



ACP-EU BUILDING SAFETY AND RESILIENCE IN THE PACIFIC PROJECT

Activity Report 2017

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



Pacific Community (SPC) 2017

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CONTENTS

FOREWORD	7
ACRONYMS	8
INTRODUCTION	11
Pacific vulnerability to disaster	
The project at a glance	13
Expected results of the project	14
Key stakeholders	15
Overarching observations of progress in 2017	
REGIONAL UPDATES	18
Pacific Islands Emergency Management Alliance (PIEMA)	19
Introduction	
Background	
How PIEMA began as a partnership	
How PIEMA works with and for countries	
How PIEMA twinning arrangements work	20
PIEMA funding structure	
PIEMA Snapshot 2017	21
Key achievements	
Detailed outcomes	
Looking ahead for PIEMA into 2018	23
Success Story - PIEMA	24
PIEMA leverages partnerships to secure its own project	
DISASTER RISK COMMUNICATIONS	25
Introduction	
Detailed outcomes	
Snapshot 2017	26
Key achievements	
Looking ahead 2018	29
Success Story	30
Regional media strengthens knowledge in disaster and climate change	
Private sector toolkit supports business resilience in the region	
COUNTRY UPDATES	33
Cook Islands	34
Federated States of Micronesia	38
Fiji Islands	42
Kiribati	47
Republic of the Marshall Islands	51
Nauru	54
Niue	56
Palau	58
Papua New Guinea	61
Samoa	66
Solomon Islands	69
Timor-Leste	72
Tonga	75
Tuvalu	77
Vanuatu	80
APPENDICES	83
ANNEX 1 – Regional Steering Committee 2017 Minutes	84
ANNEX 2 – Progress of Country Implementation(s) Minutes	85
ANNEX 3 – Financial Reporting	91
ANNEX 4 – Logic Framework (as at 31 December 2017)	94



Regional Steering Committee, 2017

FOREWORD

Dr Andrew Jones

Director Geoscience, Energy and Maritime Division

2017 has brought a new set of challenges for many countries in the region whilst being a year of great change for SPC's Geoscience, Energy, and Maritime Division (GEM, formerly the South Pacific Applied Geoscience Commission (SOPAC). As the recently appointed Director of the GEM Division, I must commend the work of the Building Safety and Resilience in the Pacific Project (BSRP) for providing exceptional examples of regional, national, and sub-national resilience building over the four years of implementation thus far. I have been impressed not only by the commitment and ownership of countries and NDMO (National Disaster Management Office) teams to the delivery of this project, but with the team in Suva working to support countries in the implementation of this project.



With the *Framework for Resilient Development in the Pacific: An Integrated Approach to Address Climate Change and Disaster Risk Management (FRDP) 2017-2030* having been endorsed by Leaders during the 47th Pacific Island Forum in 2016, the focus in 2017 shifted to its operationalisation. As BSRP was a key partner in the FRDP development, we have been able to produce tangible outcomes directly in line with the Framework, in particular, in relation to Goal 3: Strengthened disaster preparedness, response and recovery.

In 2017, we took great strides in strengthening our support for resilience within countries (consistent with GEM's future focus) when the Pacific Islands Emergency Management Alliance (PIEMA) funding arrangements were signed. PIEMA has begun the transition to be implemented as its own project to: support the strengthening of emergency management in the region; formalise existing partnerships; and integrate emergency management within resilience-based activities in the long-term. Our GEM Division recognises the need to support the increased coordination and interoperability, and we look forward to the five-year PIEMA Project thriving.

In addition, the BSRP Project received a no-cost extension from the European Union allowing country-level implementation to continue until the end of 2018, with the final project completion expected in October 2019. This ensures many risk-informed infrastructure projects will see full completion, and will in turn support increased preparedness for communities and response teams alike.

The project increased its monitoring and evaluation activities in 2017. These activities will continue into 2018 to ensure the work being implemented leads to the desired outcomes and impacts at country level, and that these results are captured to not only to reveal the magnitude of increased resilience but to also ensure we, as an organisation, are supporting learning and adaptation within our work going forward. This way, we can ensure we continue to support countries with leading best-practice technical and scientific approaches in the region.

I look forward to engaging more closely with you all over the coming year, and to supporting and strengthening the exceptional work you are leading at country and sub-national levels. Congratulations, and I look forward to more outcomes in the year ahead.

ACRONYMS

ACP	African, Caribbean and Pacific	FNU	Fijian National University
ACTESA	Australian Capital Territory Emergency Services Authority	FRDP	Framework for Resilient Development in the Pacific
AFAC	Australasian Fire and Emergency Service Authorities Council	GDP	Gross Domestic Product
AIIMS	Australasian Inter-service Incident Management System	GEM	Geoscience, Energy and Maritime Division (SPC)
ASEAN	Association of Southeast Asia Nations	GIS	Geographic information system
BCP	Business continuity planning	HFA	Hyogo Framework For Action 2005-2015
BMKG	Indonesia's Meteorological, Climatological, and Geophysical Agency	ICI	Infrastructure Cook Islands
CBDRR/M	Community-based disaster risk reduction/management	ICS	Incident Command Systems
CCA	Climate change adaptation	IDC	Island Disaster Committee
CDR	University of PNG Centre for Disaster Reduction	IEC	Integrated Education and Communication
CFA	Country Fire Authority Victoria	IMS	Incident Management Systems
CHARM	Comprehensive Hazard and Risk Management	IP	Implementing partner
CIP	Country Implementation Plans	IVA	Integrated Vulnerability Assessment
CNMI	Commonwealth of Northern Mariana Islands	JEOC	Joint Emergency Operation Centre
COP23	23rd Conference of the Parties to the UNFCCC	KRA	Key result area
CROP	Council of Regional Organisations of the Pacific	LOA	Letter of Agreement
CSO	Civil society organisation	LPO	Purchase Order
CUG	Closed User Group	MCDEM	New Zealand Ministry of Civil Defence and Emergency Management
DFAT	Australian Department of Foreign Affairs and Trade	MFAT	New Zealand Ministry of Foreign Affairs and Trade
DMPGM	Department of Mineral Policy & Geohazards Management (PNG)	MFB	Victorian Metropolitan Fire Brigade (Melbourne)
DRM	Disaster Risk Management	MOA	Memorandum of Agreement
DRR	Disaster Risk Reduction	MOU	Memorandum of Understanding
ECS	Emergency Communications Systems	MRCS	Micronesian Red Cross Society
EIE	Education in Emergencies	NDOC	National Disaster Operations Centre
EMCI	Emergency Management Cook Islands	NDMO	National Disaster Management Office
ENSO	El Niño Southern Oscillation	NDRMP	National DRM Plan
EOC	Emergency Operations Centre	NEMO	National Emergency Management Office
ERN	Emergency Relief Network	NEOC	National Emergency Operations Centre
EXMAN	Exercise Management	NFA	National Fire Authority
FIA	Fire Industry Association	NGO	Non-governmental Organisation
		NSC	National Steering Committee
		NTFES	Northern Territory Fire and Emergency Services
		NTFRS	Northern Territory Fire Rescue Services
		OB	Kiribati Office of the President
		PACSAR	Pacific Search and Rescue Meeting
		PCCSP	Pacific Climate Change Science Program
		PDS	Performance Development System
		PICTs	Pacific Island Countries and Territories

PMU	Project Management Unit	UNISDR	United Nations International Strategy for Disaster Reduction, also refers to the United Nations Office for DRR
PEOCs	Provincial Emergency Operation Centres		
PICP	Pacific Islands Chiefs of Police	UNOCHA	United Nations Office of Humanitarian Affairs
PIEMA	Pacific Island Emergency Management Alliance	UPNG CDR	University of Papua New Guinea's Centre for Disaster Reduction
PIFESA	Pacific Islands Fire and Emergency Services Association	WFP	World Food Programme
PIFS	Pacific Islands Forum Secretariat		
PILON	Pacific Island Liaison Officers' Network		
PIPSO	Pacific Islands Private Sector Organisation		
PNG	Papua New Guinea		
POLARIS	Office of Palau Automated Land and Resources Information Systems		
PREP	Pacific Resilience Program (World Bank funded)		
QEFS	Queensland Fire and Emergency Services		
RDMM	Regional Disaster Managers Meeting		
RESPAC	Disaster Resilience for Pacific Small Island Developing States (UNDP project)		
ROM	Results-orientated monitoring		
RSC	Regional Steering Committee		
SACFS	South Australia Country Fire Service		
SAR	Search and Rescue		
SME	Small and medium-sized enterprises		
SOPAC	Former South Pacific Applied Geoscience Commission		
SPC	The Pacific Commission		
SPREP	Secretariat of the Pacific Regional Environment Programme		
SREM	Strategic Roadmap for Emergency Management		
TA	Technical assistance		
TAF	The Asia Foundation		
TAT	Turn-around time		
TC	Tropical Cyclone		
UNDAC	United Nations Disaster Assessment and Coordination		
UNDP	United Nations Development Programme		
UNESCO/IOC	Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organisation		
UNFCCC	United Nations Framework Convention on Climate Change		
UNICEF	United Nations Children's Fund		

INTRODUCING THE BUILDING SAFETY AND RESILIENCE IN THE PACIFIC PROJECT (BSRP)





BACKGROUND

INTRODUCTION

The Building Safety and Resilience in the Pacific (BSRP) project is a EUR 19.37 million project supported by the European Union (EU) and the African, Caribbean and Pacific (ACP) Secretariat, implemented by the Pacific Community (SPC). Supplementary funding was also received from Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in 2017. This project directly responds to ACP group of states' and EU priorities identified under the 2009 European Union Strategy for Supporting Disaster Risk Reduction, and in line with the GIZ Coping with Climate Change in the Pacific project. It has, however, 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 fourth year of implementation and is moving into the final year of country-level implementation in 2018. It is focused on reducing disaster risk and supporting climate change adaptation whilst also strengthening the capacity of disaster agencies across the region to better prepare for, respond to and recover from hazard events in the Pacific region.

Pacific vulnerability to disaster

The Pacific region is at risk of being struck by disaster events in part due to the region's high geographical exposure to hazards¹ such as cyclones, droughts, landslides, floods, earthquakes, tsunamis and volcanic eruptions. In addition, the region's capacity to manage disaster risk is undermined by the fact that many Pacific Island nations participating in BSRP are also developing countries. The reality is that these countries rely on small economies

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



and subsistence farming. Many island nations have numerous islands spanning vast distances and face access issues. Many communities across the region live in poverty. These challenges make preparing for, responding to, and recovering from disasters more difficult for both individual countries and the region as a whole.

2017 has been another year of challenges but thankfully a year without major disasters across the region - the first such year since the beginning of the BSRP project in 2013. Vanuatu was at risk of a large volcanic eruption in September 2017 and more than 10,000 villagers were evacuated from the island of Ambae due to concerns of an imminent eruption of Manaro (a volcano at the island's centre). Thankfully, the ash cloud did not cause loss of life, although it did cause loss of agricultural crops and subsistence food and led to the entire population being evacuated for almost a month for safety reasons. The residents have since returned to their homes with the risk of eruption reducing.

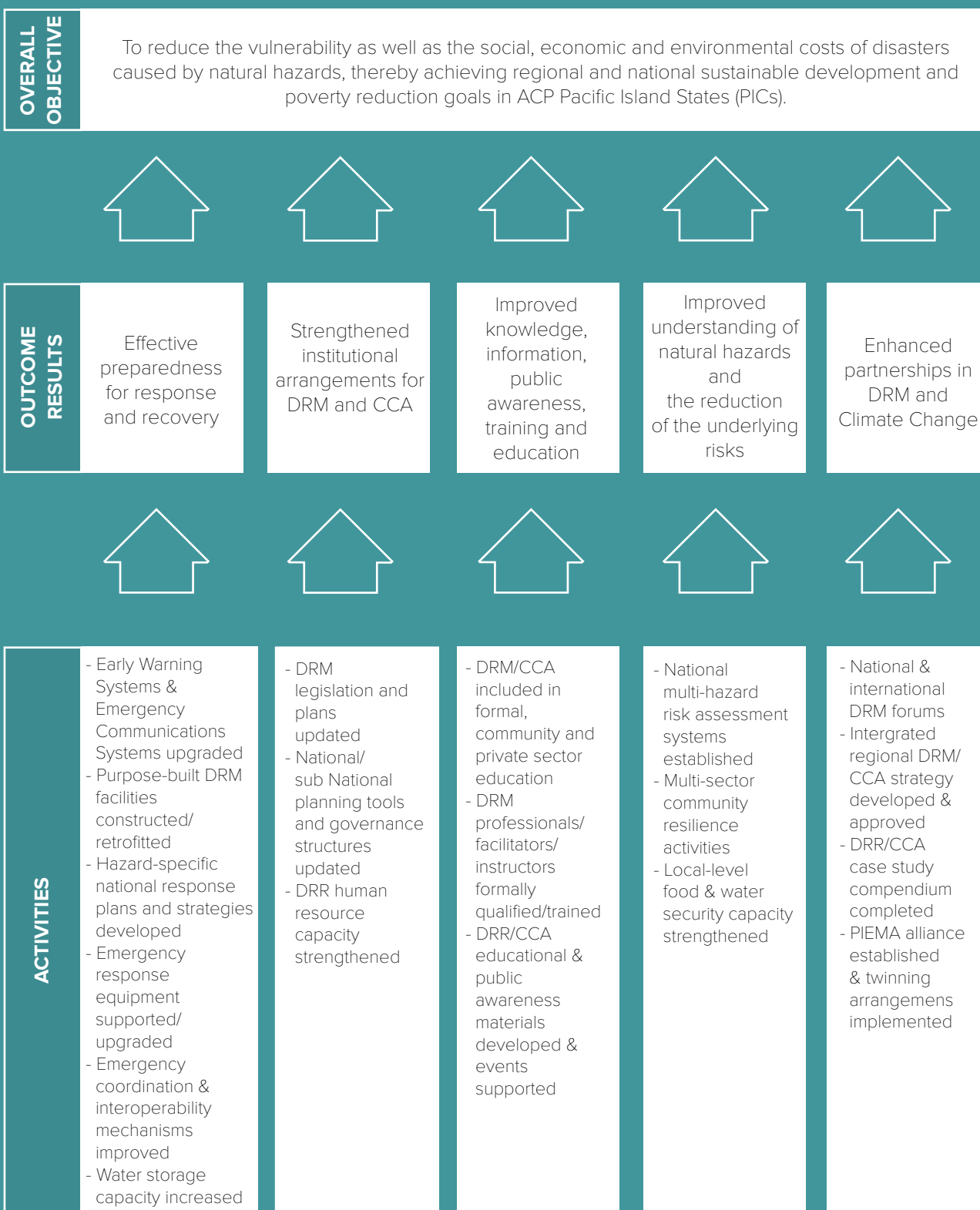
As the risk of disaster unfolded in Vanuatu, many communities in the North Pacific were still on high alert due to an impending drought with dry conditions continuing to plague the region. Fortunately, this dry weather is predicted to ease in 2018.

These events show the immense vulnerability and ongoing risk to the region. This vulnerability will continue to impact upon the achievement of the Sustainable Development Goals within Pacific Island countries, however, as we come into the final year of BSRP, this report will show how participating countries are demonstrating increased resilience to disasters in a range of ways. We anticipate even more results over the coming year.

THE PROJECT AT A GLANCE

PURPOSE

To strengthen the capacity of PICs 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 (DRR) strategies and Climate Change Adaptation (CCA).



Participating countries

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

Key stakeholders

- **National governments** are key partners in the BSRP project, with the team working alongside national disaster management offices (NDMOs) to help strengthen response planning, early warning systems and decision-making tools as well as train personnel so they can better coordinate disaster response and preparedness and reduce the long-term cost of disaster.
- **Communities** are also key beneficiaries, with activities designed to help people better understand disaster risks and hazards, empowering them to reduce the impact of disasters 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 disasters, 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.

Overarching observations of progress in 2017

As outlined in the Regional and Country Updates sections below, 2017 has seen some significant advances across all results areas under BSRP. The success stories contained within this report detail how activities are leading to real change on the ground. For example, there is increasing coordination amongst stakeholders both nationally and regionally; and Pacific DRM/CCA challenges and efforts are being recognised internationally as the relevance of DRM and CCA integration becomes even more evident. Governments across the Pacific region are themselves investing more in DRM (for example, through enacting updated legislation, co-investing in infrastructure and transitioning coordinator roles into permanent government positions so they can be sustained beyond the BSRP funding period). Knowledge and understanding of DRM/CCA is also improving across a range of stakeholders from within the NDMOs, emergency services, media, village councils, and within communities (including more vulnerable groups such as women, young people and people with disabilities). Moreover, participating countries have been able to access the equipment and infrastructure they require to better undertake their DRM, emergency management and CCA functions.

The year has not, however, been without its challenges. Participating countries were adjusting to the shift to a grant-funding modality that occurred in late 2016. With this shift came increasing in-country procurement, contracting and financial management responsibilities – these challenges are outlined the Regional Steering Committee Outcome Statement minutes in Annex 1 & 2. The BSRP team has therefore worked closely with grant recipients to ensure that SPC process and accountability requirements are met. As recipients are learning as they go, processing delays have at times been encountered leading to a slight dip in the expenditure rate as shown in Figure 1. As national activities make up 78% of the total BSRP budget, and 71% of the expenditure thus far (Figure 2 refers), delays at national level impact overall project expenditure.

Nevertheless, the financial and procurement coaching assistance is, in and of itself, strengthening the internal capability of the NDMOs and other grant recipients, and is likely to have lasting benefits. The Project Management Unit is anticipating a significant positive shift in sub-recipient expenditure (Figure 1 refers) in 2018 as grant recipients become more confident with the requirements.

Figure 1: BSRP actual and projected cumulative expenditure (2013 - 2019)

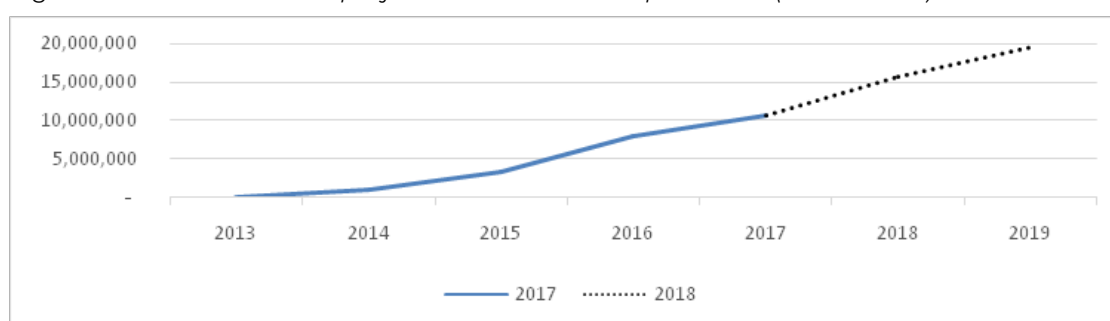
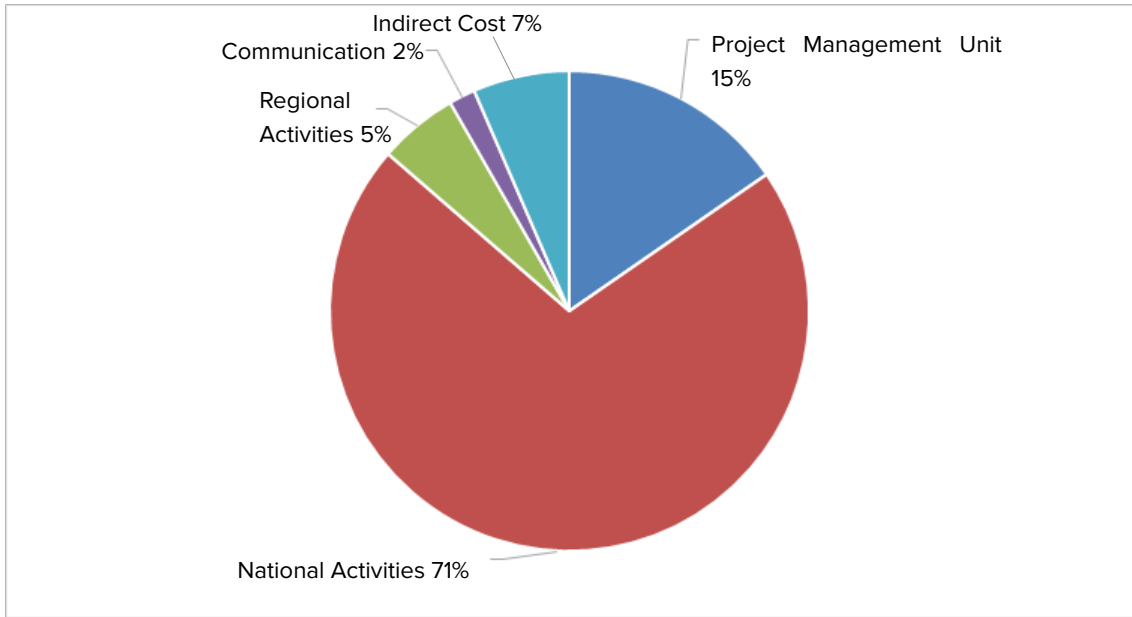
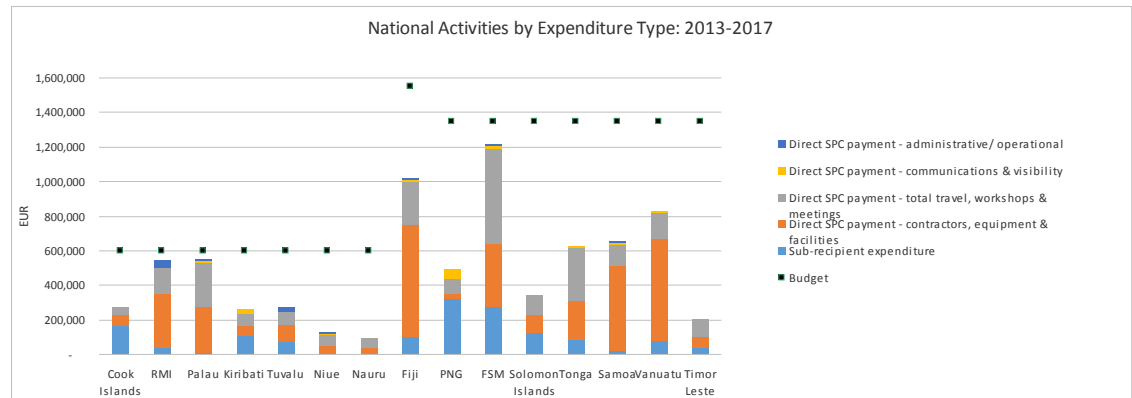


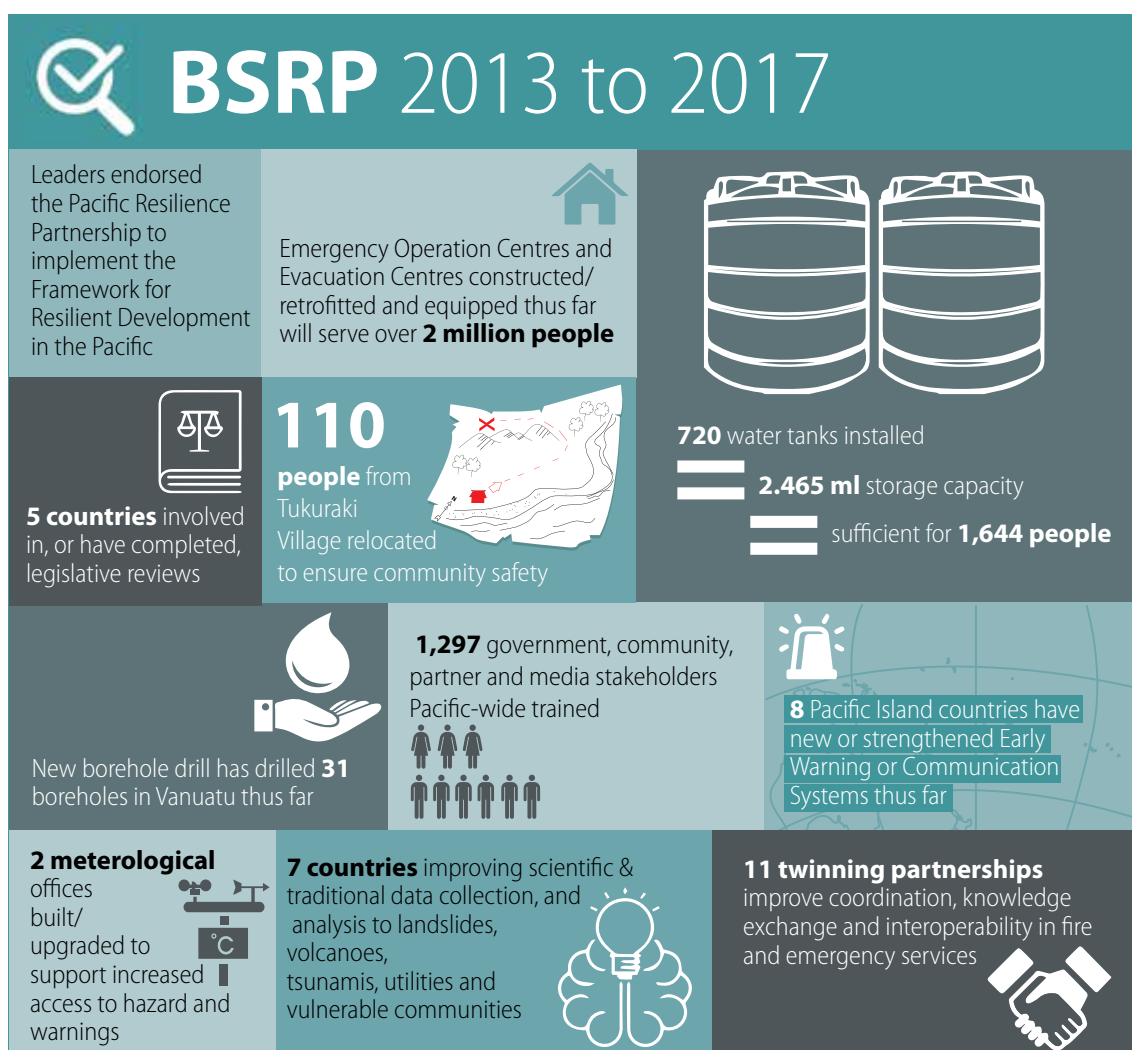
Figure 2: BSRP Expenditure: 2013-2017



With a number of design and build projects underway in 2018, it is also anticipated that this will cause a rapid increase in the rate of expenditure under the project. As shown in Figure 3, the countries in the Northern Pacific are considerably advanced in terms of expenditure – in many instances, they are drawing their BSRP activities to a close. Unsurprisingly, it is the countries with the large building projects that have experienced the most delays as they are multi-staged, and require land to be secured as well as designs drawn up and agreed before going to market to build. In some instances, these building activities are being co-funded. While co-funding adds a level of complexity, it leverages different donor investments and is a good example of the harmonisation and alignment of aid.

