



SPC
Secretariat
of the Pacific
Community



SPC climate change and disaster risk management support activities in Pacific Island countries and territories 2013

Papeete

FRENCH POLYNESIA

PITCAIRN ISLANDS

Adamstown

*SPC climate change and disaster risk
management support activities in Pacific
Island countries and territories*

2013



Compiled by the Secretariat of the Pacific Community (SPC)

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Purpose of document

The purpose of this document is to provide a summary overview of SPC climate change and disaster risk management (DRM) support to Pacific Island countries and territories (PICTs). The document lists recently concluded activities (2012) as well as current and planned activities as at 1 August 2013.

For each activity, the matrix lists the key SPC contact person as well as the national focal point. It also lists the development partners that are supporting the activity and the approximate timeframe over which the support is being provided. In this 2013 revision, brief summary status reports are provided as well as the intended impact of the activity. The SPC contact person and national focal point can provide further details on the specific activities if required.

The matrix is intended to not only provide summary information to members but also to assist SPC divisions and programmes in developing integrated multi-sector approaches to service delivery and to inform other agencies making up the Council of Regional Organisations in the Pacific (CROP), development partners and non-governmental organisations (NGOs) of SPC's current climate change support activities and thereby facilitate greater cooperation and collaboration across the region. The matrix is a living document that will be updated annually. SPC recognises that gaps and errors do exist and welcomes any information to make it as accurate as possible for the next edition.

A glossary of the main abbreviations used in the activity summary tables and a list of key SPC contacts is provided below.

Abbreviations	SPC division/regional office	Head of division	Email
DRP	Disaster Reduction Programme	Mosese Sikivou	moseses@spc.int
EDD	Economic Development Division	Captain John Hogan	johnh@spc.int
FAME	Fisheries, Aquaculture and Marine Ecosystems Division	Mike Batty	mikeb@spc.int
HDP	Human Development Programme	Linda Petersen	lindap@spc.int
LRD	Land Resources Division	Inoke Ratukalou	inoker@spc.int
PHD	Public Health Division	Dr Colin Tukuitonga	yvans@spc.int
SDD	Statistics for Development Division	Dr Gerald Haberkorn	geraldh@spc.int
SEPPF	Strategic Engagement, Policy and Planning Facility	Cameron Bowles	cameronb@spc.int
SOPAC	Applied Geoscience and Technology Division	Prof Michael Petterson	michaelp@spc.int
	Northern Pacific Regional Office		
	Solomon Islands Country Office	Mia Rimon	miar@spc.int
Key SPC climate change development partners		Project manager	
GIZ CCCPIR	Deutsche Gesellschaft für Internationale Zusammenarbeit Coping with Climate Change in the Pacific Islands Region project	Dr Wulf Killmann	wulfk@spc.int
EU GCCA: PSIS	European Union Global Climate Change Alliance: Pacific Small Island States project	Dr Gillian Cambers	gillianc@spc.int
USAID	United States Agency for International Development	Vuki Buadromo	vukib@spc.int
AusAID ICCAI	Australian Agency for International Development International Climate Change Adaptation Initiative	Brian Dawson	briand@spc.int
DCCEE ICCAI	Department of Climate Change and Energy Efficiency ICCAI	Jo Mummery	jo.mummery@climatechange.gov.au
PACCSAP	Pacific Australia Climate Change Science and Adaptation Planning Program	Shin Furuno	shin.furuno@climatechange.gov.au
PDRMP USAID/OFDA/TAF	Disaster Risk Management Training in Eight Pacific Countries – USAID/OFDA/The Asia Foundation	Kirstie Meheux	kirstiem@spc.int
EU (EDF B Envelope)/SPC	Disaster Risk Reduction in Eight Pacific ACP Countries	George Beck	georgeb@spc.int
EU (EDF C Envelope) /SPC	Disaster Risk Reduction in Four Pacific Overseas Countries and Territories	Frederique Lehoux	frederiquel@spc.int
RESCUE	Restoration of Ecosystems Services against Climate Change Unfavourable Effects	Olivier Auguin	oliviera@spc.int
PCRAFI	Pacific Catastrophe Risk Assessment and Financing Initiative	Litea Biukoto	liteab@spc.int
North-REP	North Pacific ACP Renewable Energy and Energy Efficiency Project	Solomone Fifita	solomonef@spc.int

SPC climate change and disaster risk management support activities in Pacific Island countries and territories



