communities. TOP 4,000

R5 - Enhanced partnerships in DRM and climate change: responds to the need for an integrated regional strategy for DRM and climate change, strengthening of PIEMA, enhanced hazard risk management, enhanced information management, facilitation of financing and integration of DRR into the work programmes of CROP agencies (Council of Regional Organisations of the Pacific).

- BSRP supported participation of Tonga Fire to attend the PIFESA and AFAC meetings for improved EM coordination and capacity building in this area. Lessons learnt from other Pacific Fire and Emergency services (PIFESA); opportunities for collaborative training and sub-regional cooperation as well maintaining and bettering relations with AFAC. AUD 15,000

Looking ahead

- Successful completion of nurseries on Tongatapu and Haapai as part of support to MAFF for coastal resilience through replanting. Contracting of works and equipment through BSRP support
- Construction of new national joint meteorological and emergency management office.
- CBDRM framework to be in partnership with the Tonga National Council of Churches/Act for Peace Tonga. Endorsed and implementation now continuing in 2017.

Success story

Name of person/s and organisations involved	CBDRM development and stakeholder consultations
Details of the story – explain why this is important.	Addressing the need for clear roles for CBDRM actors in Tonga and for coordinating the many CBDRM actors and their different approaches and tools
Key outcomes achieved.	Improved CBDRM through national coordination mechanism
How this is supported by BSRP project	TA and funding
What does this mean for the project in the future	More CBDRM lesson to learn from regionally
Contact details of people involved in story. Email and phone numbers.	Ana BSRP ICC



TUVALU

The Polynesian island nation of Tuvalu sits half way between Australia and Hawaii in the Pacific Ocean. Tuvalu's 10,837 people (2012 census) are spread across three islands and six atolls. The country has a total land area of 26 km², and the low-lying islands are highly vulnerable to cyclones and tsunamis. The area of Fogafale, on Funafuti, where nearly half of the country's population is concentrated, is on average less than 100 m wide, making it extremely susceptible.

Tuvalu is one of the most vulnerable countries in the world to climate change and rising sea levels. Tuvalu's hazard risk became reality in 2015 when a storm surge hit the country, caused by one of the most intense cyclones in the southern Pacific region in recorded history. Tropical Cyclone Pam forced the declaration of a state of emergency in Tuvalu with 45% of the country's population being displaced.

Tuvalu's economy is small, fragmented and highly vulnerable to external economic influences. This has led to a heavy reliance on outside development assistance and a degree of complacency in fiscal and financial management. The economy is unusual in that a substantial amount of both government revenues and private incomes are generated from overseas. There are very little exports and semi-subsistence farming and fishing are the primary economic activities. Fewer than 1,000 tourists, on average, visit Tuvalu annually.

Tuvalu has developed a comprehensive strategic plan based upon the National Strategy for Sustainable Development 2001–2015, the Climate Change Policy 2012, the National Adaption Plan of Action and the National Disaster Risk Management Plan; these have formed the platform for the development of the Tuvalu National Strategic Plan for Climate Change and Disaster Risk reduction 2012–2016.

Project snapshot 2016

Key achievements

- PIEMA and EM work has been the area receiving most support for Tuvalu BSRP in 2016 including fire truck, hoses and fire drill equipment and emergency communications. National level support benefiting the entire country.

Detailed outcomes

R1 - Effective preparedness, response and recovery: responds to the need for national and regional response plans, end-to-end early warning systems (EWS), emergency and evacuation centres, access to safe drinking water to mitigate against drought.

- *Fire truck procured and delivered through AFAC partner CFA. Domestic fire capacity needs boosting as well as water carrying capacity in an atoll like Funafuti. Aviation standards for receiving international flights needed serious support and this has been achieved. AUD 20,000*
- *Smoke machines procured for fire drills to be used for school drills. FJD 600 support for emergency preparedness for schools*
- *Hose fittings for fire truck procured and delivered. Tuvalu Police and domestic fire and aviation support. FJD 4000*
- *Tuvalu Police HF Radios and NDMO HF radios together with scansuite for the new CFA Fire truck and emergency vehicle procured. Improved emergency response and coordination between Disaster Management Office and Police. FJD 23,000*
- *Mobile Emergency Operationcentre and vehicle procured for NDMO including emergency communications to be outfitted into the vehicle. FJD 50,000*
- *Construction of relief supply storage shelter on Nanumaga Island through the Tuvalu Red Cross Society in collaboration with EU BSRP. Supporting immediate response at island level. This is the second BSRP TRCS shelter. AUD 25,000*

R2 - Strengthened institutional arrangements for DRM and CCA: responds to the need for JNAPs as well as to the integration of DRM and CCA into national and sector strategies, planning and budgetary processes.