Figure 3: National Activities by Expenditure Type: 2013-2017



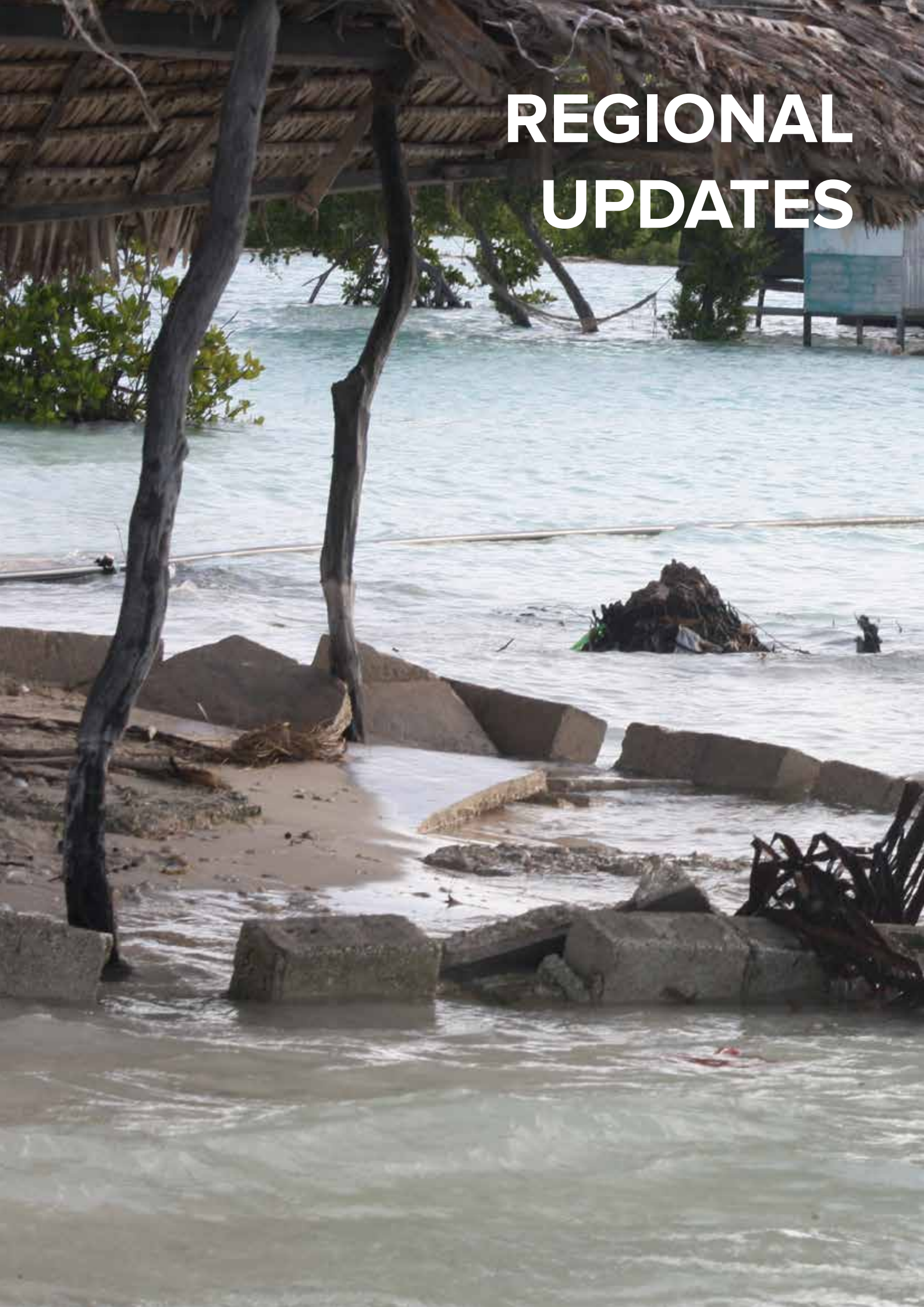


As the end of the project approaches, BSRP is actively working with stakeholders to manage risks and complete activities within the implementation period. Where external shocks or natural disasters have affected country work programmes, BSRP will continue to work with countries to adapt their work programmes to the changed circumstances where necessary.

For BSRP, 2018 and the 2019 wind-up year will also have a significant focus on monitoring, evaluation, exit/transition planning, as well as ensuring the sustainability of the outcomes and impacts achieved under BSRP.

In 2017, a revised logframe was agreed between SPC and the EU - reporting over cumulative years against this logframe is now contained in Annex 4. Summary statistics are highlighted above. An EU Results-Orientated Monitoring (ROM) review is also scheduled to be completed in early 2018, the results of which will inform the final phase of the project.

REGIONAL UPDATES



PACIFIC ISLANDS EMERGENCY MANAGEMENT ALLIANCE (PIEMA)

INTRODUCTION

Background

PIEMA is a coordinating mechanism that engages directly with Pacific countries to improve resilience and create ‘excellence in emergency management for safer Pacific communities’.

PIEMA represents a partnership with key umbrella agencies and emergency management agents - the Regional Disaster Managers Meeting (RDMM); the Pacific Islands Chiefs of Police (PICP); and the Pacific Islands Fire and Emergency Services Association (PIFESA). SPC provides secretariat and coordination services. PIEMA also receives support from partners such as Australasian Fire and Emergency Service Authorities Council (AFAC) and the New Zealand Ministry of Civil Defence and Emergency Management (MCDEM).

How PIEMA began as a partnership

Recognising that technology, infrastructure and equipment are critical for addressing hazards and risks impacting Pacific Island Countries and Territories (PICTs), PIEMA was conceived in 2012 by SPC in partnership with the United Nations Office of Humanitarian Affairs (UNOCHA), AFAC, PIFESA, The Asia Foundation (TAF) and MCDEM. It was then established in 2014 to: strengthen the emergency preparedness and response capacity of key national agencies in PICTs; provide regional guidance on emergency management issues; and develop regionally endorsed competencies, qualifications and skill sets.

How PIEMA works with and for countries

PIEMA is a regional mechanism (similar to the Pacific Humanitarian Partnership and the Pacific Platform for DRM), which focuses on emergencies and emergency management. Through PIEMA, the three key players in national emergency management (NDMOs, Police, Fire and Emergency Services) meet and discuss regional synergies and advocate regional solutions.

PIEMA meets biennially, and from this platform, outcomes and discussions flow through and influence the direction taken by individual sectors (for instance, disaster management, police, fire and emergency services) through their regionally-mandated meetings (such as PICP annual meetings). This is then implemented nationally through Strategic Roadmaps for Emergency Management (SREMs), of which Niue was the first to complete and implement. Vanuatu, Samoa, Cook Islands and Kiribati are currently in the process of finalising their SREMs.

SPC took on the PIEMA Secretariat role since 2013. In 2016, SPC also took over PIFESA secretariat duties from AFAC (this is consistent with SPC's existing role as RDMM secretariat).

In addition to the biennial regional platform and national SREMs, PIEMA acts as the coordination, support and capacity building mechanism to support twinning relationships.

How PIEMA twinning arrangements work

A PIEMA twinning arrangement is a partnership between an emergency services agency in Australia, New Zealand, or the United States with a PICT – it is a conduit for country-to-country training, technical support, equipment provision, etc. Fiji also supports some PICTs directly - it is hoped such PICT-to-PICT partnerships will increase in the future.

As shown in Table 1, there are currently 11 twinning arrangements in place across the 16 current PIFESA members - of these arrangements, five now include NDMOs (Kiribati, RMI, Samoa, Timor Leste, Vanuatu) under the PIEMA umbrella. As Police also manage Fire Services in some PICTs, they have by default been part of PIFESA and the twinning arrangements. Of the 16 PIFESA members, three are from the North Pacific. PIEMA is now in discussions with the Western Pacific Islands Association of Police Chiefs (the North Pacific version of PIFESA) on twinning arrangements in the North with Guam, the Commonwealth of Northern Mariana Islands (CNMI) and Hawai'i.

Table 1: Current twinning arrangements

Current twinning agreements with Memorandums of Understanding (MOU)	Current MoU discussions in progress for below countries
1. Fiji (Fire) with Country Fire Authority (CFA) Victoria	<ul style="list-style-type: none"> • Tuvalu • Norfolk • Federated States of Micronesia • Palau
2. Samoa (Fire, NDMO) with Victorian Metropolitan Fire Brigade (Melbourne)	
3. Vanuatu (Fire, Police, NDMO) with Australian Capital Territory Emergency Services Authority (ACTESA)	
4. Tonga (Fire) with South Australian Metropolitan Fire Service	
5. Kiribati (Fire, Police, NDMO) with South Australia Country Fire Service	
6. Solomon Islands (Fire, Police) with Fire and Rescue New South Wales	
7. Papua New Guinea (Fire) with Queensland Fire and Emergency Services (QEFS)	
8. Cook Islands (Fire) with Fire and Emergency New Zealand	
9. Niue (Fire) with Fire and Emergency New Zealand	
10. Timor Leste (Fire, NDMO) with Northern Territory Fire Authority	
11. RMI (Fire, NDMO) with NSW Rural Fire Service (NSW-RFS) Australia	

The Twinning Arrangements are outlined in a formal document establishing the relationship between the PICT and AFAC partners. This provides the general terms and parameters of the work to be undertaken together. It usually states that AFAC Partners would support in-kind any requests from PICTs and that PICTs will arrange and fund any travel and in-country costs required. When there is a request made, a binding Letter of Agreement is entered into between the parties that clearly details funding, costs and the work programmed.

PIEMA SNAPSHOT 2017*Key achievements*

- Standalone PIEMA project officially launched at Pacific Resilience Week 2017.
- Samoa National Fire Strategy developed and launched.
- Emergency management equipment donations facilitated across 5 countries.
- 100 personnel trained in emergency management functions across 3 countries.

PIEMA funding structure

The need to have a regional coordinating mechanism in emergency management was critical – it was thus led and endorsed by countries through the Strategic Agenda 2020 for PIEMA in 2015. Until 2017, PIEMA had been funded through BSRP by the EU and ACP Group of States. PIEMA has, however, received considerable support, visibility and advocacy resulting in the need for it to become a standalone programme that would provide increased levels of targeted and critical support for emergency management, and assist its integration with DRM and CCA-based efforts through the Framework for Resilient Development in the Pacific (FRDP). The Australian and New Zealand Governments have agreed to fund PIEMA as a standalone project for the next five years.

DETAILED OUTCOMES**R1 - Effective preparedness, response and recovery**

- Mobile emergency operations centre vehicle procured and delivered to the Tuvaluan NDMO after some delays in freight and obtaining necessary approvals. [EUR 40,000]
- Through PIEMA-related partnerships, emergency ambulance equipment donated by the QAS (valued at over AUD 300,000) was delivered to six countries (Fiji, Samoa, Vanuatu, Niue, Nauru and Kiribati). [EUR 8,500 shipment costs].
- The Samoa National Fire Reduction Strategy 2017 was launched by the Government of Samoa developed in partnership with MFB and PIEMA. [WST 10,000]

R3 - Improved knowledge, information, public awareness, training and education

- Training and opportunities to attend workshops were provided to 123 personnel as outlined in Table 2 below. As the emergency services tend to be a male dominated professions, only an average of 20% of participants were female. This did however vary by country and by the type of training/workshops being offered – in one training in Timor Leste, 31% of participants were female.

R5 - Enhanced partnerships in DRM and climate change

- 15 personnel from the Emergency Management sector in the Cook Islands attended the SREM Inception Workshop held in Rarotonga. The document is currently in the draft stage with a second round of consultations to be held in April 2018. [NZD 10,000]
- A three-person team from South Australia CFS and the PIEMA Officer undertook a Technical Scoping Exercise in Kiribati to develop a three-year plan of engagement to improve the Fire Services and strengthen the capacity of the NDMO and Police. This is the second consultation. It involved a wide range of consultation with different stakeholders, particularly within government (for example, with the NDMO, Airport,

- Police, President's Office, Utilities, etc). This work leveraged existing twinning partnership arrangements. [AUD 20,000]
- PIFESA Secretariat biennial meeting coordinated and managed alongside the 2017 AFAC Annual Meeting in Sydney, Australia, which was attended by ten of the 15 PIFESA-member Fire Chiefs. [FJD 2,000]
 - The PIEMA Officer attended the 2017 Pacific Search and Rescue Meeting (PACSAR), and synergies were developed between the Maritime Search and Rescue (SAR) (led by the PACSAR Steering Committee) and Urban SAR (led by PIEMA) for the Pacific. [Funded by PACSAR]
 - The PIEMA Officer attended the 2017 Emergency Communications and Logistics Workshop facilitated by the World Food Programme (WFP). This resulted in closer working relationships around emergency communications and the use of urban SAR teams to support logistics. It is hoped this will develop into an MOU in the future. [FJD 5,000]
 - PIEMA coordinated key strategic meetings on emergency management partnerships during the Pacific Resilience Week to outline the progress and way forward for the region, alongside the United Nations Disaster Assessment and Coordination (UNDAC) session, Post Disaster Needs Assessment discussions and the launch of the PIEMA Project.

Table 2: PIEMA-funded training and workshops attendance in 2017

Name	Country	Dates (2017)	No. attendees	Provider	BSRP cost	Outcomes achieved
Basic Firefighter Training	Tuvalu	16 – 25 May	12 Police/ Fire Officers, plus 8 others -Public Works Department, Solid Waste Agency and a plumber (100% male)	CFA (BSRP-funded)	AUD 23,310	Trained officers in basic firefighting and fire pump operations in order to enhance good emergency management practices, safe use of equipment and their ability to respond to a range of different incidents.
Station Drills	Vanuatu	21 – 25 Aug	15 Firefighters (100% male)	PIEMA Officer	No cost to BSRP	Trained officers in station drills to allow for ongoing training. Impact limited due resource constraints in-country
2017 AFAC Conference	Regional (in Sydney)	5 – 6 Sept	22 PICT personnel (NDMO, Fire, Police) (27% female)	AFAC	FJD 220,000	Improved understanding emergency management and risk across the Asia-Pacific region in an evidenced-based setting.
Fires Rescue Services	Timor Leste	16 Jan	35 Bombeiros officers - Dili headquarters (31% female)	NTFRS	USD 8,225 (travel costs only from BSRP)	Officers increased their knowledge on International standard approach on Fire Rescue Services.
Capability Building Assessment	Timor Leste	18 Jan	25 Bombeiros officers –Aileu Municipality (8% female)	NTFRS		Officers were trained in Capability Building Assessment and were able to contribute to the capacity building plan for bombeiros in Timor Leste. 10 Bombeiros officers visiting from Dili headquarters (10% female) also joined, but have not been included in participant numbers.
Emergency equipment maintenance, Hazmat and jaws-of-life	Timor Leste (in Darwin)	25-29 Sept	5 Bombeiros Officers and 1 BSRP Timor Leste Project Manager (17% female)	NTFRS	USD 7,218	5 Bombeiros increased knowledge on international standard approach on Fire Services process, breathing apparatus, compressor maintenance, Hamzat and cutting cars.
Total			123 participants (20% female)			



10 PACIFIC ISLAND COUNTRIES CAN ATTEND TO FIRES FASTER AND REACH MORE COMMUNITIES IN DISASTERS



Looking ahead for PIEMA into 2018

PIEMA had an exceptional and ground-breaking year in 2017 – this work will continue in 2018 as SREMs in the Cook Islands, Kiribati, Samoa and Vanuatu are progressed to set a solid foundation for the next five years of PIEMA. In 2018, PIEMA will also finalise 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 endorsed by the beneficiary countries.

R1 - Effective preparedness, response and recovery

- To deliver, train and handover Mobile Emergency Operations Centre vehicles for Fiji, Tuvalu, Kiribati and Tonga.
- To deliver up to three firefighting appliances in Kiribati.
- To support the wider BSRP project in the construction and refurbishment of EOCs in participating countries (country reports refer) and the Search and Rescue Facility build in Samoa.
- To work with the Federated States of Micronesia (FSM) to develop proposals for the municipal emergency management structures.

R2 - Strengthened institutional arrangements for DRM and CCA

- Vanuatu's Fire Service Act to be finalised for submission and endorsement by Cabinet.
- Four SREMs to be completed and endorsed.
- To finalise and begin implementing the Kiribati three-year plan of engagement to improve fire services.
- To progress Australian Interagency Incident Management System (AIIMS) adaptation and implementation for Fiji, Samoa and PNG. Incident Management Systems (IMS) / Incident Command Systems (ICS) will remain as a focus moving forward for PIEMA.

R3 - Improved knowledge, information, public awareness, training and education

- To provide a Fire Industry Association (FIA) audit and specialist training in Melbourne for the Samoa Fire Service.
- To provide IMS Phase 3 training in PNG.
- To roll out the SAR CAT 1 program with AFAC partners through the National Fire Service and NDMO in Samoa.

SUCCESS STORY



PIEMA LEVERAGES PARTNERSHIPS TO SECURE ITS OWN PROJECT

PIEMA was officially created in 2014 as a part of the BSRP Project. In 2017, it was elevated to its own standalone project, a testament to this work and the dedicated support offered by the EU and ACP Group of States as part of this BSRP project. PIEMA has been able to leverage funding from Australia's Department of Foreign Affairs and Trade (DFAT) and New Zealand's Ministry of Foreign Affairs and Trade (MFAT) to become its own five year project implemented by SPC ensuring the work can be sustained for a longer term into the future.

As part of PIEMA, SPC's GEM Division will provide the secretariat support base during the life cycle of the project. The PIEMA project management team - comprising a Project Manager, Emergency Management Capability Advisor and an Administrative and Finance Officer - will be based within the GEM Division, and will be responsible for the overall co-ordination and facilitation of the project objectives, including to continue working in AFAC partnership with BSRP over the coming year. As BSRP begins to finalise its work, the PIEMA project will increase capacity and technical capacity to support the

region over the coming years.

PIEMA will comprise three major components:

- **Project Management** - facilitating project outcomes and activities included in the PIEMA Strategic Agenda 2020, and developing new strategies to enhance the effectiveness of emergency services in the Pacific region.
- **Regional** - facilitating regional activities such as information and knowledge management, capacity-building, professional attachments and technical assistance; and
- **National** - facilitating specific country activities including workshops, attachments and technical assistance.

PIEMA will also coordinate the role of the Pacific Island Liaison Officer Network (PILON) led by AFAC. This important initial step will provide a robust platform for the development of sustainable emergency management services within the Pacific region.

DISASTER RISK COMMUNICATIONS

INTRODUCTION

Under BSRP the Disaster Risk Communications workstream aims to increase disaster resilience within the 15 participating Pacific Island countries through targeted communications materials, whilst supporting increased visibility of the project and partners themselves.

DETAILED OUTCOMES

R3 - Improved knowledge, information, public awareness, training and education

- The Fijian Get Ready Disasters Happen Campaign focused on the need to increase disaster awareness after the devastating impact of Cyclone Winston in Fiji. [FJD 30,000 SPC commitment. Total partnership cost FJD 100,000]

During Lessons Learned research across the country, it was overwhelmingly found, that many communities did not understand the severity of a category 5 cyclone. In addition, this post analysis work identified confusion over where to find accurate information and general lack of understanding of broad disaster awareness. As a result of these findings, the Fijian NDMO in partnership with the Ministry of Health (supported by the United Nations Children's Fund (UNICEF) and SPC) undertook a full redesign to create a simplified disaster awareness campaign to be launched during the next disaster season.

Taking a scientific approach to this work meant baselining communities in 2016 to understand their level of knowledge in disaster resilience - it was found that 53% of respondents relied solely on social media during the cyclone for disaster updates. In addition, respondent use of terminology linked to storm surges, categories of cyclones and actions required in times of disaster, was unclear – this led to a complete redesign of these messages in early 2017. The new messages were then tested again with communities to determine understanding, and the revised campaign was officially launched in December 2017 during the most recent cyclone season.

The Get Ready Disasters Happen Campaign is an example of partnership development with SPC becoming one of the technical partners in this work with government and UNICEF. The campaign was co-funded with UNICEF, with FJD 20,000 committed by SPC under BSRP specially targeted at the three-month mainstream and social media dissemination campaign.

- Understanding the impact of disasters on the private sector has been critical in developing a Disaster Ready Business Toolkit for the region. [FJD 39,916]

SNAPSHOT 2017*Key achievements*

- *Together with the private sector, BSRP researched, tested, coordinated and launched a highly successful disaster-ready toolkit for business – this is now being rolled out directly ensuring longer-term sustainability (www.pipso.org.fj/stayopen).*
- *Redeveloped, designed and launched disaster awareness messaging in a mainstream media campaign throughout the Fijian disaster season (www.getready.gov.fj) in partnership with the Fijian NDMO, Fijian Ministry of Health and UNICEF.*
- *Coordinated and delivered Regional Resilience Media Training for regional journalists. It was focused on increased understanding of disaster resilience and climate change in line with the Sustainable Development Goals (SDGs).*
- *Advised the region's government representatives, leaders, ministers and NDMO directors at the Global Platform for DRR in Mexico.*
- *Coordinated and delivered events for Pacific Resilience Week in Suva, Fiji represented by all PICTs. This included high-level meetings with NDMO Directors.*
- *Completed a documentary outlining the lessons and work of Tukuraki Village relocation. This was published at the 23rd Conference of the Parties (COP23) to the United Nations Framework Convention on Climate Change (UNFCCC) in Bonn Germany where Fiji was the President of the meeting outlining the reality and impacts of climate change and disasters on the region to a global audience. An additional four documentaries were drafted, and are to be completed in early 2018.*
- *The BSRP project selected as a key project for the EU writing competition to showcase highly successful projects internationally.*

Since its 2017 launch in Fiji (in partnership with the Pacific Islands Private Sector Organisation (PIPSO) and the Fiji Business Disaster and Resilience Council), this Toolkit met with significant success. The toolkit outlines six key areas that support private sector resilience with easy-to-use factsheets, infographic videos, and a business continuity planning (BCP) tool that helps businesses to understand their needs before, during, and after disaster. More than 100 businesses have already been trained in how to develop a BCP plan within the region utilising this tool.

The toolkit was presented as an innovative tool developed in the Pacific to other private sector resilience agencies at the Global Platform for Disaster Risk Reduction (Cancun, Mexico) and the Association of Southeast Asia Nations (ASEAN) Business Summit. It is being used for train-the-trainer sessions currently being rolled out across Fiji. In addition, seven (7) Pacific countries have directly requested localised versions of this toolkit to support increased private sector resilience in the region. This has become a focus for 2018 with the tool being translated into vernacular along with exploratory sessions and trainings in a minimum of five (5) countries. See Success Story below for more details.

- A one-week training for more than 38 journalists and communications professionals (28 females, 18 males) from across the Pacific region was held in Fiji in May 2017 to increase their understanding of the regional dimensions to sustainable and resilient development, and equip them with tools to improve their coverage of these issues. This training was a highly effective partnership coordinated by the BSRP project



in partnership with SPC's Ridge to Reef project, the United Nations Development Programme (UNDP) and the Pacific Island Forum Secretariat (PIFS). See Success Story below for more details. [FJD 18,348]

R5 - Enhanced partnerships in DRM and climate change

- Pacific Resilience Week was held in October 2017, and for the first year since 2013, the Joint Platform for DRM also encompassed the Climate Change Roundtable. This brought together the two communities of practice to work together on the key agreed outcomes.

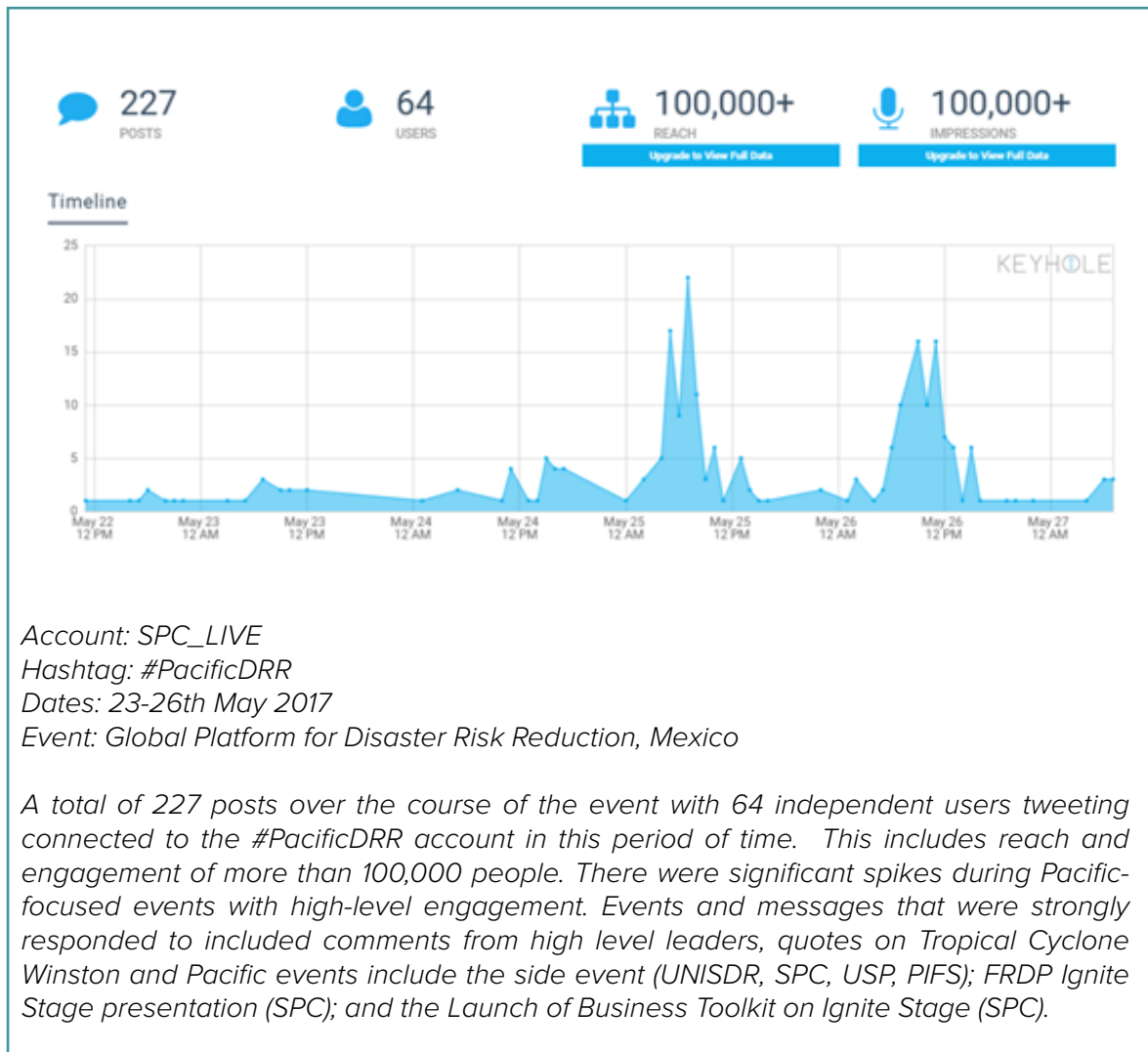
The BSRP Communications team undertook a lead coordination role for SPC in developing the week and managing sessions across the week of events. This included the Pacific Humanitarian Partnership Meeting (UNOCHA), the Pacific Platform for DRM and Climate Change Roundtable (Secretariat of the Pacific Regional Environment Programme (SPREP), United Nations Office for DRR (UNISDR), SPC), Climate Change Roundtable, and the Regional BSRP Steering Committee. [EUR 11,441]

A total of 350 participants from the region and international areas attended the meetings bringing together DRM, climate change, humanitarian actors, private sector, non-government agencies, and civil society to discuss and find ways forward for the implementation of FRDP. Outcomes for each meeting were reached with reports completed for all meetings.

- The BSRP Communications Advisor was part of the lead delegation for the Pacific at the recent Global Platform for Disaster Risk Reduction (Cancun, Mexico; May 2017). This work supported Pacific Island leaders, Ministers, NDMO Directors and coordinators in representing the integrated DRR/CCA-based work, policy and implementation already being undertaken across the region in partnership with BSRP. It has elevated some of the significant work undertaken in the region to international audiences, including the FRDP endorsed in 2016 which was funded and supported by BSRP.

The Pacific is a global leader in integrating DRR/CCA, with the FRDP being commended globally for its innovative approach and unanimous regional endorsement. The representation of PICTs throughout high-level talks, ACP meetings, social media, and international press coverage was immense across the course of the meeting, with the Pacific voice having significant impact on the meeting outcomes.

A total of 16 stories - both regional and international - covered Pacific issues across the three-day meeting. Pacific delegates were involved and spoke in 17 high-level presentations and reflections were collected from nine Pacific delegates. More than 100,000 people engaged with social media posts (led by the communications team) over the duration of the meeting.



- In 2017, there were 75 independent media articles outlining the success of the BSRP project with evidence-based stories. Promotional project items were dispatched in all 15 countries ensuring high visibility and branding of the project including project banners for all countries. Ten technical publications were designed, printed and shipped to countries including Joint State Action Plans for FSM, an Action Plan and Fire Reduction Strategy for Samoa, a Community-Based Disaster Risk Management Framework for Palau and many more. This is testament to the high quality being produced by the project.

LOOKING AHEAD 2018

2017 again built on the success of previous years for the team with the finalisation of three large scale projects, coordination of a regional meeting and support for a global meeting again support success for the BSRP Communications team and contractors.

The key focuses for 2018 are outlined below.

R3 - Improved knowledge, information, public awareness, training and education

- Using the Get Ready Disasters Happen campaign 'template', to develop and roll out disaster awareness campaigns or Disaster Ready Toolkits across five countries.
- To undertake exploratory workshops in three countries, translate and deliver localised Disaster Ready private sector toolkits in five Pacific Island countries.
- To complete 12 visibility plans across Fiji, Samoa, Solomon Islands, Cook Islands, FSM, RMI, Palau, Nauru, Niue, PNG, Tuvalu, Vanuatu.
- To implement three in-depth visibility plans in Kiribati, Tonga and Timor Leste.
- To develop a behaviour-change disaster awareness communications campaign and strategy for Samoa.
- To develop a disaster awareness handbook for Niue to benefit the entire population.
- To research 30 BSRP evidence-based success stories, and contribute to the project's monitoring and evaluation work.
- To complete six documentaries outlining key lessons and success and nine detailed policy briefs.
- To complete a minimum of 10 infographics outlining success.

SUCCESS STORIES



Partners



More than 30 journalists and communications professionals from across the Pacific region came together as part of a one-week training in Fiji in May 2017 to increase their understanding of the regional dimensions to sustainable and resilient development, and equip them with tools to improve their coverage of these issues. This training was a highly effective partnership coordinated by the BSRP project in partnership with SPC's Ridge to Reef project, UNDP and PIFS. A total of 38 individual and group stories have been submitted by the participants which then were reviewed and provided back to the teams.

The training focused on increasing regional understanding of global and regional frameworks - pre- and post-evaluation surveys and testing shows a significant increase in understanding of these frameworks across participants.

As a result of this training more trainings within countries outlining key resilience and Pacific regionalism issues has been requested with phase two proposals for country-based communications trainings being proposed by both participants and partners in the future.



A disaster-ready toolkit developed by SPC in partnership with private sector is increasing resilience and leveraging partnerships for businesses in the Pacific region. The Disaster Ready Toolkit (www.pipso.org.fj/stayopen) was led by SPC's Building Safety and Resilience in the Pacific project in partnership with the private sector and it has since led to the development of targeted training for private sector on how to use and develop their own business continuity plans.

Estimates show more than a quarter of businesses fail after a disaster, while 75% of businesses without business continuity plans fail within three years of major disasters.² In the Pacific, more than 80% of private sector consists of small and

medium-sized enterprises (SMEs) and anecdotal research shows most SMEs do not have business continuity plans.³ In 2016, Tropical Cyclone Winston cost Fiji FJD1.99bn in losses and damages. The cost to the private sector accounted for 64% of these losses, amounting to FJD 1.5bn.⁴

In 2015, Tropical Cyclone Pam cost Vanuatu losses equivalent to 64.1% of Gross Domestic Product (GDP) after the category 4 cyclone tore through the island nation.⁵ The staggering cost that is born by the private sector means helping the sector to become more resilient - not only supporting overall community resilience by keeping people in employment, but ensuring support for longer-term

economic growth of the region more broadly.

The toolkit was launched in June 2017, after being presented at the 2017 United Nations Global Platform for Disaster Risk Reduction in Mexico. A working group was established and research on the cost and impact of disasters on the private sector was undertaken by the SPC team during June-December 2016. In addition, exploratory workshops and a survey were conducted with more than 200 businesses to determine: how they communicate in the region; what level of knowledge they already have about resilience; and if they already had their own business continuity plans.

These anecdotal findings, along with research available

²Civil Defence. Wellington Region Emergency Management Office. *It's Easy. Get prepared for an emergency. Prepared Business Edition.*

³2017. Pacific Islands Private Sector Organisation URL: www.pipso.org.fj

⁴Fiji Government. (2016, May). *Post-Disaster Needs Assessment: Tropical Cyclone Winston*. Retrieved February 24, 2017, from Relief Web International, <http://bit.ly/2kSlhPH>

⁵Government of Vanuatu., (March, 2015). *Post-Disaster Needs Assessment: Tropical Cyclone Pam* retrieved from Pacific Disaster Net <http://bit.ly/2mqPeCJ>

at SPC on the cost and impact of disaster from existing loss and damage statistics were collated and developed into six key information packages. These packages include infographic videos and factsheets along with a Pacific-focused BCP template. The toolkit was then embedded into PIPSO's website www.pipso.org.fj/stayopen resulting in sustainability of the tools and broader access by the private sector to the toolkit. SPC led the research, design and coordination of the toolkit.

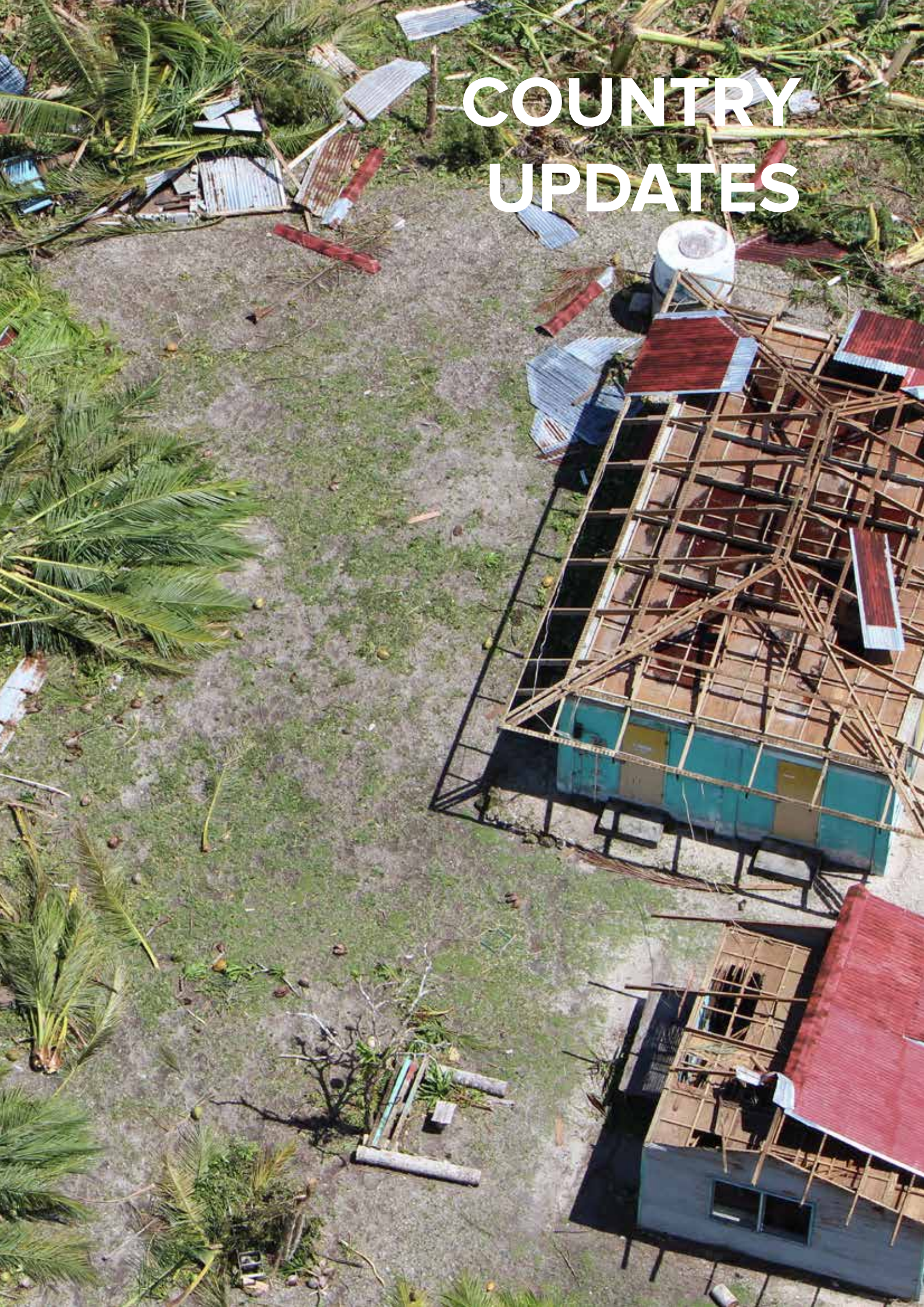
As a result of increased understanding for disaster resilience within the private sector, the Fiji Business Disaster and Resilience Council (who is a leader in this area in the region) has secured a country-wide training grant to roll out BCP for the Fijian private sector with support from the SPC team. More than 30 business leaders have already been trained on how to use the toolkit, targeting their supply chains to ensure increased resilience from the ground up, and being led by the private sector.

Requests by National Disaster Management Teams in Samoa, Cook

Islands, Tonga, Fiji, and Solomon Islands to create a localised versions of the toolkit have also been received, with Chambers of Commerce from these countries also wanting to partner to create these tools at national level. An increased number of partnerships in this area is critical for regional resilience. The Chair of the Fiji Business Disaster Council, Ms Morika Hunter, who launched the toolkit on behalf of all private sector partners in June 2017, felt this is an innovative initiative that supports effective engagement with private and public sectors, which is critical for disaster risk resilience in the region. "Research shows a resilient private sector supports a resilient community, so ensuring Pacific businesses are able to reduce the cost of disaster impact on their bottom line is critical to also ensuring communities are supported," she said.

The SPC team has since been able to secure an additional FJD 85k to complete a regional rollout of the toolkit, with translation into vernacular and BCP training planned for an additional three countries in 2018.

COUNTRY UPDATES





COOK ISLANDS

INTRODUCTION

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 Gross Domestic Product (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.

PROJECT SNAPSHOT 2017*Key achievements*

- *Emergency and Disaster Management manual for people with disabilities was printed and translated into Cook Islands Māori.*
- *The SREM for Cook Islands was developed.*
- *Emergency shelters in four village council (Puna) areas were retrofitted.*
- *The building code review is nearing completion.*

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 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 Islands.⁶

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 DRR and CCA (JNAP) is increasingly seen by sector stakeholders as the main planning document for DRM and 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**

- Work on three village council (Puna) emergency shelters/EOCs has begun. [NZD 30,000]

R2 - Strengthened institutional arrangements for DRM and CCA

- A BSRP-funded review of the Cook Islands National DRM Plan (NDRMP) was completed with in-principle endorsement by the National Disaster Council. It will replace the Cook Islands National Disaster Risk Arrangements 2009. The NDRMP is mandated under the 2007 DRM Act. The Review of the 2009 Plan and Arrangements focussed on enhancing links with the DRM Act, resilience building at all levels, and reaffirming that DRM is “everyone’s business”. [NZD 14,000]
- A review of the Cook Islands National Building Code has been undertaken by BECA Consultants and managed by the government agency Infrastructure Cook Islands (ICI). The review process included national stakeholder consultations – a workshop involving a range of government and private sector stakeholders had 49% representation from women.

The process is now in its final stages, and the Building Code has been updated to reflect the most up-to-date international standards. The review includes guidance on the overall building permit application process and design requirements. Updates

⁶Pacific Catastrophe Risk Assessment and Financing Initiative, 2011. ADB/World Bank.

from the consultant (end of June 2017) include revising the 'Home Building Manual' to allow use of standards similar to the New Zealand Standards (NZS 3604 and NZS 4229) for home building (where applicable) and providing guidance on cyclone tie-downs (which can be installed if necessary to provide resilience in the face of stronger cyclones). [NZD 75,000]

R3 - Improved knowledge, information, public awareness, training and education

- Forty Emergency and Disaster Management Toolkit for People with Disabilities training manual booklets have been printed in English (20) and Māori (20), along with additional brochures. Costs incurred included the purchase of a laptop to complete the work and translation costs. [NZD 11,000]
- DRM and tablet/internet access training for 4 women and youth completed as part of the Women's Project for Rarotonga (Outer islands) working with the women's non-governmental organisation (NGO) 'Au Vaine' Cook Islands. Au Vaine DRM Training for Women and Youth held titled 'Supporting Women & Youth to Implement DRM & CCA Activities', March 2017 [NZD 20,000]

R5 - Enhanced partnerships in DRM and climate change

- A National SREM has been developed which details strategic approaches for improved emergency management in the Cook Islands with a view to moving toward better integration (interoperability) using an all hazards, all agencies approach.

In May 2017, a two-day meeting/consultation workshop was held (hosted by Cook Islands Red Cross) with the various Cook Islands emergency management agencies to help inform the SREM development. The finalisation of a nationally-endorsed plan that identifies and strategically responds to the specific challenges faced in emergency management represents a significant step for the emergency and DRM sectors in the Cook Islands. [NZD 15,000]

LOOKING AHEAD 2018

R1 - Effective preparedness, response and recovery

- To complete renovations of the emergency shelters/EOCs.

R2 - Strengthened institutional arrangements for DRM and CCA

- To complete the Building Code review in early 2018 with final consultations and final publication.
- To finalise and publish the Cook Islands SREM and move to implementation in the third quarter of 2018 following the Phase 2 national consultation in the second quarter.

R3 - Improved knowledge, information, public awareness, training and education

- To continue support of Punas by providing first aid training.
- To continue to work with women's groups on disaster awareness and understanding necessary technology on outer islands.

R4 - Improved understanding of natural hazards and the reduction of the underlying risks

- To complete the GEOPORTAL on the remote northern island survey work has occurred.

SUCCESS STORY

Safer buildings to withstand future disasters pegged for the Cook Islands

Safer buildings to withstand future disasters pegged for the Cook Islands
A new building code is in its final stages for the Cook Islands. It will help ensure new and existing new infrastructure will withstand the ferocity of future disasters that hit the country.

Consultations have been held across the country with more than 250 key stakeholders from the private sector, tourism industry, government agencies, civil society and local leaders to ensure the newly developed Cook Islands Building Code responds to the needs of the country into the future.

The work is being led by the Ministry of Infrastructure Cook Islands (ICI) in partnership with Emergency Management Cook Islands (EMCI) and carried out by BECA Consulting Group as partners.

Secretary of ICI, Mr Ngametua College Pokino said the building code is currently outdated and this is one of the reasons the review has become a priority along with the critical need to strengthen buildings across the country.

“The intensity of cyclones we can expect is part of the reason we are prioritising this work especially the lessons learned from the Aitutaki cyclone in 2010 where 70% of the island was flattened by Cyclone Meena. Also what’s just happened in Fiji with Cyclone Winston means we want to be prepared for future disasters like that and that means we need to improve our

buildings,” he said.

Mr Pokino said this a problem across the entire region as the impact of climate change becomes reality and said the Cook Islands want to lead on ensuring infrastructure is up to standard.

“A lot of new homes are currently being built and with increased tourism numbers there is also increasing resorts and accommodation which is putting existing infrastructure under stress but is needed to support the increasing demand into the future and to keep our country safe,” he said.

As part of the exhaustive consultations, the team met with local builders, trade schools and architects to discuss the needs and achievable means to increase the current standards that were written in 1990.

The final legislation is expected to be written and endorsed by Cabinet by the early 2018 with a supporting building code manual to accompany the legislation to ensure the practical use of increased standards.

The manual will provide easy-to-understand instructions, minimum requirements and tools to support builders across the country and the Ministry of Infrastructure hopes to launch a public awareness campaign and training course for remote builders to ensure the standards are meaningfully applied.



FEDERATED STATES OF MICRONESIA

INTRODUCTION

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 four 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 2017*Key achievements*

- *Chuuk Joint State Action Plan for DRM and climate change finalised.*
- *National DRM Platform combined with Climate Change summit to be a 'Resilience Platform'.*
- *Key DRM roles being given more permanence and prominence.*

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/typhoon; wildfire; and man-made hazards (hazardous material incidents and terrorism).

In 2013, FSM adopted the Nationwide Integrated CRM 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 Climate Change, 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. In 2017, all Joint State Action Plans were completed, finalised, printed and disseminated across the country along with the printing and dissemination of the National Disaster Response Plan.