- *Procurement of laptops to support DMO capacity and DRM coordination by the Office of the PM. Coordination capacity of the DMO and supporting the Gov of Tuvalu in strengthening the DMO through Govt funded HR support. FJD 8,000*
- ☐ *Establishment of Island Disaster Committees on each of Tuvalu Islands in coordination with Gov of Tuvalu and NAPA 2 joint missions will take place to address areas including property registration/water sanitation stocktake and development planning TK review. Holistic approach to DRM promoted through collaborative efforts with Gov of Tuvalu offices and TUV NAPA 2, opportunity for better coordination with DMO within Govt and Island level. AUD 50,000*

R3 - Improved knowledge, information, public awareness, training and education: the emphasis is on building awareness of risks and risk exposure through the provision of hazard and risk information through regional and local databases, strengthening human and technical capacity in a range of priority areas, production of knowledge products and related awareness.

- ☐ *Workshop supported by BSRP for the Ekalesia Kelisiano Church The workshop will bring 5 reps from the outer islands including the Pastors, Youth Rep, Women Rep, Kaupule Rep and an NGO Rep. The workshop focus on pre and post disaster counselling, disaster preparedness,*

disaster mitigation and response. pre and post disaster counselling, disaster preparedness, disaster mitigation and response at local level focussing on targeted reps from outer islands to be 'DRM champions' in their communities. AUD 22,000

R5 - Enhanced partnerships in DRM and climate change: responds to the need for an integrated regional strategy for DRM and climate change, strengthening of PIEMA, enhanced hazard risk management, enhanced information management, facilitation of financing and integration of DRR into the work programmes of CROP agencies (Council of Regional Organisations of the Pacific).

- Supporting the Government of Tuvalu in its CCA efforts in meeting UNFCCC requirements for INDC (Intended Nationally Determined Contributions) and consultations for emissions reductions. UNFCC Global CCA agreement requirements. USD 10,000

Looking ahead

- Establishment and training of Island Disaster Councils for all Islands of Tuvalu for strengthened DRM at Island level through local authority coordination in areas of preparedness, response and risk reduction. Through DMO Tuvalu travelling to each Island to set up the IDCs with Government of Tuvalu officers and Tuvalu NAPA 2 project who aim to establish Island level CCA bodies with BSRP SPC TA and funding support.
- Upgrade of National Coordination Centre at Police HQ to be accessible, operational, functional and equipped in time of emergency
- Twinning arrangements with CFA of Victoria Australia to be formalised with Tuvalu Police and associated fire operational and safety training to take place

Success story

Name of person/s and organisations involved	Inspector Piliota
Details of the story – explain why this is important.	Procurement of emergency communications (HF radios) to be used in times of emergency and normal operations
Key outcomes achieved.	Improved emergency comms and improved capacity of emergency responders namely Police and NDMO
How this is supported by BSRP project	Procuring equipment and TA support from PIEMA Officer in set up and use for national level exercises in EM
What does this mean for the project in the future	Further funding support in the area of EM is much needed on Funafuti and complementary support through AFAC partners will add value to the equipment procured through BSRP
Contact details of people involved in story. Email and phone numbers.	Piliota Viliamu Superintendent of Operations Tuvalu Police Service Mobile phone: +688 7001168 Office phone: +688 20157 Email address: hinota80@gmail.com&pviliamu@gov.tv



VANUATU

Vanuatu has a population of 272,264 people (2015 estimate) spread across 80 inhabited islands with approximately 75% of the population based in rural settings. This broad spread of islands and population creates access difficulties particularly in response to disaster and delivery of relief and first aid to outer islands.

Vanuatu is exposed to a range of hazards due to both being surrounded by ocean and being located on the 'Pacific Ring of Fire'. In 2015, Vanuatu's disaster risk was made very clear as Tropical Cyclone Pam smashed into the country in March. This category 5 cyclone was the most intense to cross land in Vanuatu in recorded history and caused devastating damage. However, cyclones are only one of the hazards affecting the country. Others include floods, droughts, volcanoes, earthquakes, tsunamis and landslides. With climate change affecting the country, it is expected that the intensity of weather events is likely to increase in the future.