Detailed outcomes**R1 - Effective preparedness, response and recovery**

- Despite facing outer-island transportation issues, BSRP installed six (6) solar panels, 12 deep-cycle batteries and three high-frequency radios in the FSM states of Chuuk, Kosrae and Pohnpei with benefits flowing to 10,500 people. [USD 5,366]

R2 - Strengthened institutional arrangements for DRM and CCA

- Chuuk Joint State Action Plan for DRM and climate change finalised. [EUR 18,784]. The Joint State Action Plans for Kosrae, Yap, Pohnpei states have been printed and used to develop funding proposals from a range of donors including the Green Climate Fund and the Pacific Adaptation to Climate Change Plus.
- The National Response Plan has been rolled out in all four states with the review of their State Disaster Plans and development of standard operation procedures.
- FSM had previously included the National DRM Platform in their operational budget. They have now combined this with the Climate Change summit to be called the 'Resilience Platform'. It will be held bi-annually beginning in 2018.

- BSRP continued to fund the Coordinator roles [Total: USD 85,148]. This long-term human resource investment has aimed to increase DRM understanding and mainstream DRR/CCA across the Yap and Chuuk States (which have a combined population of over 60,000). The roles have also assisted implement critical work and understanding at the country-level. The roles are being transitioned into the core FSM government structure once BSRP funding ends, so that the government can continue to deliver on the Joint State Action Plans in DRM and CCA going forward.
- Pohnpei State has created a Division of Fire and Emergency Service within the Department of Public Safety, thus elevating the Disaster Officer to Chief of Division.
- In Yap, the State Emergency Operations Centre (EOC) is now manned 24/7 by Fire personnel on a shift basis. It has a Permanent Manager ensuring the centre is fully operational and not only opened when an imminent threat is detected. The incumbent will coordinate preparedness and risk reduction activities when not in response.

R3 - Improved knowledge, information, public awareness, training and education

- The International Day for Disaster Reduction was celebrated in all four states with activities involving children at elementary and high schools. It is anticipated that their active involvement will not only impact them and their behaviours personally, but will also lead to them advocating to their families and communities on the theme 'Home Safe Home'. [USD 11,726]
- Tsunami evacuation areas around main the Pohnpei Island have been mapped and signs installed to inform the public where to evacuate to when a tsunami warning is issued. Directional signs have also been installed along the routes to the evacuation areas. [USD 12,825]

R5 - Enhanced partnerships in DRM and climate change

- Supported FSM to have representation at the Pacific Resilience Week and BSRP RSC. [USD 15,393]
- Held the fifth FSM National Steering Committee (NSC) meeting to ensure that BSRP activities continue to be locally owned and appropriately overseen by local stakeholders. [USD 12,072]

LOOKING AHEAD 2018

R1 - Effective preparedness, response and recovery

- To complete the construction of the walkway between the EOC and Governor's office in Kosrae.

R2 - Strengthened institutional arrangements for DRM and CCA

- Continued support for the Coordinator roles until they are both transitioned into core government-funded roles.

R4 - Improved understanding of natural hazards and the reduction of the underlying risks

- The spatial data framework to be finalised by mid-2018.

SUCCESS STORY



The Awak Elementary School sits on the edge of shore looking out over the waters of FSM. The land was donated by a local landowner more than 40 years ago who recognised the need for a local school to cater to the five neighbouring communities.

More than 20 feet of erosion in the past 30 years has chipped away at the schools boundaries putting one of their large concrete buildings at risk. To protect the classroom and make it safe for students to play outside, a seawall was constructed over 18 months and completed in September 2016.

In July 2017, a BSRP project team went to the community to review the seawall and to monitor the success of the project. It was found that there had been no further erosion since the seawall was installed. With the land drying out, it had been deemed safe again for students to use during school hours.

This seawall prevented the loss of the school's double story classrooms and ensured the school can continue to cater for the surrounding communities. The closest school from Awak is more than 30 minutes away from these communities, which would create a significant barrier for families to access education if Awak Elementary was forced to close.



FIJI ISLANDS

INTRODUCTION

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 884,887 (2017 census), 69% of which are under 40 years. 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. The country's GDP per capita is FJD 7,986, and it is seeing growing urbanisation (494,252 deemed urban in 2017 compared to 424,846 in 2007).

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 the severity of cyclone systems, though the number per year may not vary. Rising sea levels, extreme precipitation, storm surges and thunderstorms have caused devastating flood damage in recent years. About every five 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 being 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.

Around 31% of the national population was classified as being poor in 2008/09, down from 35% in 2002/03. While poverty in urban areas dropped dramatically from 28% to 18%

⁷Children in Fiji: 2011 An Atlas of Social Indicators, UNICEF (2011)

⁸Fiji Government. 2017. Fiji Bureau of Statistics, retired January 2018 URL: <http://www.statsfiji.gov.fj/>

⁹Fiji Government. 2017. Fiji Bureau of Statistics, retired January 2018 URL: <http://www.statsfiji.gov.fj/census/infographics>

PROJECT SNAPSHOT 2017*Key achievements*

- Completed the relocation of Tukuraki Village so the community is more 'disaster ready', after it has been displaced for more than five years as a result of previous disasters.
- Completed District Emergency Operations Centre refurbishment.
- Prepared and published a documentary outlining the reality facing communities forced to relocate due to climate change which premiered in COP23 (Bonn, Germany).
- Launched new disaster awareness campaign for Fiji in partnership with NDMO, Ministry of Health, UNICEF Pacific and SPC.

over this period (a 34% reduction), poverty in rural areas increased by 6% from 40% to 43% of the population. Moreover, children are disproportionately affected by poverty - half of all families with two or more children live in poverty.

DRM 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 Summit outcomes, Sendai Framework for DRR and FRDP warrants the review of the Act.

DETAILED OUTCOMES**R1 - Effective preparedness, response and recovery**

- The relocation of Tukuraki village was completed in October 2017. This included: all road access; site levelling; building 11 disaster-safe homes with toilets and bathrooms, and an evacuation centre; improving water supply with 10 water tanks for the community; constructing retaining walls for safety; and support for income generation through the building of a tilapia fish dam. See Success Story below for more details. [FJD 759,305]
- Refurbished the Tavua, Nadi and Lautoka District EOCs. [FJD 141,236]

R3 - Improved knowledge, information, public awareness, training and education

- The engagement of a BSRP in-country coordinator for the 2016-2018 period has increased the speed of delivery and overcome procurement and finance challenges. [FJD 90,000]
- Finalised the Fijian Get Ready Disasters Happen campaign, which was launched in December 2017 by the Health Minister and Permanent Secretary of the NDMO, Mr MeletiBanimarama. The disaster awareness campaign was tested with community members and is now part of a three-month campaign across all mainstream and social media nationally – see also comments in Communications section. [BSRP FJD 20,000, cost funded by other partners FJD 100,000]
- Created a documentary to showcase the lessons learned along with a factsheet outlining the stages and steps required to relocate the entire Tukuraki Village community. These items premiered in Bonn, Germany – see also comments in Communications section. [FJD 5,000]

- Tsunami warning arrangement training for 44 participants (32% female) from national, regional and international organisations was co-funded by BSRP and the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organisation (UNESCO/IOC). [FJD 6,000]

R4 - Improved understanding of natural hazards and the reduction of underlying risks

- Finalising development of the Integrated Vulnerability Assessment (IVA) in parts of Cakaudrove province on Vanua Levu. [EUR 60,000]

R5 - Enhanced partnerships in DRM and climate change

- Developed baseline for, and are currently testing a disaster awareness campaign nationally with 5,000 copies of each of the Get Ready Disasters Happen materials printed and distributed country wide through NDMO and Ministry of Health partners. This activity is led by the Fijian NDMO in partnership with SPC, UNICEF and Ministry of Health - see also comments in Communications section. [FJD 30,000]

LOOKING AHEAD 2018

R1 - Effective preparedness, response and recovery

- To prepare and handover a mobile emergency operations vehicle for Fiji.
- To transfer of PIEMA emergency management assets donated by Queensland Fire Authority.
- To refurbish five EOCs for Central and Northern Division Districts and the Suva NDMO office.

R2 - Strengthened institutional arrangements for DRM and CCA

- To complete the review of the DRM Act and Plan in partnership with the Red Cross once it has been endorsed by Cabinet.
- To continue support for BSRP Country Coordinator based at the NDMO.

R3 - Improved knowledge, information, public awareness, training and education

- To finalise the Get Ready Disasters Happen Campaign with full mainstream media distribution completed in February 2018.

R4 - Improved understanding of natural hazards and the reduction of underlying risks

- To complete development of the IVA tool to ensure increased understanding of community disaster risk and strategic development.

SUCCESS STORY



Aerial shot of Tukuraki village

We are famous for our white sandy beaches and crystal waters in the Pacific but our region is also amongst the first to witness displacement of people caused by climate change.

Being at the forefront of climate change means for Pacific peoples that the risk of disasters such as cyclones, droughts, storm surges and landslides are predicted to worsen with many communities already witnessing changed weather patterns.

The Pacific has inevitably found itself also at the forefront of adaptation to strengthen its resilience: we are learning how to adapt to the risks brought on by climate change and disaster through navigating the challenges presented by it.

The Building Safety Resilience in the Pacific (BSRP) Project, funded by the European Union and implemented by the Pacific Community, is a project that provides 15 Pacific countries, including Timor-Leste, with scientific and technical expertise to reduce the vulnerability caused by disasters and climate change including the reduction of environmental losses, social impacts and economic costs.

The reality of climate change and increased severity of disasters mean many communities are at risk of losing their traditional homeland, as tides chip away at the shoreline, sea levels continue to rise and inland communities are struck with disasters such as landslides; leaving many communities devoid of safer and more disaster resilient land.

Recently, the BSRP project, in partnership with the Fiji government assisted with the successful relocation of Tukuraki village, the first inland indigenous community to be

relocated in the country.

In Fiji, 600 communities have been identified for relocation from the impacts of climate change, Tukuraki Village is one of the 46 priority communities for immediate relocation.

The story of resilience displayed by the people of Tukuraki village, amidst disasters, serves as a lesson for all, on the reality of what climate change looks like in the Pacific and how we, as a region, should adapt development practices to support sustainable development.

One of the significant lessons of relocating an entire village is the impact it can have on traditional roles and cultural implications. The loss of land and how the adoption of new land affects the way people relate to their traditional practices and each other is a challenge that Tukuraki Village had to carefully navigate through during its relocation process.

MULTIPLE DISASTERS PUMMEL TUKURAKI

In January 2012, Tukuraki Village received more than 939mm of rainfall in three days, more than double the average monthly rainfall for January, causing a landslide that buried the community and tragically killed a family with two small children.

The landslide decimated 80% of the village – destroying road access, water supply, homes and crops critical for the community's subsistence living.

The Mineral Resources Department which had to use a helicopter to access the remote village deemed it unstable for habitation and the community now had to flee their homes, just eight hours after the disaster.

For indigenous Fijian communities, to relocate also means leaving behind customary land which are inextricably linked to their traditional practices and identity.

Livai Kididromo, the village spokesperson said it was an emotional time for his community.

"For almost two years we lived in different locations without our extended families," he said.

"As Fijians, the land is everything, it connects us to each other and it is what keeps us grounded. Through the land we know where we stand. When we lost our village, we didn't know whether we would ever get it back. We were lost."

Fleeing their village fragmented the community: some moving to urban areas to live with relatives and others choosing to weather the storm and build temporary homes along the narrow edges of roadway, in the hope the community could rebuild.

However, their doubts and fears about the future of their village worsened when they were hit by Cyclone Evan (Category 4) 11 months after their initial displacement (2012) and in 2016, Tropical Cyclone Winston (Category 5), the strongest ever recorded cyclone to devastate Fiji's shores, destroyed their makeshift village. These multiple disasters forced the community into caves where they lived for weeks, to protect themselves from the destruction of cyclonic winds.

For Mr Kididromo, carrying out his traditional role as the village spokesman was impossible.

"Living apart is quite difficult, especially when we aren't in our own village and have to depend on others to survive," he said. "Displacement affects everyone, it affects our children and their schooling, and it affects our church obligations and our vanua (traditional) obligations."

Livai village spokesperson

Tukuraki - Honey Boxes as part of the sustainable livelihoods project implemented by the Fiji Gov



RELOCATION CHALLENGES IN THE PACIFIC

Land tenure structures in most Pacific countries is closely connected to traditional practices, culture and family lineage: in Fiji, reference to land includes the ocean for those in coastal communities.

Land-owning units (mataqali) govern land ownership; one's land connotes ancestral responsibilities and cultural practices, the capacity therefore to relocate communities due to disaster risk or climate change can be a challenge.

In the case of Tukuraki, the community approached mataqali Yalimara through traditional protocols for assistance; the latter gifted a piece of land to the Tukuraki community which allowed them to rebuild and bring back those who had fled to relatives in urban centres.

It is an uncommon practice for land to be shared freely between two clans. The unique circumstance Tukuraki found themselves in, opened up the conversation around land negotiations for displaced communities.

"We are very proud people, our old village provided us with everything we needed until the landslide. For us, it was difficult to ask for the land to live on because we knew how much value the land holds to our Fijian people," Simone Deruru, the Tukuraki turaga-ni-koro (village headman) said when discussing the difficulties of negotiating traditional dynamics in their negotiation process.

"The issue that concerned landowners was the conditions around giving their piece of land to another village to own. The people of Tukuraki needed a place where they could rebuild, a place where their future generations would live and most importantly a place where it was safe and protected from disaster.

"At that time, mataqali Yalimara were leasing

that particular land for agricultural use so the decision to gift the land to another village meant losing a source of income."

After many talanoa sessions around the kava bowl, the mataqali Yalimara decided to support the community of Tukuraki; it is known that the subject of land ownership is a sensitive topic for indigenous Fijians, and even more so when vulnerable communities are in this situation.

The loss of land is more than just about losing their homes, it is about losing their claim to be legitimate. By re-establishing their village, the people of Tukuraki were able to rebuild their homes but more importantly, reaffirm their "belonging" as a people to the land and its practices.

A NEW, DISASTER RESILIENT TUKURAKI

The cost of rebuilding the village was FJ\$756,000 or US\$363,000 – an estimate cost of an average home in most developed countries but the Tukuraki project comprised 11 homes, road ways, drainage, an evacuation centre built to the highest cyclone certification level, a playground and clean and safe drinking water.

The land negotiations were complete in November 2015, reconstruction began in June 2016 and the community moved into their new homes in October 2017.

The new site was assessed by the Mineral Resources Department to ensure it was suitable for the community to rebuild without further risk of disaster. Once the village was complete, all buildings were built to code and certified by the health department.

The BSRP project support included the construction of a retaining wall to prevent soil erosion, a drainage system to strengthen soil capacity and installed 10 water storage tanks

that supplies water for the whole community.

In addition to the homes, Tukuraki was assisted by sustainable livelihood projects with a tilapia pond, a poultry farm and capacity for honey production with 15 bee hives, ensuring food source and income-generation for the community.

The rebuilding of the new Tukuraki village was led by the Government of Fiji in partnership with the Pacific Community (SPC) team.

"For the first time in a long time, I can confidently say we feel safe in our new community and optimistic about the future. This process has not been easy but it has been worth the sacrifice," Mr Deruru said.

"My children will grow up in this community and they will consider this new location their home. When they think about where they come from, they will think about the new Tukuraki."

Dr Audrey Aumua, the Deputy Director General of the Pacific Community said the relocation project of Tukuraki manifested the best of partnerships.

"We provided a lot of scientific and evidence-based solutions for the relocation project and celebrate an incredible outcome of partnership between development partners and stakeholders support," she said.

"The most important aspect for us has been the lessons learnt because there will be increased need of disaster management in the Pacific, particularly in terms of approaching development issues with a combination of scientific and traditional considerations."

** This project is part of the EDF10 ACP-EU Building Safety and Resilience in the Pacific Project implemented by the Pacific Community, the chief scientific and technical agency in the Pacific region. The project is funded by the ACP Group of States and the European Union.



Dr Audrey Aumua SPC Deputy Director General, Minister Inia Seruiratu Fiji Government, Christoph Wagner Head of Cooperation European Union



Vilamaina Tukuraki Villager in the cave where they shelter from cyclone Evan and Cyclone Winston

FIJITIME



KIRIBATI

INTRODUCTION

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 USD 1.75/day.

Worldwide, Kiribati is well known for its vocal stance against climate change. A sea-level rise of more than 7.5cm 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 salinisation, 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 worked 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 2017*Key achievements*

- *Established five Island Disaster Committees (IDCs) on the outer islands of Kiribati in line with the Kiribati Joint Implementation Plan.*
- *Formalised a twinning partnership with South Australia CFS.*
- *SREM and three-year implementation plan developed (to be finalised in early 2018).*
- *Reviewed the Health Quarantine Act (with changes to be completed in 2018).*
- *Developed oil spill plan (to be finalised in 2018).*
- *Established a resilient agriculture nursery on one outer island.*

DETAILED OUTCOMES**R1 - Effective preparedness, response and recovery**

- Established five IDCs on the outer islands of the Gilbert Chain in Kiribati. An additional 13 IDCs will be established in 2018. See Success Story for further information. [AUD 32,500]
- Secured a site for the Emergency Coordination Centre at the Office of the President. Detailed drawings of the President's Office extension to cater for the centre are expected in early 2018, with the build expected to be finalised in September 2018. [AUD 70,000 budgeted]
- Oil Spill Plan developed - to be finalised in 2018. [AUD 15,000]

R2 - Strengthened institutional arrangements for DRM and CCA

- The BSRP Coordinator in Kiribati (recruited in mid-2016) has been able to support the NDMO to focus on project delivery and implementation. [AUD 34,000 ongoing for 2 years]
- Local community DRM capacity development work plan approved by the Office of the President/NDMO and Ministry of Internal Affairs. This collaboration with BSRP paved the way for the establishment of the IDCs for all islands in Kiribati (see R1 above). [AUD 175,000]

R4 - Improved understanding of natural hazards and the reduction of underlying risks

- The construction of the Biosecurity mini lab at Betio port is in progress. This aims to ensure that pest and biosecurity risks entering the country from ships are contained at the main port, reducing chances of spreading. [AUD 22,400]
- The construction of Cassidy Airport Meteorological office is in progress – the aim is to complete the build in early 2018. This will replace the dilapidated building that had been providing weather updates to the Cassidy Airport. The new building will ensure that the weather equipment is protected thus providing for more accurate readings. [EUR 27,109]
- The Kiribati Health Quarantine Act has been reviewed, with first draft submitted to the Attorney General's Office for vetting [AUD 7,200]
- In collaboration with the Ministry of Works, equipment for effective and accurate seawall assessments is being procured. The equipment is expected to arrive and be used in 2018. [AUD 13,751]

R5 - Enhanced partnerships in DRM and Climate Change

- SREM and three-year implementation plan developed. The plan is expected to be completed in 2018.
- Finalised twinning arrangements between Kiribati and the South Australia CFS with the donation of two fire trucks expected in early 2018 and assistance to increase understanding of how to best use the fire truck and equipment - see also comments in the PIEMA section. [EUR 3,752]
- Funding support for ensure representation of Kiribati to 2017 AFAC meeting. [EUR 4,588]

LOOKING AHEAD 2018**R1 - Effective preparedness, response and recovery**

- To establish the remaining 13 IDCs in the Gilbert Group.
- To finalise the SREM and begin implementing the three-year plan with support from the South Australian CFS.
- To finalise the Disaster Centre at the extended Office of the President.

R2 - Strengthened institutional arrangements for DRM and CCA

- To make final amendments to, and seek endorsement of, the Kiribati Health Quarantine Act.

R4 - Improved understanding of natural hazards and the reduction of underlying risks

- To complete the procurement of the seawall assessment equipment with the Ministry of Works.
- To complete the construction of the Biosecurity mini lab at Betio port.
- To complete the construction of Cassidy Airport Meteorological office.

R5 - Enhanced partnerships in DRM and Climate Change

- To facilitate the donation of two fire trucks and related advice from the South Australia CFS.

SUCCESS STORY

ISLAND DISASTER COMMITTEES (IDCS) MAKING PACIFIC ISLANDS MORE RESILIENT

Kiribati is divided into 3 island groups – Line, Phoenix, and Gilbert groups. In total, there are 23 islands and 16 of them are inhabited. The Line and Phoenix island groups are very remote and have higher risks to tsunami impacts and drought. To mitigate disaster risks at the community level, the 2012 National Disaster Plan made it mandatory for all island communities to have an IDC.

To support their establishment of all IDCs across the islands, the Kiribati government enlisted the support of the BSRP Project. The project, implemented by the Pacific Community, work with the National Disaster Management office to organise workshops and trainings to prepare IDCs for future disasters.

To date, there have been five IDCs that have been established in Abaiang, Onotoa, Tamana, Arorae and North Tarawa islands. The IDC workshop teaches

committee members about early warning systems, how to prepare their communities for a disaster, which communication channels to use during a disaster and how national disaster management plans are implemented. The workshop equips committee members with the right information and tools to help them organise their own communities in times of a disaster. The committee members also play a vital role in increasing community disaster awareness. They will be going into their communities and teaching them what they learnt from the workshop.

Having a framework that clearly demarcates the roles and responsibilities of key people in the community will allow for smooth coordination at a community and national level during a disaster. The IDCs are not only activated during a disaster, throughout the year, they work within their communities to mitigate climate change related risks.



REPUBLIC OF THE MARSHALL ISLANDS (RMI)

INTRODUCTION

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. RMI 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.

RMI's 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. This Plan 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.

In recent years the impact of drought has been severe for RMI with extremely low precipitation occurring between 2015 and 2016 due to an intense ENSO resulting in

PROJECT SNAPSHOT 2017*Key achievements*

- *The JNAP Coordinator has become a government position, thus securing sustainability for this work.*
- *The DRM Plan was reviewed and adopted.*
- *A monitoring trip, documentary, and communications planning were completed.*

severe drought. In May 2016, 21,000 people in RMI were affected from 1,257 households on the outer islands and 5,195 households in urban areas.¹⁰ The estimated impact of this disaster was USD 4.9 million with USD4million accounting for national production flows, USD 882,400 in high production costs and USD9,100 being impact to livestock. This accounts for 3.4% of RMI's GDP for the 2015 financial year.¹¹

DETAILED OUTCOMES**R2 - Strengthened institutional arrangements for DRM and CCA**

- Continued support for JNAP coordination in 2017, but this role has now been incorporated into government as a permanent position. This demonstrates RMI's commitment to long-term disaster resilience.

R3 - Improved knowledge, information, public awareness, training and education

- The DRM Plan was reviewed and adopted by Cabinet.
- Completed in-country monitoring and evaluation work to review the impact of drought and inundation relief on the outer atoll of Arno. A total of 22 water tanks were delivered and installed on the outer atoll in 2015 and these tanks helped support the community during part of the drought conditions.
- Developed a documentary showcasing the reality faced due to drought and low-lying atolls causing risk of inundation along with other success stories (to be completed in 2018).

LOOKING AHEAD 2018

The RMI portion of BSRP is advanced in terms of expenditure and implementation. As a result, 2018 will be focused on ensuring DRR/CCA support to increase mainstreaming across government, monitoring and evaluation and capturing the lessons learned in project delivery. Specific activities are detailed below.

R1 - Effective preparedness, response and recovery

- The JNAP Coordinator position is transitioning into a permanent Government position funded by RMI.

R2 - Strengthened institutional arrangements for DRM and CCA

- Enhancement of ICT infrastructure in the Office of Chief Secretary and NDMO.

R3 - Improved knowledge, information, public awareness, training and education

- Final reporting and documentary on drought in low lying atolls developed by May 2018.
- Develop success stories and undertake final completion reporting.
- In partnership with UNISDR and the RMI NDMO, to complete private sector engagement and BCP training in May 2018.

¹⁰Republic of the Marshall Islands. 2017. *Post Disaster Needs Assessment of the 2015-2016 Drought*.