Historically, Vanuatu has demonstrated resilience to natural hazards and an ability to rebuild its subsistence economy and societies, using traditional knowledge and external disaster relief and other development assistance. However, the capacity of Vanuatu to effectively deal with the impacts of major disasters remains fragile, particularly as traditional knowledge is increasingly threatened. The possibility of achieving sustainable development, including the reduction of poverty, is recognised as being threatened due to the impact of hazards on vulnerable communities and economies.

Vanuatu was an early mover among its Pacific peers in establishing both a national action plan for disaster risk reduction and disaster management (NAP), and a national adaptation programme for action on climate change (NAPA). Since their instigation, recognition of the strong links between DRM and CCA has grown. This recognition has led to the creation of the Ministry of Climate Change which now includes the Climate Change Adaptation, Meteorology, Geo-Hazards, Environment, Energy and Disaster Management. A National Advisory Board on DRR and CCA (NAB) with a joint DRR and CCA national governance mandate was also established. Disaster response and preparedness arrangements continue to be led by the NDMO.

Project snapshot 2016

Key achievements

- Development of water access for water scarce communities through the procurement of a large drill rig. This is a direct recommendation post-TC Pam and is a partnerships with KFW to ensure communities have regular access to water and are able to access clean and safe drinking water during and after disaster such as cyclones. Implementation will begin in early 2017.
- Launch of disaster support truck, cars and three boats. These will allow access to communities across the country for disaster risk management training and can be utilised in times of disaster for transport and evacuation.
- Two fire trucks arrived from Australia donated by ACT Fire and Emergency Service and funded by the project for transport, training of Vanuatu Fire Service teams and local mechanics to ensure longevity of the work. In addition, MOU signed between Vanuatu Government, SPC and ACT Fire and Emergency Service for long-term twinning arrangement.
- Fire Act finalised awaiting government endorsement to strengthen fire service capacity.

Detailed outcomes

R1 - Effective preparedness, response and recovery: responds to the need for national and regional response plans, end-to-end early warning systems (EWS), emergency and evacuation centres, access to safe drinking water to mitigate against drought.

- Strengthen provincial level preparedness & response capacity through equipment for provincial emergency operations centres. 3 boats with engines - Penama (Ambae - Saratamata), Malampa (Malakula – Lakatoro) & Torba (Vanua Lava – Sola); 2 x vehicles - Sanma and Tafea (Santo and Tanna).
- Three provincial emergency operations centres in progress for the Penama, Sanma and Melampa with the land being identified for the 3 sites and approval for the land use secured. The engagement of a construction supervisor to occur in 2017 to progress the buildings of which designs are completed.
- Significant upgrade of fire service equipment and vehicles: Flat-bed truck purchased to support VMF day-to-day operations, water cartage and movement of heavy loads for emergency response. Shipping costs covered for 2 donated fire trucks and equipment from ACT along with the training cost of the VMF team and local mechanics to ensure longevity.
- Documentary also completed on this work in country to show the impact.

R2 - Strengthened institutional arrangements for DRM and CCA: responds to the need for JNAPs as well as to the integration of DRM and CCA into national and sector strategies, planning and budgetary processes.

- Fire Act developed in response to need to strengthen capacity of the Fire Service. National Fire Act complete, fire regulations and mechanisms to monitor and enforce these complete. Both completed by emergency management consultant who worked closely with World Bank reviewing the DRM legislation to ensure work aligned. This collaboration was engineered to ensure synergies and complementarity between key emergency response agencies and their respective legal documents. The Fire Act and Regulations were handed over to the NDMO Director in October to be submitted to the Council of Ministers (COM) for consideration. Cabinet approval expected in 2017.

R3 - Improved knowledge, information, public awareness, training and education: the emphasis is on building awareness of risks and risk exposure through the provision of hazard and risk information through regional and local databases, strengthening human and technical capacity in a range of priority areas, production of knowledge products and related awareness.