¹¹Republic of the Marshall Islands. 2017. *Post Disaster Needs Assessment of the 2015-2016 Drought*

SUCCESS STORY



JOINT NATIONAL ACTION PLAN (JNAP) HOME IN THE MARSHALL ISLANDS GOVERNMENT

RMI has recently approved a permanent position within its NDMO dedicated to the integration of CCA and DRR in the country. The role is responsible for the implementation of the country's JNAP developed with key priorities to reduce the impact of climate change and disasters such as drought, inundation, typhoon and tsunami risk and the coordinator, Jennifer De Brum has already been working to achieve significant outcomes within this work.

This role was previously funded by BSRP for a two-year period before the government felt it was such a critical role that it should be embedded permanently into the team and division.

This role was successfully passed through Cabinet in June 2017 and is a credit to the progressive approach of the Marshall Islands Government, the Coordinator, partners and the Pacific. This region continues to lead in the effective and meaningful integration of DRR and CCA globally.



NAURU

INTRODUCTION

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 20km² land area with an exclusive economic zone of 308,502km². 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."¹²

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

¹²Country Risk Profile. 2011. World Bank. <http://documents.worldbank.org/curated/en/2015/05/24560951/nauru-country-risk-profile>

PROJECT SNAPSHOT 2017*Key achievements*

- *Completed building design for the first ever national emergency service building, with construction to take place in 2018. This will house all key emergency response agencies, the weather office and the national disaster management team.*

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 imported 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.

DETAILED OUTCOMES**R1 - Effective preparedness, response and recovery**

- Completed building design for the first ever national emergency service building, with construction to take place in 2018. This will house all key emergency response agencies, the weather office and the national disaster management team. [AUD 107,000]

Procurement for the building construction supervisor faced a number of complications, and was extended twice due to insufficient interest. Fortunately, three bids had been received by the end of 2017. Procurement and contracting to take place in 2018, so that the build can get underway. The first floor will be funded by BSRP, with the second floor costs being met the Government.

R2 - Strengthened institutional arrangements for DRM and CCA

- Since the National Disaster Management Act was adopted in 2016 creating the National Emergency Service (funded from the Nauru Government operational budget), 2017 saw the National Emergency Service role consolidation in coordinating disaster preparedness and response consolidated.
- Due to capacity constraints in Nauru, BSRP is operating under a direct procurement model from SPC.

R3 - Improved knowledge, information, public awareness, training and education

- The two National Emergency Service officers who attended training on managing and organising an EOC in 2016, demonstrated increased confidence when monitoring events such as sea swells and tsunami waves when alerted during 2017.

LOOKING AHEAD 2018**R1 - Effective preparedness, response and recovery**

- Construction of the National Emergency Service complex to commence in 2018.



NIUE

INTRODUCTION

The world's smallest independent nation, the raised atoll of Niue has a population of 1,190 people (2014 estimate¹³). 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 64km 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, sweet potato 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.

¹³2014. Central Intelligence Agency. World Factbook.

PROJECT SNAPSHOT 2017*Key achievements*

- Contractor engaged for Joint EOC construction work.
- National Disaster Awareness Week held to promote increased understanding of disasters.

DETAILED OUTCOMES**R1 - Effective preparedness, response and recovery**

- Tender for the Construction of the Joint EOC was completed and the contract awarded to a value of NZD 1.03 million. This is to be funded jointly by BSRP [NZD 700,000], MFAT and the Government of Niue. Contract negotiations to be completed in early 2018.

R2 - Strengthened institutional arrangements for DRM and CCA

- The Disaster Coordinator position was funded in 2016 and 2017 by BSRP ensuring that Niue had a dedicated focal point for DRM activities in support of the Niue Police Chief. The salary for this role is now being covered by the Government of Niue to ensure its sustainability. [NZD 32,000]
- Developed the Niue SREM Action Plan to support the implementation of the 2015 Niue SREM framework. [NZD 5,000]

R3 - Improved knowledge, information, public awareness, training and education

- The 2017 National Disaster Awareness Week was held in Niue for the first time after a lapse of over five years. It was facilitated by the NDMO, with involvement by the BSRP in-country coordinator. This revitalisation of the NDMO can be attributed to having the in-country coordinator position.

R5 - Enhanced partnerships in DRM and climate change

- One person attended the 2017 PIFESA Annual Meeting together with the AFAC Conference in Sydney, Australia.

LOOKING AHEAD 2018**R1 - Effective preparedness, response and recovery**

- Construction of Joint EOC is key final project to be implemented in Niue under BSRP.

R2 - Strengthened institutional arrangements for DRM and CCA

- The mid-term SREM implementation report to be compiled in 2018.



PALAU

INTRODUCTION

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 United States. 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.

PROJECT SNAPSHOT 2017*Key achievements*

- *Toolkit for integrated approaches to community-based disaster risk reduction (CBDRR) adopted by the National Emergency Committee.*
- *CBDRR training delivered in five states.*

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 United States for disaster response and humanitarian support. Awareness of the need to invest in preparedness and risk reduction is, however, growing (particularly at political and operational levels). 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.

DETAILED OUTCOMES**R1 - Effective preparedness, response and recovery**

- Three VHF transceivers installed in the outer islands states of Kayangel, Pelelie and Angaur allowing them to communicate back to base. [USD 17,446]
- The Palau CBDRR Toolkit was endorsed by the NEMO. This paved the way for training to commence on the CBDRR Toolkit in the different states, which will enable the community to identify and prioritise hazards, conduct vulnerability assessments, prepare DRR action plans to reduce vulnerabilities, and develop evacuation plans. In 2017, five states were covered. [USD 12,000]
- State Disaster Plans in line with the National DRM Framework were drafted for all 16 states to increase coordination and implementation. State disaster coordinators were trained and are being supported to developing these plans. [USD 40,869]

R3 - Improved knowledge, information, public awareness, training and education

- Monitoring and evaluation was completed in July 2017, and work on a documentary outlining the key success and outcomes recorded in the project to date was progressed.

LOOKING AHEAD 2018**R2 - Strengthened institutional arrangements for DRM and CCA**

- To seek adoption of the State Disaster Plans.

R3 - Improved knowledge, information, public awareness, training and education

- To complete CBDRR training in all remaining 11 states.
- To develop success stories and complete the final documentary by May 2018.

SUCCESS STORY

Mapping supports tsunami evacuation points

Palau's population is more prepared for tsunamis after the erection of tsunami safe zones across the country with more than 57 signs being erected across all 16 states of Palau.

The National Emergency Management Office (NEMO) allocated safe zones in evacuation areas that have been mapped to ensure easy understanding for communities across the country. These evacuation centres are noted as safe from tsunami threats, with schools already practising evacuation skills in line with the new disaster awareness signage.

Communities are also involved in disaster awareness training being carried out across 2017-2018 to ensure increased understanding of hazards and the required actions to ensure protection of lives during disaster.

The signs are located in specific sites that have been mapped as safe evacuation points by the Office of Palau Automated Land and Resources Information Systems (POLARIS) in partnership with the NEMO and the Pacific Community through BSRP.

These zones meet regulatory standards of being more than 10m above sea-level with signs directing people to these safe zones in case of an emergency. It is hoped the signs will provide visible, safe and accessible sites to protect the people of Palau from tsunami.



PAPUA NEW GUINEA

INTRODUCTION

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 and the strongest economy in the Pacific.

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 exposure is also particularly high in PNG.¹⁴

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. More recently, the country has had continued landslides in localised areas with a high risk area along the Oceans Highway with reports of landslides killing five people in February 2017 and devastating a marketplace in 2016. In the final weeks of December and early January 2018, Kadovar volcano began emitting ash clouds with more than 5,000 people evacuated from nearby communities. This situation is still ongoing at present and will be monitored over the coming weeks.

In line with the wide range of risks facing the country, PNG has scaled up its DRM efforts in recent years. A Disaster Management Act was created in 1984 but was not implemented

¹⁴Global Facility for Disaster Risk Reduction and Recovery. PNG. (2016). <https://www.gfdr.org/sites/gfdr/files/region/PNG.pdf> ¹⁵GFDRR. PNG. (2016). <https://www.gfdr.org/sites/gfdr/files/region/PNG.pdf>

PROJECT SNAPSHOT 2017*Key achievements*

- *ICT capacity is being upgraded in the 20 Provincial Disaster Centres for improved local level preparedness, response and DRM operations/coordination. This includes equipment and training to provide the Provincial Disaster Centres with robust and dependable emergency communications.*

effectively. 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 CCA.¹⁵

DETAILED OUTCOMES**R1 - Effective preparedness, response and recovery**

- ICT capacity was upgraded in the 20 Provincial Disaster Centres for improved local level preparedness, response and DRM operations/coordination. A 2014 audit of communications equipment by the PNG National Disaster Centre found that a large percentage of the Telikom landlines were not operational due to disconnection and technical problems. BSRP support has allowed for the establishment of Digicel landlines with Closed User Group (CUG)-enabled features allowing communication at different levels (including sub-national to national, and across provinces) which is more reliable in time of emergency. Equipment has been procured and missions to Provincial Disaster Centres are planned for 2018 for installation and training. [PGK 124,000]
- IT equipment was distributed to 11 of 22 provinces to prepare for an awareness drive on hazards with a specific focus on drought. This drive is being coordinated by the National Disaster Committee and DRM partners. Awareness materials have been produced and are yet to be distributed to schools, provinces, universities, and government institutions. Equipment has been purchased for all 22 communities. [PGK 100,000]

R3 - Improved knowledge, information, public awareness, training and education

- In 2017, it was agreed that funds would be directed to support the National Disaster Committee to develop and install a database in the Centre to be used to collate, compile and use disaster data. It will have links to other sectors including climate change, universities, hazards, fire services and other emergency management services. This activity will be implemented in 2018. [PGK 100,000]
- In PNG, BSRP collaborated with the University of Papua New Guinea's Centre for Disaster Reduction (UPNG CDR) and the Department of Mineral Policy and Geohazards Management to develop a Post-Graduate Diploma in Geological Hazards and Risk Management. Thus far, the focus has been on recruiting Course Module Writers who will develop four modules in 2018 - 1) Mass movement and landslide hazard; 2) Volcanoes and Volcanic hazard; 3) Earthquake and Tsunami Hazards; 4) Flood and Flooding Hazards. In 2017, UPNG CDR also recruited an Assistant Coordinator for the CDR to support this work.
- The PNG Government has supported the Department of Education's Education in Emergencies (EiE) and DRM Policy in 2017 by funding the printing of the policy. In Madang Province, the Department delivered the first in a series of provincial workshops focussed on awareness, distribution and sensitisation on the EiE and DRM Policy. There were 29 participants who attended the workshop (14% female)

¹⁵GFDRR. PNG. (2016). <https://www.gfdr.org/sites/gfdr/files/region/PG.pdf>

from the education sector, including teachers from various schools in Madang, NGOs and stakeholders from Madang Province. The remainder of the workshops will take place in 2018 – BSRP is discussing with the Department how it might be possible to increase female participation in these other workshops. [PGK 130,000]

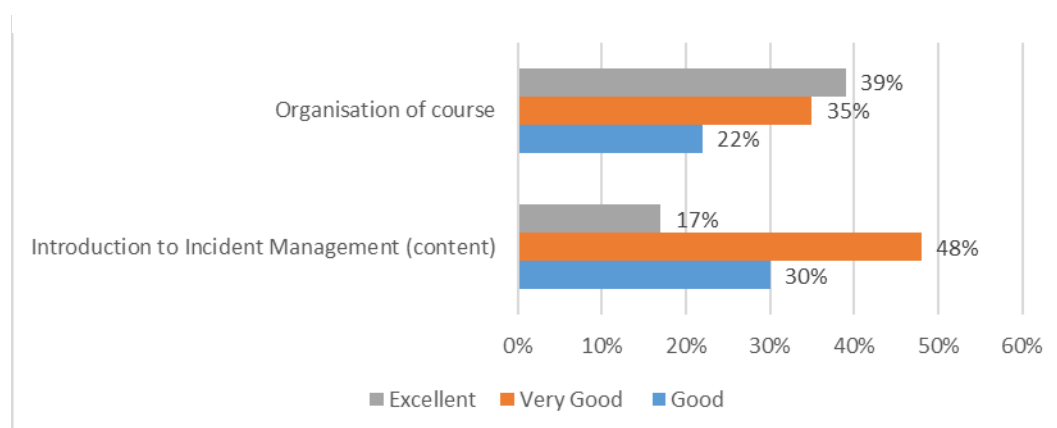
- Port Moresby Geo-observatory received and installed seismic equipment. Additional complimentary accessories (for example, laptops for field work) are currently being procured. The observatory staff already have the skills to use and maintain the equipment. [PGK 600,000]

R4 - Improved understanding of natural hazards and the reduction of underlying risks

- Work has continued on landslide hazard mapping of vulnerable areas of the Highlands Highway, Simbu Province where there are important economic transport routes. Geotechnical testing, dry season monitoring and community awareness activities have been undertaken as part of Phase 2. [PGK 198,000]
 - Rabaul Volcano Observatory received imported volcano monitoring instrumentation equipment, with the remainder to be purchased on the domestic market in 2018. [PGK 192, 305]
 - Planning to procure suppliers to design, acquire and survey land for the National EOC has continued – this will be a significant focus in 2018 (PGK 400, 000)
 - The Comprehensive Hazard and Risk Management (CHARM) Diploma Coordinator has been confirmed and the appointed person began work in 2017. This activity has been extended to December 2018. UPNG reports that they have secured alternative funding sources to cover this position in the future.
 - The Community Development Department completed training and data collection for People with Disabilities from around Central Province in 2016.
 - The balance of funds for the Community Development Department work are to be redirected to priority activities identified by the National Disaster Committee:
 - BSRP national coordination
 - PNG Fire Service for AIIMS Phase 3.
 - Developing a database to capture data already collected under the community development activity along with other relevant disaster information.
- [Total expended PGK 72,000 and remaining PGK 178,000 to be redirected.]



Figure 7: Participant evaluation of AIIMS 1 and 2 course



- Phase 1 and Phase 2 of the interactive incident management training (AIIMS training) were delivered over five weeks (five days training in five locations) to 231 participants from the PNG Fire Service, government agencies and the private sector. The interagency approach promoted interaction and developed a mutual understanding of incident management. Participants evaluated the course positively (see Figure 6), but some fed back that it would be good to have more participants including local data users. [PGK 300,000]

LOOKING AHEAD 2018

R1 - Effective preparedness, response and recovery

- To continue work towards establishing a dedicated National EOC, specifically procuring and contracting technical assistance to undertake preliminary design, initial cost estimates, land acquisition and approval. Additional technical support will also come from QFES, the wider AFAC, PIFESA and SPC. Actual construction is likely to be funded through other donor support. Having a National EOC will assist greatly in raising the profile of the National Disaster Centre and boosting their capacity.

R3 - Improved knowledge, information, public awareness, training and education

- To support the UPNG Assistant Coordinator position for CDR through until December 2018. UPNG reports that they have secured alternative funding sources to cover this position in the future.
- To development of the Graduate Course in Geohazards Management in coordination with UPNG and the Department of Mineral Policy and Geohazards Management underway to be completed and implemented in 2018. UNPNG is currently looking for alternative funding sources (including considering cost recovery options) to fund the Course Coordinator going forward.

R4 - Improved understanding of natural hazards and the reduction of underlying risks

- To complete the upgrade of the volcano monitoring instrumentation for the Rabaul Volcano Observatory.
- To continue supporting the CHARM Course Coordinator position through until December 2018.

SUCCESS STORY



TELECOMMUNICATIONS FOR PREPAREDNESS AND RESPONSE

Through the BSRP project, 20 Provincial Disaster Centres across the provinces of PNG received increased ICT capacity to ensure they can better communicate disaster and crisis information quickly. This has greatly improved local level preparedness, response, and disaster risk management operations throughout the Provincial Disaster Centres. This work not only responds directly to country-based priorities to increase local level capacity, but also answers to the FRDP, the overarching regional Framework committed to DRR/CCA integration in the Pacific region.

This work was identified as a priority after the completion of a 2014 communications equipment audit by the PNG National Disaster Centre. This report found a large percentage of telecommunications lines were not operational due to disconnection

and technical problems resulting in reduced ability to communicate before, during, and after disaster. BSRP support allows for the establishment of Digicel landlines with CUG-enabled features allowing communication from sub-national to national levels and across provinces with more reliability in times of emergency.

In 2017, the procurement was finalised for the purchase of the ICT equipment with delivery to 11 of the provinces completed. Training is to be completed in 2018 to ensure sustainable useability and maintenance of the equipment. This work will ultimately lead to increased capacity for emergency operations and DRM at the provincial level, which will be able to be coordinated through the Provincial Disaster Centre with robust and dependable emergency communications.



SAMOA

INTRODUCTION

Comprised of two large volcanic islands (Upolu and Savai'i) and several smaller islands with a total land area of approximately 2,935km², Samoa lies in the southwest Pacific with an EEZ of 120,000km². The population of Samoa is 187,820 (2011 census) with approximately 76% living on Upolu island. The capital, Apia is a port city located on Upolu with a population of 36,000. Samoa's main income source is from agriculture and fisheries followed by tourism and remittances. The GDP per capita is roughly USD 3,000.

Both islands are mountainous and 70% of the population lives in low-lying coastal areas. The country is exposed to a number of natural and technological hazards. Some hazards are seasonal, such as tropical cyclones, floods and droughts. Others are ever-present threats such as earthquake, volcanic eruption, tsunamis, 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 USD 10 million per year in losses due to earthquakes and tropical cyclones in the next 50 years. There is a 50% chance that losses of USD 130 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 USD 124 million, was equivalent to more than 22% of Samoa's GDP. Cyclones in 1990, 1991, & 2012 led to 33 people losing their lives in total damage of over USD 200 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.

PROJECT SNAPSHOT 2017*Key achievements*

- Completed the review of current national disaster management arrangements.
- Finalised the designs for the SAR Facility and NEOC facility.
- Completed phase two of the emergency radio network upgrade.

DETAILED OUTCOMES**R1 - Effective preparedness, response and recovery**

- Completed phase two of the emergency radio network upgrade through purchasing network upgrade licenses to improve voice and data communications for the tsunami siren system and emergency response. This forms part of the larger contract to be completed in 2018, which includes hardware and software upgrades and training. [NZD 50,000]
- The procurement of NEOC and office equipment to be completed in early 2018. The WorldBank has agreed to cover the construction costs, and with BSRP covering the design costs.

R2 - Strengthened institutional arrangements for DRM and CCA

- The review of current national disaster management arrangements was completed, and the recommended changes to the strengthen Disaster Risk Management Act and National Disaster Risk Management Plan await cabinet approval (expected in 2018). A DRM/CCA guideline for sector-based plans has been developed. [EUR 20,000]

R4 - Improved understanding of natural hazards and the reduction of underlying risks

- The Samoa National Fire Reduction Strategy was launched. It will help guide the Government of Samoa on how to reduce structural fires, improve fire safety and, through better analysis, strengthen fire investigations. Work on implementation will continue in 2018 [EUR 10,000]

R5 - Enhanced partnerships in DRM and climate change

- Two people attended the 2017 PIFESA Annual Meeting and AFAC Conference in Sydney, Australia. [EUR 5,000]

LOOKING AHEAD 2018**R1 - Effective preparedness, response and recovery**

- To complete the SREM for Samoa, with one additional workshop, draft finalisation and then publication.
- To review of SAR Facility Design and commence construction in early 2018.
- MCS Digital New Zealand to complete the Emergency Radio Network upgrade (software and hardware installation and training).

R3 - Improved knowledge, information, public awareness, training and education

- Now that Fire Reduction Strategy has been completed, the Fire Investigation Audit project will include an audit in Samoa with support provided by MFB.
- To develop, design, implement and test disaster awareness messaging targeting school children and those at early childhood level. It will include interactive communications activities and a review of existing NDMO outreach materials in line with best practice and in line with Samoa Government schooling and expectations. Implementation expected in June 2018.

SUCCESS STORY

Fire Reduction Strategy launched

The Government of Samoa, in partnership with BSRP, launched its Fire Reduction Strategy on 8 November 2017 aimed at reducing the number of fires whilst increasing fire safety and awareness across the country.

Deputy Prime Minister, Minister of Natural Resources and Environment Hon. Fiaame Naomi Mataafa officially launched the strategy and explained implementation to reduce the impact of fire will now begin in partnership with the Pacific Community and the MFB in Australia.

“We are building on our already existing Wildfire Reduction Strategy to now focus on structural and domestic fires that occur across the country whilst increasing support for our Fire and Emergency Services in times of largescale disaster.

The implementation of this strategy will occur over the coming years in partnership with SPC and our partners at the MFB in Melbourne, Australia with a commitment to preventing loss of life and loss of infrastructure here in Samoa,” she said.

The strategy was endorsed by the National Disaster Committee and the Samoa Fire and Emergency Services Authority Board. It will directly support the country’s Fire and Emergency Services Authority to better understand the cause of fire,

conduct fire investigations with qualified officers, and develop fire awareness programs to reduce the impact of fire and loss of life because of these incidents.

Mr Anthony Blake of SPC commended the Government for endorsing this work and said “it shows the commitment of Samoa to lead on wide scale disaster preparedness which we know saves lives and protects assets which is critical in small island nations where resources can be difficult to access when needing to rebuild.”

European Union Ambassador to the Pacific, H.E. Julian Wilson supported the launch of the strategy and said “this work shows the commitment of island nations like Samoa to focus on proactive steps towards reducing the impact of disaster at national, sub-national and local levels.”

The strategy was developed by the NDMO and Samoa Fire and Emergency Services supported by PIEMA. In addition to the launch of the Fire Reduction Strategy, materials to support in disaster preparedness were handed over including a power generator for the NEOC, 100 firefighting helmets, a Mobile Emergency Operations Vehicle and HF radios to increase communications during times of crisis in Samoa.



SOLOMON ISLANDS

INTRODUCTION

The archipelago of the Solomon Islands is made up of 992 islands of which approximately 300 are populated. The country's land mass is 28,000 km² with an estimated ocean area of more than 1.3 million km². The total population (2015 estimates) is 622,469 - it 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 annum.¹⁶ Solomon Islanders, however, enjoy a high degree of subsistence security, are generally not malnourished, and have a life expectancy of 63 years.¹⁷

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, the 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 SBD 250million in humanitarian relief and property losses.

¹⁶Gough 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.

¹⁷Gough 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 2017*Key achievements*

- *Demolition of existing Solomon Islands National Disaster Management Building at Vavaya Ridge completed.*
- *Preparatory work for construction of the National EOC.*

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 years. 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**

- Demolition of existing Solomon Islands National Disaster Management Building at Vavaya Ridge completed. [SBD 300,000]
- Completed unexploded ordinances survey at existing NDMO site to ensure construction is safe. [SBD 83,743]
- Completed termite treatment of existing NDMO site [SBD 90,000]
- Completed geotechnical assessments of existing NDMO site [SBD 225,780]
- Procurement for design and construction supervision the NEOC initiated, and to be finalised in 2018.
- Strengthened end-to-end early warning systems for last mile message dissemination and understanding. Updated early warning messages were reviewed by stakeholders and are to be finalised in 2018. [SBD 499,265]
- Currently awaiting stakeholder input on the Initial Damage Assessment tools as part of the early warning system upgrade.
- Community Disaster Plans for Makira and Isabel provinces developed as part of CBDRM training (see below).

R3 - Improved knowledge, information, public awareness, training and education

- CBDRM training completed for Makira and Isabel provinces [EUR 57,717]. BSRP will now invest in a flood early warning system and a simulation exercise will be conducted in 2018 .
- A Lessons Learnt workshop involving 40 participants across 15 agencies was conducted following the 2016 Makira earthquake response. The Standard Operating Procedure has since been updated to reflect lessons, and cluster arrangements in the revised Disaster Risk Management Plan have been strengthened [EUR 3,278]
- Two staff sponsored under BSRP completed their Graduate Certificates in DRM from the Fiji National University (FNU).

R5 - Enhanced partnerships in DRM and climate change

- Investment from BSRP ensured that the Solomon Islands was represented at meetings (including AFAC), trainings and conferences. [EUR 1,851]

LOOKING AHEAD 2018**R1 - Effective preparedness, response and recovery**

- The NEOC construction to be completed.
- To install the early warning equipment along the river banks in Makira and Isabel Makira and Isabel.