- Support the recruitment, development and resourcing for an Information Management Specialist (ISM) within the NAB Secretariat including salary cost until 2018. The ISM specialist is directed to design an effective information system framework and web based tool that will link regional, national, provincial and local level networks in collating, sharing and coordinating Climate Change/Disaster Risk Reduction (CC/DRR) information and activities in country.

R4 - Improved understanding of natural hazards and the reduction of underlying risks: addresses gaps in baseline scientific, technical, social and economic understanding of hazard impact and addresses underlying risks created by changing social, economic and environmental conditions and resources.

- Improve the Government's capacity to carry out exploratory work and establish wells in water scarce communities after purchase of drill rig €400,000. Given the recent El Niño situation, the Department of Geology, Mines & Water Resources (DGMWR) is keen to increase capacity to identify suitable community sites for accessing ground water. To support this, the BSRP has partnered with KfW through their post TC Pam recovery work to purchase a truck mounted borehole drilling rig able to access remote areas of the country. Expertise from SPC's Water Programme will be provided to support the selection of suitable sites, capacity build local staff, and support bore holes to be established in highly vulnerable communities. The drill rig will arrive in Vanuatu in March 2017.

R5 - Enhanced partnerships in DRM and climate change: responds to the need for an integrated regional strategy for DRM and climate change, strengthening of PIEMA, enhanced hazard risk management, enhanced information management, facilitation of financing and integration of DRR into the work programmes of CROP agencies (Council of Regional Organisations of the Pacific).

- Enable key personnel to attend DRM/CCA regional and international meetings/training opportunities. NDMO Director and Fire Chief were supported to attend the PIEMA, PIFESA and AFAC meetings in Brisbane and NDMO Director was supported to attend the Pacific Resilience Meetings in Suva
- Support long-term sustainable development of fire service by facilitating the signing of the MoU with ACT Fire & Emergency Service between Vanuatu Government, ACT and SPC. This included logistics and catering costs paid for i) handover of trucks and equipment and ii) ACT Reps visiting Port Vila to meet with VMF counterparts, provide training on the trucks and equipment and officially handover the donated goods to VMF

Looking ahead

- Building, supervision and completion of three provincial emergency operations centres. Expected completion in 2018.
- Implementation of drill rig work in partnership with Department of Geology, Mines & Water Resources (DGMWR), KfW and SPC. Arrival of rig and truck fitting to occur by end of March and preparatory work in early 2017. Drilling work in communities with water scarcity to begin in April 2017 as identified by key priority needs assessments undertaken by department and SPC water team.

OUTCOME STATEMENT



Regional Steering Committee Meeting Suva, Fiji, 30th October 2016

We, representatives of National Disaster Management Offices from the Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Marshall Islands, Palau, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu and Timor Leste, alongside the European Union, Development partners and Pacific Community attended the *EDF-10 ACP EU Building Safety and Resilience in the Pacific project 3rd Annual Regional Steering Committee*.

NOTE that the Regional Steering Committee meeting is part of two weeks of Pacific Resilience Week, held in partnership with the **United Nations Office for Disaster Risk Reduction- UNISDR** and the **United Nations Office for Coordination of Humanitarian Affairs- UNOCHA**.

APPRECIATE the efforts to bring together the PHP, the PDRMP and the RSC of the EDF 10 ACP-EU Building Safety & Resilience in the Pacific Project during the Pacific Resilience Week, 19 – 27 October.

ACKNOWLEDGE that efforts of other partners like GIZ had complement funding available through BSRP to enhance safety and resilience.

APPRECIATE the ongoing support from the EU in providing guidance to SPC so that the countries can fully benefit from their country allocations post D+3

ACKNOWLEDGE the progress being made by the countries as presented by country representatives and there were challenges encountered which require to be addressed to enhance implementation.

ACKNOWLEDGE the value of communication and visibility to showcase results to stakeholders at national, regional and international level and further leverage the value of the funding to small island vulnerable communities.

ACKNOWLEDGE that Pacific Countries have endured a number of disasters such as cyclones and El Nino period which has impacted the implementation of activities through delays.

NOTE the challenges of progressing implementation by a number of Pacific island countries due to recent disasters and requested SPC to apply for a Time Extension to allow countries to reprioritise and implement activities.

ACKNOWLEDGE that SPC had recruited an additional finance officer and two procurement assistants within the PMU to support implementation of the project with due regard to constraints in Pacific small island states. Spending is now at 31% at end of June 2016 and the target set to be 60% at end of 2017. Moving forward countries need to work closely with the newly recruited officers to ensure timely implementation.

RECOGNISE the EU had different funding modalities which is provided to Pacific Island countries. Acknowledge the critical role of the Brussels' based Pacific Ambassadors in the ACP Secretariat to decide on allocations of the DRR Intra-ACP funds. The Meeting calls upon the Ambassadors to present the priorities of the region informed by the PICs and to ensure that a fair share of ACP funding is secured to implement the FRDP.

ACKNOWLEDGE the outcomes of the PHP and Platform including the Science and Technology area and looking at the establishment of a Pacific Science and Technology Advisory Group

CALL ON SPC to collaborate with partners and coordinate the development of a paper on priorities from countries and the Pacific region, in preparation for future funding under EDF11 Intra ACP to implement the FRDP by end of March 2017.

ACKNOWLEDGE EU, SPC and the BSRP PMU in progressing the project implementation given the constraints and challenges that exist in the region.

THANK the Republic of Nauru for accepting to chair the 3rd RSC meeting comprised of Pacific NDMOs

ENDORSED & ADOPTED ON THE 27th OF October 2016

Annex 1 – Progress of Country Implementation(s)

Country	Achievements	Challenges
Timor leste	<ul style="list-style-type: none"> • Support to the NDMD Strategy Plan in Timor Leste that at least 13 municipalities have an Evacuation Center • Commitment with NT- Australia, LOA signed with Australian NT, Ministry of Interior Timor Leste and Ministry of Solidarity Timor Leste to provide Capacity Building for Timor Leste Fire brigade Services during the BSRP Project Period. • Commitment with Indonesia BMKG (Meteorology) provide WRS dissemination system to monitor Tsunami and Earthquake information automatically for the system in Timor Leste • NDOC operational Partition Room completed and facilitate with Monitoring System 	<ul style="list-style-type: none"> • Communication (Using email had been effective) however need for follow up call by Skype • MoA late approval- affecting delay of BSRP Project implementation • Delay of payment process. Directly payment process from SPC to vendor seems to be need more time. • Unclear yet of Procurement process within SPC and County level (Need for Procurement Process specific Training and clarity)
Nauru	<ul style="list-style-type: none"> • BSRP project assist in implementing Cabinet decision 197/2015 which had established the department of National Emergency Service (NES) • Design of the NES complex to house the weather office, NEOC and NES headquarters (geotechnical assessment, design) • Construction through MOA and will be co funded by Nauru Government 	<ul style="list-style-type: none"> • Synchronising the procurement process for SPC and Nauru Government during the tender to select the contractor • Delay of materials

<p>FSM</p>	<ul style="list-style-type: none"> • Strengthen Emergency communication with solar and battery to ensure they have back up communication • Enhance tsunami preparedness – mapping of safe areas that are above 10 meters on Pohnpei main island • Strengthen State EOC • Mobile EOC vehicle at National, Pohnpei, Chuuk and Yap • Refurbishment of Kosrae, Yap and Pohnpei • Integrated DRM & CC Policy • Develop JSAPs for DRM/CC – Pohnpei and Chuuk • Establish National Platform for DRM and CCA • Public awareness programs • International Day for Disaster Reduction (IDDR) • Typhoon information in Telephone Directory • Technical training for EOC staff and other stakeholders - Kosrae & Pohnpei after Yap & Chuuk in 2015 	<ul style="list-style-type: none"> • Implementing the MOA (SPC procurement rules but funds are with national Finance) • IDDR funds might lapse • Can we reprogram funds? • Transfer and Exchange fees • Fund might be used for other unrelated activities
<p>Cook Islands</p>	<ul style="list-style-type: none"> • PA Enea (Outer Islands) DRM GEO Portal Survey • NEOC Training • First Aid Training at CI Red Cross for Tupapa (Puna) DRM Kuniti • PCRAFI/PACRIS training 	<ul style="list-style-type: none"> • Delays on MOA, & transfer of funds from SPC • Affecting timeframes with the various sectors • Too many projects to implement within the very short timeframe
<p>Niue</p>	<ul style="list-style-type: none"> • Training for Niue Fire and Police • Common C3 Incident Management Systems • Expanded Roles and Responsibilities and Emergency Service • Strategies developed to mitigate the increasing occurrence of wildfire • Alignment of response agencies so that roles and responsibilities are clearly defined and common SOP's developed to reflect EM sector reform arrangements • Strengthen Government and Department's awareness of their roles and responsibilities and ensure they have contingency and consequence management plans in place to maintain service delivery during adverse events. 	<ul style="list-style-type: none"> • Project challenges faced during implementation (e.g. internal - lack of quorum at NSC, slow disbursement from finance, lack of manpower in the NDMO etc.; external (SPC related etc.)