R3 - Improved knowledge, information, public awareness, training and education

- To conduct a simulation exercise to test the CBDRM Plans from Makira and Isabel provinces.
- To convene focus groups and general public two-way communication to ensure effective content development of risk messages.

R3 - Improved knowledge, information, public awareness, training and education

- To finalise the Initial Damage Assessment tool to assist in timely collection of information on impact and determination of needs.
- To continue support for one staff to complete the Graduate Certificate in DRM from FNU in 2018.

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 generated tsunami waves and caused wide spread damage to infrastructure. The tsunami waves caused damage along the coastline, but no lives were lost due to both the timely issuing of the warning and the greater community awareness of what to do to keep safe.

The first tsunami alert at Makira was raised through the alert system installed with funding from BSRP by the Makira Provincial Disaster Office. The Provincial Disaster Office (in conjunction with the Police and other response agencies) used the alert to coordinate an evacuation to higher ground.



TIMOR-LESTE

INTRODUCTION

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, Díli, Ermera, Lautem, Liquiça, Manatuto and Viqueque. The country is further subdivided into 65 sub-districts, 442 sucos (villages), and 2,225 aldeias (hamlets).¹⁸

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

¹⁸National Statistics Directorate and United Nations Population Fund, 2011. "Population and Housing Census of Timor Leste, 2010. Volume 2: Population distribution by administrative areas"

¹⁹Climate 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 2017*Key achievements*

- *Four towers are being constructed that will enable the Timor Leste National Disaster Operation Centre (NDOC) to access Indonesia's Meteorological, Climatological, and Geophysical Agency (BMKG) system for earthquake and tsunami warnings. The general public of Díli (est. 200,000 people) and businesses will be able to access tsunami and earthquake warnings in real time allowing for timely evacuations.*
- *Covalima and Viqueque Evacuation Centres approved for construction.*
- *Emergency management training was carried out by the Northern Territory Fire and Emergency Services as part of their twinning arrangement.*

Manatuto, Aileu and Manufahi (with 13% of the population). The average household size is 5.8 people 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 side, the mountains taper off some distance from the coast, providing 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) report,¹⁹ temperatures have warmed in Timor-Leste and will continue to warm with more very hot days in the future. Rainfall data for Díli Airport show a clear downward trend in annual and dry season rainfall since 1952, however, there are data gaps. Rainfall patterns are projected to change over this century – there will be 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 also 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.

DETAILED OUTCOMES**R1 - Effective preparedness, response and recovery**

- Increased EWS support with the purchase of two desktop computers (including Video Graphics Array cards) for the NDOC. Internet for the EWS in the NDOC Room is funded until December 2017. BSRP is working with the government to have these costs programmed into core budgets when BSRP funding ends. [USD 13,883]

- As part of the tsunami siren project, a contractor was procured to supply two monopole towers to improve transmission. These will be installed in 2018. [USD 270,526]
- Two engineers were engaged to finalise the design of two evacuation centres for Covalima and Viqueque [USD 40,000]. The engineers will also monitor the construction to ensure best practice standards are met. [AUD 750 base salary]
- The construction of Covalima Evacuation Centre began in September 2017 - this included the breaking of the soil and launch. Delays with this build have included transportation issues due to the remoteness of sites and changes in the government team. The project is now progressing well and is expected to be completed in mid 2018. [USD 163,637]
- The Viqueque Evacuation Centre tender has been evaluated and approved by the Timor Leste Minister of Solidarity Social. In October 2017, community engagement meetings were held with 64 participants and the government socialisation team to an early proposed site and potential need for the relocation of the community during construction. (Note, at the time of writing, a new site with less social impacts has been identified and confirmed). Construction is expected to begin in early 2018. [USD 332,991 budgeted]

R2 - Strengthened institutional arrangements for DRM and CCA

- A total of 60 officers were trained during 2017 in either Fire Rescue or Capacity Building Assessment as part of the twinning relationship between the Timor Leste Fire and National Disaster Management Directorate and Northern Territory Fire and Emergency Services (NTFES) under PIEMA - detailed in Table 2 (PIEMA section). [USD 8,225 – travel costs only]
- Five Bombeiros Officers and the Timor Leste BSRP Project Manager also visited the Northern Territory Fire Rescue Services (NTFRS) in Darwin, Australia, to be trained in breathing apparatus compressor maintenance, fire rescue, hazmat-electronic detection, hose repair, and jaws-of-life car extrications. NTFRS covered the training costs with BSRP meeting travel costs. [USD 7,218]

R3 - Improved knowledge, information, public awareness, training and education

- Two BSRP Staff actively participated in the International Disaster Day in Municipality of Aileu to increase education and awareness – this included preparing a DRM questionnaire that was used in secondary school and community competitions, tent preparations and clean up. [AUD 16,000]

LOOKING AHEAD 2018

R1 - Effective preparedness, response and recovery

- To complete construction and officially inaugurate of the two emergency evacuation centres (Covalima and Viqueque).
- To complete the installation of the tsunami sirens and ensure the EWS is fully operational. This will be followed by a tsunami exercise test and training to the National Disaster Management Department and NDOC teams.
- To continue emergency management capacity development with the Northern Territory government under the PIEMA twinning arrangement.
- To procure uniforms for the National Disaster Management Department team.

R3 - Improved knowledge, information, public awareness, training and education

- To develop and print information for mainstream media and banners for visibility of BSRP.
- To roll out media training on DRM and Climate Change communications once the tsunami siren is installed, including developing knowledge products for dissemination. Public engagement training and work with the National Disaster Management Department, NDOC and media will take place.



TONGA

INTRODUCTION

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 damage, 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 - 22% live below the national poverty line and remittances from overseas are important to many.

Tonga places great importance in integrating disaster risk consideration into sustainable development. The national DRM institutions and DRM capacity in the country need strengthening. There are weaknesses in the current 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 2017

Key achievements

- BSRP has collaborated with the World Bank Pacific Resilience Program Project (PREP) on the new purpose-built EOC, with BSRP leading on design.

DETAILED OUTCOMES

R1 - Effective preparedness, response and recovery

- The design of the Ministry of Meteorology, Energy, Information, Disaster Management, Climate Change and Communications building is being refined to bring construction costs within the World Bank PREP Project budget constraints. The design is expected to be completed by mid-2018. [FJD 994,773]

R2 - Strengthened institutional arrangements for DRM and CCA

- A legal consultant completed the DRM legislation review and the draft Strategic Framework for NEMO was finalised. The framework will allow for clusters to be absorbed into the systems under those line Ministries. It will also ensure all relevant decision-making power rests with NEMO to allow for more efficient delivery of DRM and risk reduction services.

R3 - Improved knowledge, information, public awareness, training and education

- A geographic information system (GIS) lab has been set up for geohazards and disaster information database collation and storage. ICT equipment was procured and the office refurbished for network and cabling. [TOP 67,000]
- The BSRP Coordinator assisted in facilitating a CBDRM workshop in Ha'apai to develop Community Development Plans to link DRM efforts and the Sendai Framework to the Sustainable Development Goals. The workshop was led by the Mainstreaming of Rural Development Initiative (MORDI) Tonga (funded by the International Fund for Agricultural Development (IFAD).

R4 - Improved understanding of natural hazards and the reduction of underlying risks

- Procurement completed for the Ministry of Forestry, Fisheries and Food (MAFFF) nursery on Tongatapu and Va'vau. This will allow for seedling cultivation and eventual distribution increasing the distribution of plant species that improve coastal adaptation and reduce sea spray and erosion. Through BSRP, MAFFF has also procured a truck for seedling distribution for communities and for extension training. [TOP 70,000]

LOOKING AHEAD 2018

- To complete MAFFF nursery construction on Tongatapu and Haapai.
- To finalise the design of the new national joint meteorological and emergency management office coordination for construction by World Bank.
- Although the intent was to finalise CBDRM work in 2018, at the time of writing and in the wake of Tropical Cyclone Gita in February 2018, this work has been put on hold and is subject to a lessons learned workshop to be held.



TUVALU

INTRODUCTION

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 100m wide, making it extremely susceptible to extreme conditions.

Tuvalu is one of the countries in the world most vulnerable 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.

PROJECT SNAPSHOT 2017*Key achievements*

- *In December 2017, building supplies were delivered to the Northern most island in Tuvalu (Nanumea) for a new MET office.*
- *A mobile EOC was delivered to Tuvalu to improve emergency responses and coordination on Funafuti Island.*
- *Training of officers by CFA focused on improving fire and emergency services of Tuvalu.*

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 DRM Plan. These have formed the platform for the development of the Tuvalu National Strategic Plan for Climate Change and DRR 2012–2016.

DETAILED OUTCOMES**R1 - Effective preparedness, response and recovery**

- The mobile EOC for the Disaster Unit of the Office of the Prime Minister was procured. The mobile EOC fit out includes emergency signage, lighting and radio communications to be used in operations in time of emergencies for coordination, response and relief purposes. [FJD 59,000]
- The current Nanumea MET station has been deemed unsuitable to house metrological operations and MET observing officer. Building materials and equipment for the Nanumea MET observing station were therefore procured and shipped to the capital Funafuti in December 2017. Challenges occurred in delivering supplies for building and equipment to Nanumea due to its remoteness as the most northern island of Tuvalu. The Nanumea MET station is slated to be completed in the first half of 2018 once the goods are shipped to the north. [AUD 42,171]
- As part of providing Post TC Pam support (building from the Post TC Pam Lesson learnt workshop in 2015), a consultation trip was carried out in July 2017 to meet with the kaupule (councils) of the three northern islands - Niutao, Nanumea and Nanumaga. The purpose was to understand the priorities of the kaupule(councils) in terms of the communities' ability to manage and coordinate disaster preparedness and response. Draft priorities for each island from the earlier lesson learnt workshop were further developed for these three northern islands. BSRP will now move to fund these priorities in 2018. [AUD 48,000]

R2 - Strengthened institutional arrangements for DRM and CCA

- The Tuvaluan BSRP Country Coordinator has been selected and contracted. Office equipment has been procured to support the Coordinator's role in national coordination of BSRP activities. This step is also expected to boost the human resource capacity of the Climate Change Policy and Disaster Coordination Unit of the Office of the Prime Minister. [AUD 35,000 budgeted].

R3 - Improved knowledge, information, public awareness, training and education

- As part of an informal twinning relationship with the CFA of Victoria Australia under PIEMA, BSRP supported in-country training - both basic firefighting and training on the usage and maintenance of the BSRP-procured fire truck (sourced from CFA). See

Table 2 (PIEMA section) and Success Story below for details. The support is expected to continue with the supply of smaller trucks/equipment and the development of fire teams on the outer islands in the coming years. [AUD 23,310]

LOOKING AHEAD 2018

R1 - Effective preparedness, response and recovery

- To complete the Nanumea MET monitoring station.
- To procure equipment, etc., in line with outer island kaupule(council)priorities as determined by the current planning exercise.
- To support the formalisation of the twinning relationship between CFA and Tuvalu, and the associated emergency management support.
- Now that Australian-funded renovations to set up the National Coordination Centre and space for the national council to meet at the Police HQ are completed, BSRP will provide the office equipment, security and ICT fit-out.

SUCCESS STORY



Participants from the Fire Service, Public Works Department, and Tuvalu's Solid Waste Agency were involved in a one-week basic firefighting training focused on supporting the country's emergency management response.

The training was run by the CFA of Victoria after the donation of firefighting equipment and a fire truck was provided to the country in 2016. The training was focused on enhancing emergency management best practice including safe use of the donated equipment, maintenance of the firefighting equipment, and capacity development in how to address different emergencies.

The CFA team found the participants were able to perform hands-on demonstrations of how to address and extinguish different fires (wood, fuel, etc). The trainees also learnt what each specific signal meant in times of fire response and how best to respond to fires in a timely manner with regular drills recommended to maintain these skills in the coming months.

The training was funded by the BSRP Project and the technical support was provided by Tuvalu's informal partner, the CFA, where it is hoped a formal MOA will be signed in the coming year to formalise the relationship and future emergency management support for the country.



VANUATU

INTRODUCTION

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 TC Pam smashed into the country in 2015. 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.

PROJECT SNAPSHOT 2017*Key achievements*

- *Engaged a BSRP Coordinator in Vanuatu.*
- *Contracts were signed for three provincial EOCs to be built in 2018.*
- *A drill rig arrived to be installed in order to increase community access to water in Ambae.*

Vanuatu was an early mover among its Pacific peers in establishing both a national action plan for DRR and disaster management, and a national adaptation programme for action on climate change. 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 CCA, Meteorology, Geo-Hazards, Environment, Energy and Disaster Management. A National Advisory Board on DRR and CCA with a joint DRR and CCA national governance mandate was also established. Disaster response and preparedness arrangements continue to be led by the NDMO.

DETAILED OUTCOMES**R1 - Effective preparedness, response and recovery**

- Construction of three provincial EOCs for Penama, Sanma and Melampa provinces is progressing. The land has been identified and approved, sites have been prepared, and designs finalised. The team met with the Vanuatu Central Tender Board to update them on progress of the tender evaluation (it is government policy that all major contracts should go through this Board). BSRP was granted a waiver from the Board and is allowed to use SPC Procurement Guidelines. [VT 22,000]
- The construction suppliers for each of the provincial EOCs have been procured and contracts signed to commence work.
- A construction supervisor was also engaged to oversee all the construction works.
- SPC, the KfW Development Bank and the Vanuatu Department of Geology, Mines and Water Resources partnered to purchase a drill rig in order to improve access to water. The drill rig will support increased access to safe and clean drinking water for communities.

R2 - Strengthened institutional arrangements for DRM and CCA

- A BSRP Coordinator was appointed in Vanuatu, and attended procurement and financial acquittal training at the SPC Office (five days) to support the team to ensure acquittals are managed appropriately was also carried out in 2017. [VT 250,000]
- The consultant working on the development of the Fire Act sadly passed away in early 2017. At that time, the Bill, associated regulations, monitoring and enforcement mechanisms and a draft Cabinet paper had all been finalised and reviewed ready for consideration by Cabinet. These documents had been handed over to the NDMO to be progressed. Since this time, however, there have been changes in the Director role at the NDMO. With the loss of the key instigators of this work, BSRP will support the government and the new NDMO Director in 2018 to make any required changes and have the Act and regulations endorsed by Cabinet.

LOOKING AHEAD 2018

R1 - Effective preparedness, response and recovery

- To complete the construction of the three provincial EOCs in Malampa, Penama and Sanma provinces, and to have the buildings operational for coordination of disasters.

R2 - Strengthened institutional arrangements for DRM and CCA

- To support the NDMO to seek Cabinet endorsement of Fire Act and regulations.
- Implementation of drill rig work to increase access to safe and clean drinking water for communities.

R4 - Improved understanding of natural hazards and the reduction of underlying risks

- Implementation of drill rig work to increase access to safe and clean drinking water for communities.



APPENDICES



ANNEX 1: BSRP REGIONAL STEERING COMMITTEE MEETING OUTCOME STATEMENT 6 OCTOBER, 2017

WE, the 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 Country Coordinators for BSRP, European Union, GIZ, development partners and the Pacific Community attended the EDF-10 ACP-EU Building Safety and Resilience in the Pacific project 4th Annual Regional Steering Committee:

EXPRESSED appreciation for the ongoing support from the EU Pacific Delegation and GIZ in supporting resilience building in the Pacific.

ACKNOWLEDGED the progress made by the BSRP countries in their implementation progress over the past 12 months and noted the challenges encountered across the beneficiary states.

ACKNOWLEDGED the need for implementing countries to be familiar with and adhere to specific articles under the signed MoA's with SPC as it relates to Procurement and Financial acquittals.

RECOGNISED that BSRP project implementation at the country level needs to be finalised by December 2018.

AGREED that the key challenges related to the MoA modality fall under the areas of:

- i) Slow disbursement of funds
- ii) Difficulty in understanding and following SPC procurement processes
- iii) Expiry of MoAs in December 2017 and March 2018

AGREED for countries wishing to continue with the Grant modality and country implementation of activities; that an amendment to extend the closure date of the MoA, can be signed, following an official request from countries.

AGREED that for countries wishing to transfer activities to SPC for direct procurement it was possible to develop new MoA's to facilitate this arrangement following identification of activities and an official request from the country.

AGREED that documentation and reporting at the activity level rests with the implementing agencies in country coordinated by the BSRP Country Coordinator.

AGREED that SPC would utilise unused country funds and these could be re-allocated to regional and national activities that are in line with project objectives and purpose after December 2018.

ACKNOWLEDGED the EU Results Oriented Monitoring (ROM) review would take place tentatively in November/ December 2017 with activity level documentation and narrative reports should be ready to present to the EU ROM mission team.

RECOGNISED the need for Outcome Based reporting on activities and successes of BSRP for effective Monitoring and Evaluation and reporting against the BSRP Logical Framework.

ACKNOWLEDGED the work of the BSRP Communications team and the various activities and assistance provided in terms of design work, disaster messaging and effective communication of BSRP achievements and successes.

ACKNOWLEDGED the excellent work of the chair in moderating today's BSRP Regional Steering Committee meeting.

ENDORSED and **ADOPTED** on the 6th of October 2017.

ANNEX 2: 2017 REGIONAL STEERING COMMITTEE MEETING MINUTES

COUNTRY	ACHIEVEMENTS	CHALLENGES
TONGA	<ul style="list-style-type: none"> Tonga Meteorological Services refurbishment completed before the 2016 cyclone season. Setting up the GIS library included – 3 laptops, 2 heavy duty printers, 8 PCs, 8 UPS, 1 projecting screen, 1 Projector, 1 whiteboard screen; hard drives for database collation – maps and pictures and footage from the field. GeoNode was set up for NEMO with support from UNESCO and AIT-Bangkok. This will be the data hub for NEMO and could be a hub for the rest of the other line Ministries. In support of the GeoNode and mapping needs for NEMO, 2 DJI Phantom 4 Pros were purchased for detailed mapping as show in this map of the block where the MEIDEC building is located. KoboTool training was carried out by a local NGO but were willing to include NEMO. We then used this tool to locate some of our outer island identified evacuation centers that will then be listed in the evacuation centers available. A civil engineer will have to be deployed to the outer islands to check the strength of the buildings and if they meet standards or whether it needs upgrading. Development of the Framework for NEMO will be able to see how everyone fits into DRRM. It will allow for clusters to be absorbed into the systems under those line Ministries and ensure all decision making powers rests with NEMO and not with other line Ministries or outside agencies. Partnership for CBDRM completion of CDPs for 21 communities in Ha'apai. PacSAFE was brought in by Geoscience Australia and SPC and we were fortunate to support this training and use the software in other activities. In support of the Food Security and Livelihoods cluster on the national platform, the SOP and PDNA form for this cluster was developed with the help of BSP during the regional WFP meeting. Taking the partnership with Red Cross all the way to the Vava'u District Committee and the town and district officers proved successful as this was the first time town and district officers along with district committee members were trained in First Aid. Their certificates then needs an update every two years in order to retain the validity of their certified training 	<ul style="list-style-type: none"> Time to carry out all activities Need to better understand the updated SPC procurement policy
TUVALU	<ul style="list-style-type: none"> Fire Truck donated by Country Fire Authority of Victoria, Australia (CFA) and the BSPRP Project funded the shipment and capacity training support for 2 CFA officials. Building materials for Nanumea MET station procured from Fiji Emergency Operation Centre in completion phase 	<ul style="list-style-type: none"> Starting late with project is a challenge Funds haven't been used since the beginning of project Different procurement systems used in countries compared to SPC in terms of financial acquittals (lack of resources) No offices expenses within activities allocated
KIRIBATI	<ul style="list-style-type: none"> Main Christmas Island Meteorological Office near completion Abaiang Disaster Committee established on September 22, 2017. ToR adopted by Abaiang full council. Training conducted with ADC. Preparedness and response plan developed. Twinning arrangement with SA CFS. Team from SA CFS (CEO/ Chief Officer Greg Nettleton, Deputy Commander Matthew Davis and a Community Engagement Coordinator Tracy Grime) visited Kiribati to carry out scoping mission on 28th to 31st August 2017 PIEMA officer conduct one day workshop to finalize SPREM Vegetable seeds, drought tolerance cassava varieties have distributed to disaster prone islands – Christmas and Tabiteuea South Compost shed constructed at Agriculture's nursery center in Tabiteuea south. Women, youth, and local farmers were trained on improved farming methods– use of compost and drip irrigation system. 	<ul style="list-style-type: none"> Lack of personnel in the NDMO. Competing tasks and priorities with implementing partners/sectors. Remoteness of project sites from administrative centres. Tranche ratio is slowing implementation of parallel activities
COOK ISLANDS	<ul style="list-style-type: none"> Review our NDRM Plan & Arrangement- June 2017 completed Review of the Building Code- 2017 near completion Finalise the Disability Toolkit DRM Survey of Disability households and develop Database 2017 completed Women Project for Rarotonga (Outer Islands) Au Vaine DRM Training, tablet & internet DRM Access, in progress Retrofit 4 of our Puna (village) EOC, in progress Police Patrol Kukupa Charter- conduct DRM Survey- Nih Group Commence TOR & Design of NEOC- Oct 2017 EMCI Support Kit – Equipment to support Office Capacity Building & DRM Training- ongoing Platform Meetings with Stakeholders- on going Public Awareness and Communications Teachers Resource Kit – All Schools 	<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 Solutions Better understanding of the process with a more practical approach Strengthen partnerships across all sectors and agreed new timeframes Group small related projects into fewer manageable projects