	<ul style="list-style-type: none"> • Strengthen Government and Department’s awareness of their roles and responsibilities and ensure they have contingency and consequence management plans in place to maintain service delivery during adverse events. 	
Kiribati	<ul style="list-style-type: none"> • BSRP strengthened DRM Operational structure • BSRP assists with the implementation of the KJIP (Kiribati Joint Implementation Plan) • BSRP interventions focused on enhancing disaster preparedness, response and recovery • Emergency communications and spare parts for network Abaiang islets Health Center 	<ul style="list-style-type: none"> • Conflicting and inconclusive advise in finalizing our action plans (list of activities) • Slow and conflicting advice on remaining amounts in our allocations • SPC/BRSP PMU/staff unilaterally decides to engage other SPC divisions to implement technical components of our BRSP. • No consultation carried out with NDMO/Project Coordinator or Activity stakeholders and even the National Steering Committee before this was done. • Slow response from PMU (we understand the pressure in dealing with multiple countries) • Delay in funds disbursement (BSRP) set us back to wait for how many more months • Bulky procurement process
Vanuatu	<ul style="list-style-type: none"> • Purchase of two (2) vehicles and three (3) boats with accessories for the Provincial NDMO; • Purchase of one (1) lorry for the Vanuatu Police Force under VMF; • Freight for two (2) donated fire trucks from ACT Fire Services; • Emergency Management Road Map and draft of Vanuatu Fire Services Act; • MOA signed with SPC for the construction of three (3) Provincial NDMOs; and • In the process of advertising the position of a construction supervisor for the three Provincial NDMOs. 	<ul style="list-style-type: none"> • Slow disbursement of finance for purchase of equipment; • MOA should be signed earlier to ensure funding is made available at the national level for implementing activities under the project; • Recruitment of a Construction Supervisor for the Provincial NDMOs; • Tender for Construction of the Provincial NDMOs; and • Weather (La Nina), will cause delays in the construction of the three buildings.

<p>Tonga</p>	<ul style="list-style-type: none"> o Integrating DRR/M into Community and District Development Plans for about 95% of all Tongan communities with completion at the end of the year by supporting MIA, MORDI TT, PRRP in reaching the 21 remaining communities in Ha'apai o Completing school visits in all 54 GPS & church affiliated Primary and Kindergartens in Tongatapu o Completing school visits to 31 GPS in Vava'u and Ha'apai's main island developing SOPs and identifying safe routes to evacuation areas. o Developing SOPs for Tongatapu and identifying safe routes to evacuation areas – 17-21 Oct o Conducting a national drill in Tongatapu on Nov 4 to align with World Tsunami Day on 5 Nov o CBDRM has been successfully integrated into the community development plans and town and district officers have been trained on aligning those plans with the Sendai Framework and the Sustainable Development Goals o Villages are getting multihazard SOPs developed and using their DRR integrated community development plans to prepare, mitigate and recover from disasters o Initial Damage Assessment training of town and district officers has contributed largely to the data improvement in hazards as seen in TC Ula and TC Winston o Met services, MIA, MoET, Infrastructure and MAFFF have worked closely with NEMO this year to reach line ministries, students, teachers, and communities on a multisector approach o Working together with local NGOs, donor partners and development partners has also brought development in special areas such as cluster establishments, partnering at local level and sharing of information 	<ul style="list-style-type: none"> • Project challenges faced during implementation (e.g. internal - slow disbursement from finance, long procurement processes) BUT now at country level – who is accountable to who? How can we be accountable to SPC when we issue our own orders and make our own payments? There are payments to be made in Suva, can't the funds remain in Suva instead of going through bank transfer fees and exchange rates? • How can the issues be addressed to enhance implementation? – have a better system in place to ensure efficient transactions. • Leave the funds with SPC so that all countries can still be accountable to one entity
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<p>Palau</p>	<ul style="list-style-type: none"> • BSRP had supported Palau in implementing and reviewing • the 2010 DRM Framework. • Support the integration of DRM and CC in the CC Policy. • Relocating HF antenna and installing VHF transceivers at Kayangel, Peleliu and Angaur • Installing Tsunami signs at 10m evacuation zones • Refurbishments of NEMO boat and fitted with new outboard motors • Construction of container basement and roof for storage • CBDRR training to state representatives by ADPC • Development of CBDRR Framework • CBDRR training in all hamlets to develop DRR action plans and community evacuation plans • Review of State DRM Plans 	<ul style="list-style-type: none"> • Payment to country vendors too slow
<p>Fiji</p>	<ul style="list-style-type: none"> • Review of Disaster Management Act & Plan • Upgrade of EOC • Integrated Vulnerability Assessment (IVA) • Communication and Awareness • Database development • Feasibility Study & PIEMA • Purchase of Water Tanks • DRM Platform and Lessons Learnt Workshop - Conducted Divisional and National LL workshop - Report in Draft • Upgrade of EOC – Refurbish EOC Nadi, Planning Office and CWD’s Office, Lautoka; DEOC – Nausori : Equipped 	<ul style="list-style-type: none"> • MOA – Fiji MOA is yet to be signed. Document with SG for vetting

<p>Solomon Islands</p>	<ul style="list-style-type: none"> • NEOC/NJWC Construction project • Review NEOC assessment tools and processes • Provide logistical assistance to NEOC Operations • First stakeholder wide consultation undertaken with key recommendation for technical agencies to re-look the messaging content of early warning alerts, public safety messages • Community profiling completed • Establishment of Village DR Committees completed • Training of Village • DR committees completed in 11 of 15 identified communities in Makira Province and 5 communities in Isabel Province. • Installation of simplified flood gauges and rain gauges completed in 2 villages in Makira and 2 village in Isabel. • Safe school clubs started in 2 schools • Local technicians trained in the assembling of equipment and maintenance. 	<ul style="list-style-type: none"> • Internal - lack of quorum at NSC • Implementing project activities in the middle of other government imperatives. (drawing staff from other provinces to support implementation. • Multi-agency implementation – NDMO, SI MET, Water Resource Division, Provincial Govt, Education, JICA, OCHA and DFAT • External – SPC procurement processes
<p>RMI</p>	<ul style="list-style-type: none"> • Installation of 217 x 1,000 gallon polythene water tanks • Installation of 22 x 1,000 water tanks at Arno Rearlaplap for houses damaged by 2014 seawater inundation • Support scoping mission for drought • Review of the Disaster Risk Management Plan to incorporate lessons learnt from the drought response as well as the Sendai Framework for DRR and FRDP 	<ul style="list-style-type: none"> • No real challenges in implementation but just to note that we need more to enhance resilience and safety of our people
<p>Samoa</p>	<ul style="list-style-type: none"> • Design and construction of the National Emergency Operation Centre – finalizing the design and in the process of clearing tender document for the procurement of construction contractor under the PREP. • Office Equipment – computers and hard drives – complete the initial procurement • Community outreach vehicle – complete except for bar light • Strengthening of national early warning systems • Feasibility of using cell broadcast and implementation of the outcomes of the study – this could not be implemented under this project • Increase in the siren network coverage – this could not be implemented under this project • Tailoring early warning system for people with disabilities and awareness for people with disabilities – this could not be implemented under this project 	<ul style="list-style-type: none"> • Understanding the status of spending • Finding opportunities under other existing projects to fund BSRP activities that have been cancelled due to insufficient funds • Procurement – delay - from purchase order, completion of activity to actual payment of suppliers of goods and services