SOLOMON ISLANDS	<ul style="list-style-type: none"> • NEOC Construction – TOR for Design and Project management completed – Tender to be advertised 16th Oct 2017. – Geotech, Demolition, UXO and Pre-construction termite treatment – currently tendered to be awarded and work completed by first week of December 2017, refurbishment of the NDMO warehouse to host NEOC for the next 2 years – Completed. • FNU online PG Cert in DRM – 2 students graduated, currently funding 2 more students will increase by 5 in the • Attendance to international training and conferences – Supported staff attend training - IT/C/OC meetings, FRDP, Logistics and Emergency Telecoms etc. • The Solomon Islands Initial Damage assessment tool and the manual developed. An early warning messaging workshop was conducted to review contents of early warning and public safety messaging. As the result of this workshop, early warning and public safety messaging were simplified and currently used by the media and technical divisions such as Met Service and NDMO • The two Provinces of Santa Ysabel and Makira Provinces were the identified provinces to implement the community level early warning systems. This programme will going through several steps. <ul style="list-style-type: none"> – Identification of Communities deemed high risk to flooding. This was done by the PDOs – Village by village consultation by NDMO to verify existence of that risk, ascertain buy in by communities to accept installation of flood and rain gauges and maintaining them in their communities and land. – Undertaking CBDRM training for Village DR committees and producing Village DR plans – Installation of Flood and Rain gauges. – Simulation exercise • Community Based DRM training conducted in 15 communities in Makira Province and 4 in Isabel Province. Village DR committees established to manage Disaster events and risk reduction activities in communities • Training for local technicians from NDMO, Water Resource Division and SI Met Service on the assembling of the components of the simplified Rain and Flood gauges by the JICA experts. • Installation of Local Level Early warning system for floods and Rain gauge in the two provinces – Makira/Ulawa Province and Santa Isabel. The Team has so far installed 4 simplified flood gauges and 1 rain gauge in Makira Province. There are 11 more communities and 6 schools to complete in Makira. In Isabel Province, 2 simplified flood gauges have been installed and 1 rain gauge in a school. 	<ul style="list-style-type: none"> • Internal – Poor management especially in the record management and reporting. • Conflicting financial systems between – SPC & Receiving Govts • Support from Govt Technical agencies were very slow or not forthcoming at all.
VANUATU	<ul style="list-style-type: none"> • Fire Truck from twinning partner received and already used to stop a major fire in Port Vila. • Two new Mobile Emergency (Operation Centre vehicles) for the provincial disaster centre for SANMA and TAEFA purchased. • Drill Rig for Vanuatu purchased with co-funding support from the German Government (GIZ). Currently drilling in Ambae province prior to evacuation due to volcanic activity. • Evaluation of the 3 PEOC tenders completed. 3 separate companies awarded tenders and contracts signed. 	<ul style="list-style-type: none"> • Financials – review of MOA to include communication (operational) • Works on Ambae PEOC site is currently on hold until state of emergency is removed. Delays commencement of works.
PAPUA NEW GUINEA	<ul style="list-style-type: none"> • PNG Fire Service using its own recurrent budget did: Phase One: Introduction to Incident Management to five (5) selected locations across the country of PNG; Phase Two: Strategic Disaster Management Awareness of AIMS Training with the Queensland Fire Service. • Senior Geologist Elizabeth Michael and her team of local geologists have done landslide mapping of the big Okuk Highlands Highway within the Simbu Province in 2016. Soil testing and landslide mapping was done in dry season during the first trip • The work done by the Geology Department is to narrow the focus down to very active areas. • Central Province has been selected as the first province to collect all data for the people with disability. The training was facilitated by people with disability to increase the understanding of those responsible for Disaster Risk Management (DRM) the needs of People with Disability (PWD) during disaster crisis. Training conducted ensures sensitivity issues for those responsible for collecting these data collected via surveys. • Result of this training: Training completed with 50 provincial officers; 416 surveys completed to date; Database to be sourced via direct procurement to upload data for compilation and analysis. • BSRP purchased 6 sets of portable seismic monitoring equipment that augments with the current 10 stations network across the whole country. The main network was developed as part of the EDF9 project and the mobile structure will complement that national system and provide detailed information. 	<ul style="list-style-type: none"> • Lack of quorum at NSC • Slow disbursement from finance • Lack of manpower in the NDMO External (SPC related) 3 Key Issues • Purchase Order will have to be used during acquittals as PO is not used in PNG • Implementation schedules will have to be realigned after review of all LoAs and MoAs • Timely completion of activities before deadline Dec 2018
NIUE	<ul style="list-style-type: none"> • Advance rope training (Certified 9 Police – 1 female/8 males, Niue Fire – 5 males). • Advance First Aid Training (All emergency workers) • In collaboration with RCCNZ, Search & Rescue Boat purchased and training of Police, Fire, and Ambulance carried out. • Building of a new boat/tractor shed close to the National EOC to be funded by the BSRP. • Boat/Tractor shed constructed. • NDMO Attachment with Edgcombe (two weeks attachment to EOC to observe flooding operations) • Niue National Building Code – awaiting the final copy of the document. 	
NIUE	<ul style="list-style-type: none"> • Advance rope training (Certified 9 Police – 1 female/8 males, Niue Fire – 5 males). • Advance First Aid Training (All emergency workers) • In collaboration with RCCNZ, Search & Rescue Boat purchased and training of Police, Fire, and Ambulance carried out. • Building of a new boat/tractor shed close to the National EOC to be funded by the BSRP. • Boat/Tractor shed constructed. • NDMO Attachment with Edgcombe (two weeks attachment to EOC to observe flooding operations) • Niue National Building Code – awaiting the final copy of the document. 	<ul style="list-style-type: none"> • Secure more funding to construct a new Joint EOC • Salary NDMO – Because this is funded by the project, it is now nearing its review stage and Government excluded the NDMO salary component in the recurrent budget • All funds under the BSRP for Niue is now pooled under the EOC, so this means that all the proposed expenditures under this project is on hold • Donated resources under the project • Lack of funding to maintain and replace • Communication breakdown between the BSRP Coordinator and the NDMO – updates/acquittal reports etc.
TIMOR LESTE	<ul style="list-style-type: none"> • Ground-breaking ceremony for Covallima Evacuation Centre carried out. • Fire Service (Bomberos) carried out specialized fire rescue tools training e.g. car cutting equipment with twinning partner - Northern Territory Fire and Emergency Services. • NITFS- supported 480 PPE (Personal Protection Uniform), 6-Breathing Apparatus Compressors and Rescue equipment • Tsunami Siren Early Warning System tendered and evaluation to be carried out. 	<ul style="list-style-type: none"> • Political Decision • Ministry of Solidarity Social Structure Frequently Changed (Affecting delaying of Procurement process) • Transport/Vehicle, (BSRP Project mostly dependent to the NDMO Vehicles), NDMO has limited vehicle too.

SAMOA	<ul style="list-style-type: none"> • National Disaster Management Plan 2017-2020 • Disaster Risk Management National Action Plan 2017 –2020 • Mainstreaming of DRM and CC Guideline • Legal Review Report of the DEM Act 2007 • Completed mainstreaming workshops for 11 sectors Mainstreaming of DRM and CC Guideline, DRM National Plan 2017-2020, NDMP 2017-2020, and Legal Review Report of the DEM Act 2007; • Conducted a Samoa Emergency Management Alliance workshop, Australasian Inter-service Incident Management Systems Training for emergency services and first response agencies, completed Fire Reduction Strategy to facilitate capacity building for emergency services in Samoa on fire investigation, hazardous materials response, SARs and SARs equipment etc. • GenSet for Mt Vaea should be installed by the end of November 2017 • LCP awaiting the Mpoi to submit their radio specs and system to be integrated into the LCP, LCP increases connectivity and security as well as good redundancy of the system. 	<ul style="list-style-type: none"> • Co-financing of a project by different donors with different timeframes. • Implementation of other projects • Primary activities take precedence over project activities • SPC remote to support (increase to a weekly basis) for the EDF 10 implementation need to be strengthened • Technical visits every four (4) months rather than 6 months • Use Regional budget to funds the visit rather than the country funds
MARSHALL ISLANDS	<ul style="list-style-type: none"> • More Catchments to the Outer Islands that are prone to Drought needed • Building Capacity • More Resource to our National Partners – Fire Station – Weather Service Office 	<ul style="list-style-type: none"> • Finished allocation, need more financial resources.
FJI	<ul style="list-style-type: none"> • The Tukuraki Relocation Project is almost complete and is scheduled to be opened on 27th October 2017 by the Hon. Prime Minister. The project consists of 11 houses, 24x16 dwelling house with bathroom and toilet, an Evacuation Centre with Ablution Block; Water Supply and Retaining wall. • Fiji Government through the Commissioner Westerns Office has provided livelihood project including Fish pond, beekeeping, Layer Birds, Pineapple Suckers and Reforestation (Fruit Trees). • The Tavua EOC is also completed and is ready to be opened on a date that is to be announced by the PA (BA). • Have completed scoping for all EOCs in the Northern Division • Evaluation for NEOC refurbishment has been completed and waiting for the approval of the Permanent Secretary to proceed with the work • The Permanent Secretary for the Ministry of Economy, wrote and advised that the Fijian Government has secured the assistance of the World Bank for a national climate change vulnerability mapping project with a view to informing climate risk reduction and resilience buildings. • It is for this reason that the Fiji Climate Change Unit had written to SPC to advise the termination of the IVA MOA. • Tsunami Training for Fiji under the UNESCO IOC International Tsunami Programme (ITP). The ITP in Country Training on Tsunami Warning & Response was held in Suva, Fiji from 10 to 14 July 2017. The Tsunami training was organised in collaboration with SPC and JICA and was led by the International Tsunami Information Centre (ITIC) based in Hawaii, USA. • The TC Winston Lessons Learned Report has been endorsed by the National Disaster Management Council and will be submitted to Cabinet before the report can be printed. 	
FEDERATED STATES OF MICRONESIA	<ul style="list-style-type: none"> • Complete installation of solar panel and battery for the communication equipment • National Disaster Response Plan developed • Public Awareness carried out • Finalisation of the spatial data framework 	<ul style="list-style-type: none"> • Project challenges faced during implementation <ul style="list-style-type: none"> – Collecting documents from the states (quotes, invoices, etc.) – Disbursement of fund – SPC Procurement not FSM
NAURU	<ul style="list-style-type: none"> • NDRM Act 2008 reviewed – June 2016 • NDRM Act 2016 passed in Parliament January 2017 • Final review of the National Tsunami Plan June 2017 • Completion of NES project site clearing scheduled Nov 17 	<ul style="list-style-type: none"> • The main challenges of Nauru BSRP Project experiencing at current is the slow process of the completion of the clearing of NES project site. • Construction will be done in 2 phases • No procurement capacity • Negotiation with bilateral partners for EOC support
PALAU	<ul style="list-style-type: none"> • Relocated VHF Antennas • Purchased and installed additional repeater antennas • Construction of NEMO storage area. <ul style="list-style-type: none"> – 2 each of 20 foot containers – Aluminum roofing • Revision of National Disaster Risk Management Framework • NEC endorsed; Presidential approval • Construction of the NEMO sign. <ul style="list-style-type: none"> – Not just a sign, this represents Palau's commitment to its people. This was a step towards streamlining of cross-cutting issues. • Disbursement process could be improved. Whether it is county acquittals or SPC procurement process. Financing shouldn't have been a common denominator on project delays. • Country NDMO was identified by the magnitude of this project to be understaffed. • Country NDMO is inevitably a political will magnet. • The remainder of Palau's BSRP is now being implemented through our Community-Based Disaster Risk Reduction 16 States Workshop. • Some of the BSRP Projects require follow-up to ensure continuity, i.e. State DRM Plans, to be absorbed at State and National Governments. 	<ul style="list-style-type: none"> • Slow disbursement • Lack of manpower • Political influence

ANNEX 3: FINANCIAL STATEMENTS FOR THE PERIOD 7 SEPTEMBER 2013 TO 31 DECEMBER 2017 (EUR)

STATEMENT OF EXPENDITURE AND COMMITMENTS BY COUNTRY

Country/Budget Lines	Budget	Actual Expenditure						Balance
		Sub-recipient expenditure	Direct SPC payment - contractors, equipment & facilities	Direct SPC payment - total travel, workshops & meetings	Direct SPC payment - comms & visibility	Direct SPC payment - administrative/ operational	Total	
National Activities (NA)								
Cook Islands	600,000	166,379	66,269	45,680	-	143	278,471	321,529
RMI	600,000	44,187	310,873	146,214	173	45,330	546,778	53,222
Palau	600,000	12,398	266,821	253,221	12,017	3,973	548,430	51,570
Kiribati	600,000	114,296	52,672	75,270	19,518	375	262,131	337,869
Tuvalu	600,000	76,645	99,886	73,869	1,801	21,615	273,817	326,183
Niue	600,000	-	54,430	67,652	6,748	890	129,720	470,280
Nauru	600,000	2,446	40,880	53,950	695	17	97,988	502,012
Fiji	1,550,000	99,873	655,624	247,471	8,253	6,343	1,017,564	532,436
PNG	1,350,000	326,234	29,194	90,609	49,425	358	495,819	854,181
FSM	1,350,000	281,950	362,653	550,432	13,496	7,234	1,215,765	134,235
Solomon Islands	1,350,000	127,580	107,991	111,277	-	125	346,974	1,003,026
Tonga	1,350,000	91,122	222,281	311,950	1,556	679	627,588	722,412
Samoa	1,350,000	21,709	494,852	126,357	11,304	2,557	656,780	693,220
Vanuatu	1,350,000	83,855	586,581	159,387	2,631	1,054	833,508	516,492
Timor Leste	1,350,000	39,403	66,100	106,283	-	478	212,264	1,137,736
Total NA	15,200,000	1,488,077	3,417,107	2,419,622	127,618	91,172	7,543,596	7,656,404
Regional Activities (RA)								
PIEMA - regional	500,000	-	32,034	145,328	917	1,317	179,595	(70,083)
Road map		-	72,637	81,465	3,782	5,542	163,427	
2014 Pacific platform		-	6,174	56,430	-	1,006	63,610	
RDM/RSC meetings		-	27,400	125,889	871	2,735	156,895	
Regional hazard & risk assessment		-	-	5,537	-	1,020	6,557	
Total RA	500,000	-	138,245	414,649	5,570	11,620	570,083	(70,083)
Regional Comms & Visibility	200,000	-	64,623	40,704	82,373	1,699	189,398	10,602
Project Management Unit Operation & Admin Cost	2,180,833	-	38,966	28,701	775	1,564,347	1,632,790	548,043
TOTAL DIRECT COSTS	18,080,833	1,488,077	3,658,941	2,903,676	216,336	1,668,838	9,935,868	8,144,965

Budget notes

1. The financial report presented is in accordance with the books and records of SPC that have not been subjected to the auditing procedures. The financial report is to be used only for the sole purpose of this report. SPC will not take any responsibility arising if the data is relied upon for any other purposes. Audits are to occur in the fourth quarter of 2018.
2. Expenditure across the project implementation period has been reviewed to ensure country and EU budget line tags are consistent and appropriate. This has led to some re-tagging of previous expenditure to ensure consistency across country-level and budget-line reporting.
3. The review of expenditure revealed some posting errors from previous years, which are to be reflected in the 2018 accounts.

STATEMENT OF INCOME AND EXPENDITURE

INCOME	Budget	2013	2014	2015	2016	2017	Total income	% budget	Balance
Opening Balance B/F		-	4,992,272	3,692,233	8,423,587	3,754,900			
Funds received - EU	19,367,000	4,892,725	-	6,966,934	-	5,748,860	17,608,519	91%	1,758,481
Funds received - GIZ	200,000	-	-	-	-	99,975	99,975	50%	100,025
Other income	-	-	21,601	8,738	13,299	4,931	48,568		
FOREX translation diff.	-	120,590	(321,951)	(7165)	(12,431)	(5,876)	(226,832)		
Total Income	19,567,000	5,013,315	4,691,922	10,660,740	8,424,454	9,602,790	17,530,230	90%	1,858,506
EXPENDITURE	Budget	2013	2014	2015	2016	2017	Total spend	% budget	Balance
Project Management Unit (PMU)									
Senior Advisor/Project Manager (Band 12)	447,102	-	60,318	82,128	89,220	89,715	321,381	72%	125,721
Advisor (B10)/Deputy Project Manager (B11)	403,563	-	56,325	64,298	54,519	42,452	217,595	54%	185,968
Advisor (B9)	378,612	-	84,103	85,205	84,798	66,827	320,933	85%	57,679
Advisor (B9)	295,612	-	47,088	57,950	60,774	61,739	227,551	77%	68,061
Advisor (B9)	295,612	-	44,202	54,200	55,663	60,600	214,665	73%	80,947
Admin/Fin. Assist. (B5)	52,632	66	9,450	12,798	12,608	11,391	46,312	88%	6,320
Media/Comms Officer (B8)	88,500	-	3,164	23,406	52,733	51,141	130,445	147%	(41,945)
Finance Officer (B7)	56,000	-	-	-	10,276	10,090	20,366	36%	35,634
Admin Assist. (B5)	44,000	-	-	-	-	17,476	17,476	40%	26,524
2 Short -term staff	35,000	-	315	82	6,947	28,293	35,637	102%	(637)
	2,096,633	66	304,966	380,068	427,537	439,724	1,552,360	74%	544,273
Operational costs & administration									
Facilities	9,500	-	1,952	2,669	5,668	872	11,162	117%	(1,662)
Equipment	27,500	-	18,272	12,206	5,431	251	36,160	131%	(8,660)
Publications	17,000	171	2,660	1,213	3,256	463	7,763	46%	9,237
Consummables	15,000	7	1,165	42	849	456	2,518	17%	12,482
Stationery	8,200	-	1,585	2,073	1,130	3,489	8,277	101%	(77)
Micellaneous	7,000	49	426	5,227	3,428	5,418	14,549	208%	(7,549)
	84,200	226	26,060	23,431	19,762	10,950	80,429	96%	3,771
Total PMU	2,180,833	293	331,026	403,498	447,299	450,674	1,632,790	75%	548,043
Implementation of National Activities (NA)									
Equipment	1,180,000	-	1,029	400,336	672,369	(187,157)	886,578	75%	293,422
Facilities	3,500,000	-	-	47,790	1,003,233	446,212	1,497,235	43%	2,002,765
Scientific/tech data acquisition/development	1,500,000	-	6,465	33,717	164,270	7,361	211,813	14%	1,288,187
Data, information & knowledge mgmt	1,775,000	-	10	30,098	234,035	5,303	269,446	15%	1,505,554
Training, workshops, attachments & meetings	3,750,000	9,669	246,302	644,617	1,279,007	1,519,351	3,698,946	99%	51,054
Reports & publications	225,000	-	1,310	54,796	57,043	27,005	140,154	62%	84,846
Technical assistance	3,270,000	-	55,836	350,327	306,004	127,258	839,424	26%	2,430,576
	15,200,000	9,669	310,953	1,561,681	3,715,961	1,945,332	7,543,596	50%	7,656,404
Implementation of Regional Activities (RA)									
Data, info & knowledge management	40,000	-	11,462	-	-	-	11,462	29%	28,538
Training/workshops/ attachments/meetings	240,000	5,801	142,536	86,715	82,956	38,955	356,963	149%	(116,963)
Reports/publications	35,000	635	9,670	5,449	1,192	-	16,946	48%	18,054
Technical assistance	185,000	3,270	112,113	16,580	49,315	3,435	184,712	100%	288
	500,000	9,705	275,781	108,744	133,463	42,390	570,083	114%	(70,083)
*Project Travel	387,500	-	46,093	75,494	109,854	51,345	282,785	73%	104,715
Comms & Visibility	200,000	-	16,529	16,874	67,346	88,649	189,398	95%	10,602
Total Implementation Activities	15,900,000	19,374	603,263	1,687,299	3,916,771	2,076,372	8,303,078	52%	7,596,922
Subtotal I: Total direct costs	18,080,833	19,667	934,289	2,090,797	4,364,070	2,527,045	9,935,868	55%	8,144,965
Subtotal II: in-direct costs	1,267,000	1,376.67	65,400.23	146,355.78	305,484.88	171,832.62	690,450.18	54%	576,549.82
Subtotal III: Provision for contingencies	219,167	-	-	-	-	-	-	0%	219,167.00
TOTAL EXPENDITURE	19,567,000	21,043	999,689	2,237,153	4,669,555	2,698,878	10,626,318	54%	8,940,682
Surplus of funds before commitments		4,992,272	3,692,233	8,423,587	3,754,900	6,903,912			

*These figures represent associated travel cost of the NA+RA. They illustrate Project Staff travel costs (flights, boat travel and visas/departure tax) within the NA and RA budgets.

ANNEX 4 – LOGIC FRAMEWORK (AS AT 31 DECEMBER 2017)

KRA	Indicator	Baseline	Target	Cumulative Results to Dec 2017	Evidence of change as at Dec 2017
Overall objective	To reduce the vulnerability as well as the social, economic and environmental costs of disasters caused by natural hazards, thereby achieving regional and national sustainable development and national sustainable development and poverty reduction goals in ACP PICTs	Average 2013 Climate Vulnerability Scores (7 PICTs: Fiji, PNG, Samoa, Solomon Islands, Tonga, Timor Leste, Vanuatu) - 0.53708769 (Vulnerability Scores not available for: Cook Islands, FSM, Nauru, Niue, Kiribati, Palau, RMI, Tuvalu)	Overall lower consolidated vulnerability score ¹ for the 15 PICTs at the end of the Project	 Average 2015 (latest available) WRI Vulnerability Scores (7 PICTs): 0.539024401 (Slight increase, not statistically significant).	Data is not recent enough to detect changes through to 2017. Vulnerability scores should be read in tandem with Readiness scores. Average Readiness Score ² (12 PICTs) improved slightly, increasing from 0.421031268 to 0.4223414675 over the 2013 to 2015 period. 
KRA 1: Effective preparedness for response and recovery	11 No. of PICTs EWS and emergency communications systems (ECS) strengthened through upgraded equipment.	11 At least 3 countries have EWS/ECS strengthened or expanded (Fiji, Tonga, PNG) <i>Upgrades include, but are not limited to: improved power sources, VHF repeaters, and increased number of handsets for emergency responders.</i> 11.2 At least 1 country has a new system design and installed (Timor Leste).	11.1 At least 3 PICTs have EWS/ECS strengthened or expanded (Fiji, Tonga, PNG) <i>Upgrades include, but are not limited to: improved power sources, VHF repeaters, and increased number of handsets for emergency responders.</i> 11.2 At least 1 PICT has a new system design and installed (Timor Leste).	(Vulnerability scores not available for Cook Islands, FSM, Nauru, Niue, Kiribati, Palau, RMI, Tuvalu) 11.1 <i>Target exceeded</i> - emergency communications improved/improving in 10 countries : - Completed: Cook Islands, FSM, Kiribati, Niue, Palau, PNG, Samoa, Tuvalu - Underway: Solomon Islands, Tonga) with strengthened EWS/ECS systems (including some outer islands). 11.2 <i>Target will be exceeded</i> - 2 countries (Timor Leste and Fiji) will have new systems installed.	(Readiness scores not available for Cook Islands, Nauru, Niue, Tuvalu) ECS/EWS infrastructure and equipment were prioritised in BSRR. This is in line with priorities identified in the SIDs. Accelerated Modalities of Action (SAMOA) Pathway. However, the effectiveness of ECS/EWS equipment is yet to be tested as much of it is still being procured and installed. Initial observations are that further technical training may increase the effective use of systems. Where EWS systems are being designed (e.g. with Fiji) the needs of those with hearing impairment have been considered for example, in Fiji and Timor Leste, there are SMS warning systems in place (where people have phones). When selecting sirens for Fiji, specifications also took into account those with some hearing impairment.
	12 No. of PICTs that have fit-for-purpose DRM facilities	Many PICTs do not have a purpose-built fit-for-purpose EOC – 11 have only meeting rooms and some EOCs are in a state of disrepair (e.g. Solomon Islands). EOCs in PICTs such as Palau lacked proper equipment. These factors negatively impacts the effectiveness and speed of responses. Equipped and flexible coordination facilities are required closer to the sites of disaster events. For example, in Fiji and Vanuatu, there is a need for new/refurbished EOCs at district/provincial level. For other PICTs, coordination can be improved through Mobile EOCs. For PICTs such as Timor Leste, remote and vulnerable communities have no access to suitable evacuation centres. In the Cook Islands, many schools, etc. used for evacuations not considered safe and fit for safety shelters; and use of schools delays them reopening.	12.1 At least 4 PICTs have fit-for-purpose EOCs through support for design, retrofit and/or construction (Fiji, PNG, Vanuatu, Samoa) 12.2 Two (2) Evacuation Centres renovated or constructed for cyclone (Timor Leste) 12.3 At least 2 PICTs benefit from improvements to meteorological offices (Tonga, Kiribati) <i>Gender and the needs of vulnerable groups to be considered in all designs.</i>	12.1 <i>Target will be exceeded</i> – work to construct/retrofit EOCs in 11 PICTs - Construct: Kiribati (site located); Solomon Islands (designer procured); Niue (design complete); Vanuatu and Nauru (build contractor procured). - Retrofit/Upgrades: Cook Islands (3 underway); Fiji (completed 3 EOC return/dispatches; 5 underway); FSM (2 completed); Palau (completed); Timor Leste (completed); Tuvalu (underway) <i>In addition:</i> - BSRR has funded the design of EOCs for Samoa and Tonga. 12.2 <i>Target will be exceeded</i> - Two (2) evacuation centres in progress for Timor Leste, and 3 village-level emergency shelters being retrofitted (Cook Islands). 12.3 Target will be exceeded – MET Offices built/upgraded in 2 PICTs (Kiribati, Tuvalu), and the Tongan Ministry of Meteorology, Energy, Information, Climate Change and Communications building designed <i>In addition:</i> - 1 Fijian community relocated due to severe disaster risk with rebuilding of community including disaster resilient evacuation centre to withstand category 5 cyclones. - 1 SAR building designed/under construction (Samoa)	EOCs and evacuation centres are established to serve a wide community. Those constructed, refurbished or upgraded as at December 2017 will benefit cumulative community populations of over 2 million people . It is anticipated that this risk-informed infrastructure - MET offices, EOCs (fixed and mobile) and evacuation centres - will improve hazard monitoring and response coordination before, during and after disasters. However, BSRR is currently in for has recently completed the design and/or construction phases, it is too soon to see evidence of this. Gender and the needs of vulnerable groups have been identified as key considerations in designs. For example, gendered bathrooms and sleeping quarters, and through wheelchair accessibility. Only in a post-disaster setting will it be possible to evaluate the impact of these design considerations. It has been identified that additional support is required in EOC training and operations. EOC training now included to increase and test operational set-ups installed within the project
	13 No. of hazard specific national response plans and strategies	Fiji, Marshalls and Vanuatu have Tsunami Plans.	1.3.1 At least 2 PICTs develop response plans for hazards to which they are highly exposed (FSM, Palau)	1.3.1 <i>Target will be exceeded</i> 8 PICTs have already, or are in the process of developing hazard-based plans. These include developing/updating at: - Drought Policy - Niue - Fire Reduction Strategy - Samoa - Tsunami plan - Fiji, FSM, Nauru, Palau, RMI - Oil spill plan – Kiribati <i>In addition:</i> - Post-disaster lessons learned and plans have been developed at national level in 3 PICTs (Fiji, Solomon Islands, Tuvalu), and outer-islands (Tuvalu)	The participatory nature of the plan and policy development has helped ensure local ownership of the processes, and it is anticipated that this will assist in seeing these plans and policies translated into practice. BSRR is, however, providing capacity development alongside the plan development to ensure the local capacities exist to implement the plans/policies.
	14 No. of PICTs that have improved preparedness and response systems as a result of equipment upgrades and required goods and services	All PICTs face logistical challenges in terms of providing support to people living in remote areas who are affected by hazards. Very few NDMOs and Emergency Services have access to appropriate resources to carry out preparedness and response throughout their areas of jurisdiction Health and Safety of first responders is not currently supported by access to appropriate equipment. For example, Kiribati and Tuvalu do not have firetrucks; and FSMs fuel terminals are exposed to the risk of storm surges and tsunamis that could disconnect the fuel supply.	1.4.1 At least 3 PICTs are supported to receive upgraded fire trucks and safety equipment (FSM, Timor Leste, Vanuatu) 1.4.2 At least 10 vehicles (boats/trucks/heavy load vehicles) procured to support preparedness, response and emergency operations. 1.4.3 At least 3 national workshops and/or simulation exercises supported to improve response, coordination and conduct of post disaster needs assessment (Fiji, Solomon Islands, Vanuatu)	1.4.1 <i>Target will be exceeded</i> Increased emergency response in 8 PICTs (Fiji, FSM, Kiribati, Nauru, Niue, Samoa, Tuvalu, Vanuatu) with upgraded firetrucks and emergency management response equipment (combined with training) 1.4.2 <i>Target will be exceeded</i> 25 vehicles (boats/trucks/heavy load vehicles/ Mobile EOCs) procured for 8 PICTs (Fiji, FSM, Kiribati, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu) to strengthened coordination and emergency response. 1.4.3 <i>Target exceeded</i> 48 workshops and/or simulation exercises held or supported across eleven countries (Cook Islands, Fiji, FSM, Kiribati, Niue, Palau, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu) and involving more than 1000 participants. ⁹ This includes a 2017 workshop in the Cook Islands specifically focussed on Emergency and Disaster Management Toolkit for People with Disabilities.	PICTs are reporting an improved ability to respond to fires and other emergencies due to access to equipment and practice from simulation exercises. Analysis of change in response times is anticipated in 2018/19. A video demonstrating the impact of the fire trucks and training in Vanuatu is available at: http://bsrrp.gsd.spc.int/index.php/videos/ . The purchase of vehicles and boats allows for NEMO personnel to increase access to more remote populations both during preparedness activities and in disaster events. Simulation exercise participants report increased confidence in undertaking their roles. These exercises have also allowed areas for improvement to be identified. Diverse stakeholder participation in workshops has increased the interoperability between agencies, and ensured that preparedness work takes into account the needs of more vulnerable populations. Analysis of the impact of workshops and simulation exercise to occur in 2018/19.