ACP-EU BUILDING SAFETY AND RESILIENCE IN THE PACIFIC										
STATEMENT OF INCOME AND EXPENDITURE FOR THE PERIOD 1 JULY 2015 TO 30 JUNE 2016										
INCOME	INCOME PERIOD			INCOME PERIOD "1/07/2015 TO 30/6/2016 (FJD)"	TOTAL INCOME	% COVERED BY ACTUAL EXPENDITURES	EXPENDITURE PERIOD			% COVERED BY ACTUAL EXPENDITURES
	"6/09/2013 TO 30/6/2015 (FJD)"	"6/09/2013 TO 30/6/2015 (EUR)"	"1/07/2015 TO 30/6/2016 (EUR)"				"TOTAL FJD"	"TOTAL (EUR)"	"TOTAL FJD"	
FUNDS RECEIVED FROM EU	12,259,396	4,892,725	15,631,443	27,890,839	11,859,659					
OTHER INCOME	59,764	23,852	4,239	64,003	25,642					
FOREIGN EXCHANGE DIFFERENCE	(1,060,554)	(423,267)	505,277	(555,277)	(209,838)					
TOTAL INCOME	11,258,606	4,493,310	16,140,959	27,399,565	11,675,463					
EXPENDITURES	BUDGET	EXPENDITURE PERIOD	EXPENDITURE PERIOD	EXPENDITURE PERIOD	TOTAL EXPENDITURE	% COVERED BY ACTUAL EXPENDITURES	TOTAL EXPENDITURE	% COVERED BY ACTUAL EXPENDITURES	TOTAL EXPENDITURE	% COVERED BY ACTUAL EXPENDITURES
		"6/09/2013 TO 30/6/2015 (FJD)"	"6/09/2013 TO 30/6/2015 (EUR)"	"1/07/2015 TO 30/6/2016 (FJD)"	"TOTAL (FJD)"	"TOTAL (EUR)"	"TOTAL (FJD)"	"TOTAL (EUR)"	"TOTAL (FJD)"	"TOTAL (EUR)"
PROJECT MANAGEMENT UNIT										
SENIOR ADVISOR/PROJECT MANAGER (BAND 12), SPC FIJI	447,102	250,956	100,157	161,502	412,458	168,375	38%			
ADVISOR (BAND 10), SPC FIJI	403,563	222,747	88,898	84,415	307,162	124,555	31%			
ADVISOR (BAND 9), SPC NPRO FSM	378,612	325,426	129,878	199,608	525,034	214,192	57%			
ADVISOR (BAND 9), SPC FIJI	295,612	181,662	72,501	199,931	381,593	156,952	53%			
ADVISOR (BAND 9), SPC FIJI	295,612	182,864	72,981	58,913	241,777	97,866	33%			
ADMINISTRATIVE/FINANCE ASSISTANT (BAND 5) SPC FIJI	52,632	37,654	15,027	147,190	184,844	77,200	147%			
MEDIA & COMMUNICATIONS OFFICER (BAND 8) SPC FIJI	88,500	19,060	7,607	142,465	161,525	67,784	77%			
FINANCE OFFICER (BAND 7)	56,000	-	-	8,317	8,317	3,513	6%			
ADMINISTRATION ASSISTANT (BAND 5)	44,000	-	-	519	519	219	0.5%			
2 SHORT TERM STAFFS	35,000	-	-	24,000	24,000	10,138	29%			
	2,096,633	1,220,369	487,049	1,026,860	2,247,229	920,794	44%			
OPERATIONAL COSTS AND ADMINISTRATION										
FACILITIES	9,500	4,586	1,830	150	4,736	1,893	20%			
EQUIPMENT	27,500	52,635	21,007	12,786	65,421	26,408	96%			
PUBLICATIONS	17,000	3,460	1,381	-	3,460	1,381	8%			
CONSUMMABLES	15,000	9,847	3,930	5,119	14,966	6,092	41%			
STATIONERY	8,200	5,542	2,211	(13)	5,529	2,206	27%			
MICELLANEOUS	7,000	4,770	1,903	9,267	14,037	5,817	83%			
	84,200	80,840	32,262	27,309	108,149	43,797	52%			
TOTAL PROJECT MANAGEMENT UNIT (PMU)	2,180,833	1,301,209	519,311	1,054,169	2,355,378	964,591	44%			
				445,280	2,355,378	964,591	44%			





BUILDING SAFETY AND RESILIENCE IN THE PACIFIC PROJECT



Further information:
BSRP Project
Disaster Reduction Programme
Geoscience Division
Email: infobsrp@spc.int

Postal Address:
BSRP Project, SPC,
Private Mail Bag,
GPO, Suva, Fiji Islands

Street Address:
241 Mead Road, Nabua, Suva, Fiji Islands.
Tel: +679 3381 377 Ext: 36223
Fax: +679 3370 040