¹Accessed through PREPdatahttp://prepdata.org from University of Notre Dame Global Adaptation Initiative data. Vulnerability measures a country's exposure, sensitivity, and capacity to adapt to the negative effects of climate change (rather than the combined disaster vulnerability and climate vulnerability focus of BSRR).

²Accessed through PREPdatahttp://prepdata.org from University of Notre Dame Global Adaptation Initiative data. Readiness measures a country's ability to leverage investments and convert them to adaptation actions. ND-GAIN measures overall readiness by considering 3 components – economic readiness, governance readiness, and social readiness and 9 indicators. Again this is focused on climate change readiness only.

⁹Actual gender disaggregated numbers pending receipt and analysis of a number of detailed reports.

	2.3 No. of PICTs supported with human resources for disaster risk reduction	All countries are burdened by limited human resources to oversee and implement at a large number of DRR/CCA activities	2.3.1 Sub-national (community/island/provincial/district) institutions with key roles in managing risk are strengthened in at least 3 PICTs through creation of dialogue and capacity building at these levels. 2.3.2 At least 2 PICTs supported to develop CBDRM frameworks 2.3.3 At least 10 positions and salaries paid to support NDMO to implement the BSRP project at national and community levels and/or perform critical roles that will support more effective risk management	2.3.1 <i>Target will be exceeded</i> Sub-national institutions have been strengthened in 2 PICTs (20 CBDRR committees in Solomon Islands; 5 outer-island DRM committees in Kiribati, with a further 8 to be established). CBDRR training and planning to be completed in 2 PICTs (Tonga, Palau) will also strengthen sub-national institutions. 2.3.2 <i>Target will be exceeded</i> 3 PICTs (Palau, Kiribati, Tonga) have been supported to develop CBDRM frameworks in different forms. 2.3.3 <i>Target exceeded</i> 17 in-country positions in paid to support implementation, including EOC Directors/Managers, coordinators, engineers/construction supervisors, a Data and Information Manager and Geoportal Officer. - 60% held by women. - Spanned 11 PICTs (Cook Islands, Fiji, FSM, Kiribati, PNG, RMI, Solomon Islands, Timor Leste, Tonga, Tuvalu, Vanuatu).	Training and capacity development has included embedding DRM into community disaster plans. Monitoring of implementation of those plans is planned for 2019. The CBDRR framework for Palau took the form of a toolkit launched in 2017, and being rolled out in 2018. In Kiribati, a sub-national DRM framework is paving the way for increased coordination and capacity building with outer islands. In Tonga, a CBDRM and partnerships gap analysis has guided CBDRM activities now being undertaken. While increases in disaster awareness and consistency/clarity on CBDRM processes and tools should be evident by 2019, community-level results are unlikely to be seen during the BSRP implementation period. Implementation of a project of this magnitude would not have been possible without the work of the local Coordinators operating alongside NDMO colleagues. These roles were key to: maintaining momentum, engaging with stakeholders, dealing with procurement, contracting and financial issues; as well as local monitoring. The effectiveness of establishing the EOC Director/Manager roles in RMI, will see these roles (or similar) transition into a permanent government-funded roles in 2018. Refer to <i>Communications</i> section for a case study on outcomes from the development of the disaster-ready toolkit for the private sector. In PNG, the Department of Mineral Policy and Geohazards Management is working with the community and with schools along the Highlands Highway to not only monitor and map critical and active landslides, but to raise awareness of other geological hazards. Field investigations have depended on the awareness and understanding of the communities in and around the active areas visited. Villages have also provided casual field assistants and security. This highlights the importance of technical and community-based activities being implemented simultaneously. Many of the activities to support DRM/CCA community and private sector education are still underway so it is too early to assess evidence of change. Analysis of evidence of change from these activities is planned for 2019.	Analysis of evidence of change from qualification and training activities planned for 2018/2019. Early observations include: - Participant feedback from all trainings that conducted immediate post-training surveys showed that expectations of participants were met. - The staff in the Cook Islands that completed the project management training were able to directly apply these skills into the implementation of BSRP and their wider work. - Informal training and coaching in SPC procurement and financial requirements provided to all countries saw increased compliance and ability to procure, contract and acquit for funds received by most countries. These skills will be transferable into other projects in the future.
KRA 3: Improved knowledge, information, public awareness, training and education	3.1 No. PICTs supported to include DRM and CCA in formal, community and private sector education	5 countries have integrated DRR in the national educational curriculum to date (Nauru, Palau, Samoa, Tonga, Vanuatu). Only 3 of these include DRR at a tertiary level. CBDRM is not reflective in the region.	3.1.1 At least 1 additional PICT integrated DRM into school curriculum (Kiribati). 3.1.2 At least 1 PICT developed a teacher's resource kit (Cook Islands). 3.1.3 At least 1 additional PICT supported to deliver tertiary DRM courses (PNG). 3.1.4 At least 3 PICTs supported with logistics, per diems, printing, equipment, to carry out CBDRR training activities (Cook Islands, Palau, Solomon Islands, Tuvalu)	3.1.1 <i>Target met</i> 1 PICTs (Cook Islands) has integrated DRM into their school curriculum. <i>In addition:</i> - BSRP funded introductory workshops for the development of Provincial Education in Emergencies (EIE) policy and integration into schools across PNG in partnership with Ministry of Education. 3.1.2 <i>Target will be exceeded</i> 1 PICT developed a teacher's resource kit (Cook Islands) and in 2018 will provide training on its use. 1 PICT (Samoa) is also in the process of developing a Teachers' Resource Guide for the integration of DRM into early childhood education. 3.1.3 <i>Target will be met</i> 1 PICT (PNG) is developing 2 tertiary courses (Comprehensive Hazard and Risk Management (CHARM), DRM) for delivery by the University of PNG from 2019. <i>In addition:</i> - a disaster-ready toolkit has been developed with the private sector to increase resilience and leverage partnerships for businesses in the Pacific region. 3.1.4 <i>Target will be exceeded</i> CBDRRM-type training and activities are being supported in 10 PICTs (Cook Islands, FSM, Kiribati, Palau, PNG, RMI, Solomon Islands, Timor Leste, Tonga, Tuvalu) targeting a range of stakeholders including new Mayors, District Officers, councils, schools, private sector, women, youth, and those with disabilities.	3.2.1 NDMO staff from 2 countries have been/are being supported to achieve formal DRM qualifications (Fiji, Solomon Islands). A total of 13 staff (100% male) were sponsored, 9 completed , 1 did not complete, and 3 are still studying. <i>In addition:</i> - 2 NDMO staff (50% female) from 1 country (Cook Islands) received partial sponsorship to complete formal Project Management qualifications . 3.2.2 There have been 67 CCA/DRM-related training events (trainings or study tours) involving more than 1,221 government, community, private sector and non-government participants . ²⁰ PICTs have participated in trainings to varying degrees: Cook Islands (11), Fiji (7), FSM (10), Nauru (1), Palau (9), PNG (7), RMI (3), Samoa (6), Solomon Islands (1), Timor Leste (5), Tonga (3), Tuvalu (2), Vanuatu (2). The level of BSRP support for these events varied as shown below.  These trainings spanned a range of disciplines, generally classified below: - Community-based DRM (2) - Disaster-related policy and programming skills (3) - Emergency Operations / Evacuation Centre training (8) - Emergency response skills – professional (12) - First aid (9) - Hazard-specific skills (5) - Training trainers (4) - Understanding DRR/DRM – community/private sector (4) - Understanding DRR/DRM/assessment – professionals (10) Of those trainings where gender statistics are available (n=48), 33% of participants were female . This, however, varied by discipline. <i>In addition:</i> - BSRP found increased need for Finance and Procurement training following the change in implementation delivery modality. This informal training was provided during Regional Steering Committee meetings as well as direct coaching (in person/distance).	
	3.2 Number of DRM professionals/facilitators/instructors supported to pursue relevant qualifications and number of PICT government, NGO, private sector and community reps introduced to DRM/CCA capacity building	No NDMO staff, below Director Level, have formal DRM qualifications. Only 1-2 people in each of the 15 countries trained on various aspects of DRM and very little understanding of risk in other government sectors	3.2.1 At least 2 PICTs supported to sponsor NDMO staff to achieve formal DRM qualifications (Fiji, Solomon Islands). 3.2.2 At least 200 government officials, community members, and non-government representatives from a range of sectors and across the 15 countries trained on a range of topics such as post-disaster needs-assessment, training for instructors, disaster management, emergency response, emergency operations centre, incident command systems, and community disaster risk reduction			

	3.3 No of knowledge products developed to increase awareness and public information risk	In 2013, 3 countries had publicly available national disaster information systems. Awareness materials tend to be hazard focused and not tailored to the needs of different groups or easily available in remote parts of the countries	3.3.1 Supporting printing and logistics for DRR/CCA educational awareness materials and events to improve quality and reach of DRM information to specific groups and/or general public in at least 6 PICTs through regional initiatives	3.3.1 <i>Target exceeded</i> 11 PICTs have been supported with forms of education awareness materials, education campaigns and events such as Pacific Resilience Week or International Day for Disaster Reduction. This has included developing 2 behaviour change disaster awareness campaigns (Get Ready Disasters Happen and Disaster-Ready Toolkit)	Refer to <i>Communications</i> section for case study on the Get Ready Disasters Happen disaster awareness campaign.
	3.4 No. of PICTs supported to review and modify risk message content and provide training to media reps	In 2013, four countries provided preventative risk management public education campaigns for risk-prone communities (Fiji, Nauru, Samoa, Tonga)	3.4.1 Financial and technical support provided to at least 2 PICTs through regional initiatives to train media representatives on improved messaging for DRM/CCA	3.4.1 <i>Target exceeded</i> 64 participants (47% female) from 9 PICTs have participated in 3 media trainings to increase disaster awareness and CCA resilience-based messaging supported through BSRP project.	To be assessed as part of 2018/2019 monitoring activities.
KRA 4: Improved understanding of natural hazards and the underlying risks	4.1 Number of countries with expanded risk profiles and improved understanding of hazards and vulnerability	In 2013, 3 countries reported having a national multi-hazard risk assessment to inform planning and development decisions. Two of these included gender disaggregated data	4.1.1 Supported at least 3 PICTs to establish systems to enable a better understanding of locations in communities exposed to hazards and that can overlay socio-economic information to determine level of risk (Fiji, FSM, Tonga).	4.1.1 <i>Target exceeded</i> 6 PICTs have been supported to establish systems that enable better understanding of locations of communities exposed to hazards to support reduction of vulnerability (Cook Islands, Fiji, Kiribati, Palau, PNG, Tonga). This has included establishing information, GIS, vulnerability and disability databases/systems, and technical systems and equipment to monitor and collect data.	Data collected forms a baseline that can be drawn on to inform more targeted responses following a disaster. The extent to which new data is being analysed to inform preparedness decisions within the government, community and private sectors will be examined in monitoring and evaluation activities in 2018/19.
	4.2 No. of activities that support community resilience	All countries recognise the importance of building resilience at community level	4.1.2 Supported 3 PICTs to collect, collate and analyse hazard data to inform planning and decision making for high risk areas (PNG, Samoa, Timor Leste)	4.1.2 <i>Target exceeded</i> 7 PICTs have been or are being supported to collect, collate and analyse hazard data to inform planning and decision making for high risk areas (Cook Islands, Fiji, Palau, PNG, Samoa, Timor Leste, Tonga). This has included both data from both scientific and traditional sources in relation to landslides, volcanoes, tsunamis, utilities and vulnerable communities.	The cyclone-resilient storage facilities in Palau and Tuvalu allow for the pre-positioning of equipment and supplies and thus faster responses following disaster events.
	4.3 No. of countries supported to have improved food and water security	All PICs recognise the importance of strengthening food and water security in terms of taking an integrated approach to risk reduction. In the Pacific, household or community level food and water supplies are more threatened than national ones by climate change and hazards.	4.2.1 Support government departments in at least 4 PICTs to develop and implement multi-sector actions to reduce risk in vulnerable communities	4.2.1 <i>Target met</i> 4 PICTs have benefited from multi-sector actions to reduce risk to vulnerable communities. - 3 storage facilities for pre-positioned supplies/emergency fuel provided (FSM, Palau, Tuvalu) - 1 seawall constructed (FSM – Awak School) - 1 village (110 people) relocated due to disaster risk (Fiji – Tukuraki village)	The upgrade of fuel storage infrastructure at higher elevations in FSM was part of the development of a model Facility Operating and Maintenance Agreement (FOMA) in FSM for replication with other utilities. A video demonstrating the impact of the Tukuraki village relocation is available at: http://bsrpgsd.spc.int/index.php/videos/
	5.1 No. of forums convened with participation of international and national agencies including civil society and private sector	A regional DRM platform has been convened since 2005 to enable DRM managers and stakeholders from throughout the region to share information, network, and collectively formulate strategic regional plans	4.3.1 At least 3 PICTs supported to build local level capacity to improve food and/or water security (Vanuatu, Kiribati, FSM)	4.3.1 <i>Target exceeded</i> 5 PICTs have been/are being supported to build local level capacity to improve food and/or water security (FSM, Kiribati, RMI, Tonga and Vanuatu). This has included installing water tanks and providing a borehole drilling rig to carry out water exploration in communities prone to water scarcity, working with youth to establish nurseries, and providing the means to distribute plants.	Vanuatu had used the borehole drilling rig to drill 31 boreholes across 5 islands by the end of 2017, with a further 3 boreholes underway.
KRA 5: Enhanced partnerships in DRM and Climate Change	5.2 Integrated regional strategy for DRM and Climate Change developed and approved by Leaders	Regional Framework for Action for DRR ending in 2015. No regionally endorsed integrated framework	5.1.1 2 Pacific Platforms for NDMOs and Climate Change experts convened.	5.1.1 <i>Target exceeded</i> 4 Pacific Platforms for DRM/CCA held with BSRP acting as lead organisers for these events with partners and CROP agencies since 2013. <i>In addition:</i> - Fiji, FSM, and the Cook Islands have all held national platforms (supported by BSRP) for NDMOs and climate change experts to look at local and sub-national integration.	Engagement in the development of the FRDP was high, with a Technical Working Group, 11 face-to-face consultation workshops at national and regional stakeholders, 14 selected stakeholder interviews, and online consultations resulting in 1,529 individual comments and 56 full submissions (primarily Pacific, but also global). This extensive engagement has meant that there is a broad ownership base of FRDP in the region, and motivation to see it implemented. In 2017, the focus shifted to the implementation of FRDP, which include many of the activities detailed in this report. In 2017, the Platform was focused on combining climate change and disaster risk areas to create a way forward together to continue integration at a regional level of CCA/DRR.
	5.3 Strategic alliance between Pacific Islands Disaster, Fire and Emergency Services with APAC members established and twinning arrangements implemented	All countries dealing with emergency response operate in silos. No SREMs and no formal Emergency Management-endorsed alliance for the Pacific exist.	5.2.1 An integrated framework is regionally endorsed	5.2.1 <i>Target met</i> FRDP completed and endorsed by Leaders in September 2016. The Pacific Resilience Partnership Governance Structure was then endorsed by Leaders in September 2017 and will now be the coordinating mechanism to implement the FRDP and integrate DRR/CCA at regional and country levels over the coming years. <i>In addition:</i> - Compendium of case studies of DRM and climate change	FRDP now has high-level unanimous regional endorsement and is heavily supported by BSRP and partners. This is the first Framework in the world fully integrating DRR and CCA. It is influencing practice regionally, but also throughout the world.
			5.3.1 Logistical support provided to enable twinning partnerships between APAC partners and PIC emergency services agencies to be activated.	5.3.1 <i>Target met</i> Logistical support has enabled 10 Twinning Partnerships to be finalised and activated, with a further 5 underway.	The twinning relationships have resulted in a wide range of resource and skills transfer by participating countries.
			5.3.2 Strategy 2020 developed and endorsed by BSRP RSC	5.3.2 <i>Target met</i> Strategy 2020 developed with countries, endorsed by NDMO directors in 2015.	The focus is now on implementing Strategy 2020 across the region. This has led to the leveraging of additional funding for emergency management to support PIEM into the future (refer to case study in PIEMA section)
			5.3.3 Two (2) national SREMs developed and approved by the National BSRP steering committees	5.3.3 <i>Target may be exceeded</i> 1 SREM completed and 2 SREMs expected to be completed during the BSRP implementation period. In total, SREMs are in various stages of development 5 PICTs (Cook Islands, Kiribati, Niue, Samoa, Vanuatu).	The SREMs are proving to be a key mechanism to guide national action, stakeholder engagement and improve interoperability within countries.

³² Training reports for some training events are still pending, therefore this is an incomplete number.



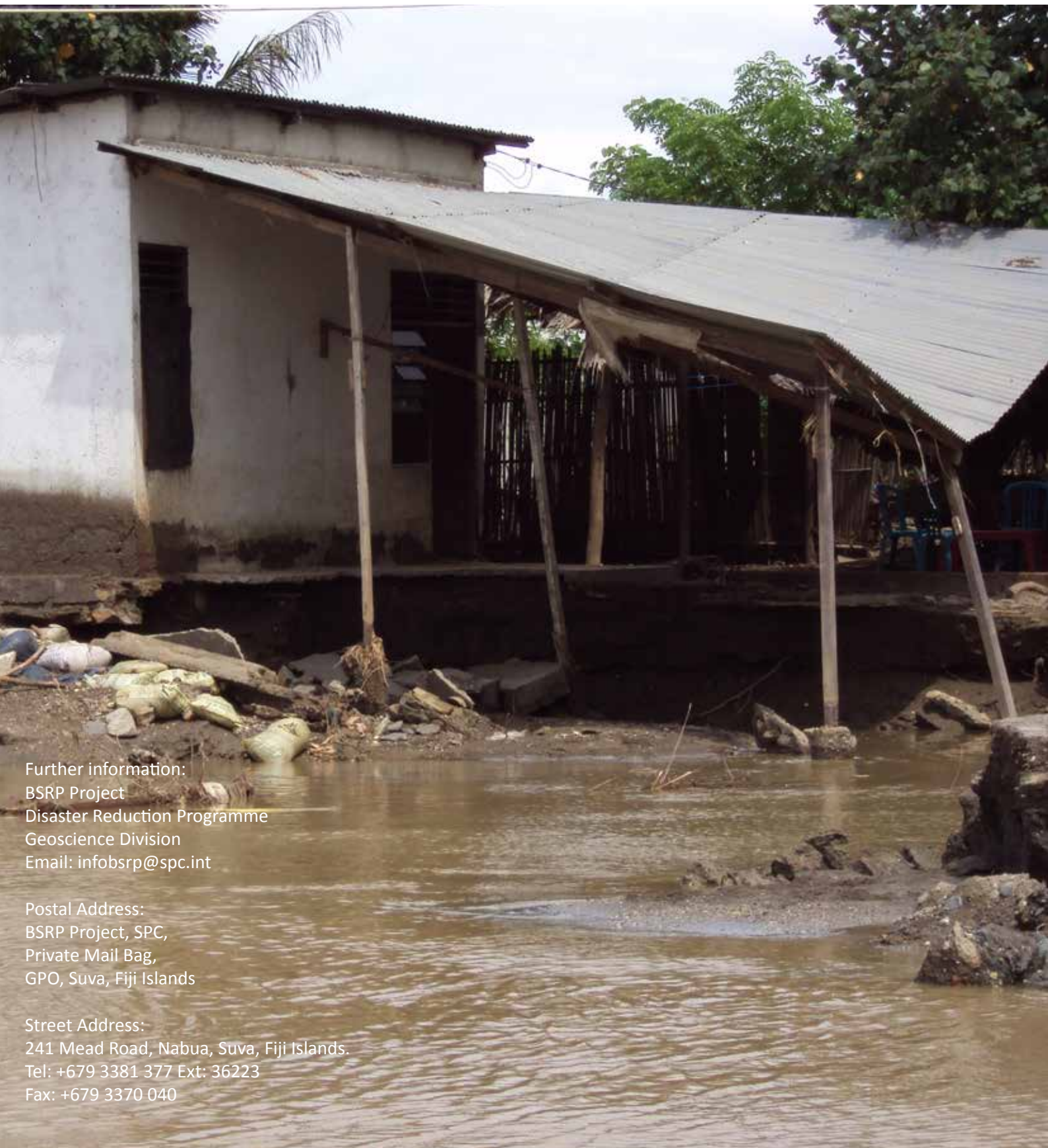




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