American Samoa

Climate change and related disaster risk management activity	Relevant SPC programme/division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 1 August 2013)	Projected impact
Fisheries <ul style="list-style-type: none"> Identification of adaptation responses for coastal fisheries and oceanic fisheries and aquaculture Provided funding for representative to attend Vulnerability of Pacific Fisheries and Aquaculture to Climate Change Workshop 5–8 June 2012, Noumea 	SPC-FAME Johann Bell johannb@spc.int Etuati Ropeti etuatir@spc.int	Ray Tulafono Department of Marine and Wildlife Resources ray.tulafono@yahoo.com	AusAID ICCAI	2012–2013	Regional workshop to identify priority adaptations to climate change for the fisheries and aquaculture sector, and a joint report with FAO on workshop outcomes. Raised awareness of climate change impacts on contributions of fisheries and aquaculture to national economies, food security and livelihoods, and the range of adaptations and supporting policies to minimise the risks and capitalise on opportunities. American Samoa summary in regional assessment of vulnerability of fisheries and aquaculture to climate change; SPC Policy Brief 15/2012 'Oceanic Fisheries and Climate Change'; SPC Policy Brief 16/2012 'Coastal Fisheries and Climate Change'; SPC Policy Brief 18/2012 'Aquaculture and Climate Change'. Presentation of climate change adaptations at 'Resilience of marine ecosystems' workshop.	Priority adaptation actions will enhance resilience of fisheries and aquaculture sector to climate change impacts
Water <ul style="list-style-type: none"> Involvement in the development of a Regional Framework for Water, Sanitation and Climate 	SPC-SOPAC Rhonda Robinson rhondar@spc.int	Ms Andra Samoa Chief Executive Officer American Samoa Power Authority andras@aspower.com	EU/French Pacific Funds/C Envelope	Ongoing	In progress 2013.	Strengthened adaptive capacity through provision, management of water and sanitation



Cook Islands

Climate change and related disaster risk management activity	Relevant SPC programme/division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 1 August 2013)	Projected impact
Agriculture <ul style="list-style-type: none"> Provision of technical assistance and guidance documents relating to the impacts of climate change on the agricultural sector 	SPC-LRD Valerie Tuia valeriet@spc.int Dean Solofa deans@spc.int	William Wigmore DOA, MOA	ICCAI	2012–2014	SPC producing comprehensive vulnerability assessment of agriculture to climate change (similar to Fisheries Vulnerability Assessment) that will inform priority adaptation actions (due 2014). Book currently in production with chapter authors working on materials. Full list of trained nationals to be produced in final report.	Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts
<ul style="list-style-type: none"> Establishing evaluation sites for climate resilient crops from the climate ready crop collection (Centre for Pacific Crops and Trees – CePaCT) 					Screen-house experiment has progressed well with detailed plans executed, including the design of randomised complete block with 4-replication. Sites have been established, nurseries built, test crops planted and seeds harvested. Crops currently under assessment and testing phase for the water-logging tolerance tests.	
<ul style="list-style-type: none"> Supporting taro improvement programme to combat climate related disease (taro blight) 					Taro breeding initialised and supporting facilities (nurseries and screen houses) assessed. Varieties include CePaCT supplied taro leaf blight improved varieties. A note was made of the dry conditions of the normally wet season.	
<ul style="list-style-type: none"> Expanding the distribution of climate resilient planting material (banana, cassava, sweet potato) from CePaCT crop collection 					Completed procuring equipment in December 2012. Sweet potato planting materials are at germination stage and are now in process of shifting into trial buckets. Cultivars for cassava varieties are currently being multiplied for stem pieces ready by end of March for testing phase. All cultivars are now being planted; however the water-logging trial is currently on hold due to the current drought being observed on island. Evaluation on cassava will be undertaken in 3rd quarter 2013.	
<ul style="list-style-type: none"> Undertaking evaluations of crop tolerance to water logging 					Water-logging design systems tested and devised. Test crops planted in flooded plots and evaluations to begin around July/August.	

Coastal zone management <ul style="list-style-type: none"> Collecting oceanographic data and developing benthic habitat map of Muri Lagoon to assess susceptibility to development and climate change impacts 	SPC-SOPAC Arthur Webb arthurw@spc.int	Ben Ponia Secretary, Ministry of Marine Resources	AusAID	2010–2011	Completed	Critical baseline data (marine habitat map and water flow patterns) established to guide decision-making in improving the flushing of the lagoon and establish a monitoring regime for long-term water quality and ecosystem health
<ul style="list-style-type: none"> Hydrodynamic modelling and habitat mapping of Aitutaki Lagoon and boat channel 	SPC-SOPAC Arthur Webb arthurw@spc.int	Bim Tou Ports Authority	EU EDF9 / NZROSP	2008–2013	Ongoing.	Reducing impact of capital dredging on the lagoon ecosystem through redesign of proposed channel and marina
<ul style="list-style-type: none"> Developing a comprehensive geospatial framework to inform climate change adaptation in the coastal zone of selected areas of Mangaia Island – part of SPREP PACC 	SPC-SOPAC Arthur Webb arthurw@spc.int	Vaipo Mataora Ministry of Infrastructure and Planning SPREP focal point Taito Nakalevu taiton@sprep.org	GEF UNDP SPREP/PACC	2010–2012	Completed.	Increased knowledge base on coastal processes and coastal inundation for hazard mapping; hazards from tropical cyclone-induced waves and water levels quantified and detailed coastal hazard map used for local adaptation strategies and development planning
<ul style="list-style-type: none"> Updating and analysing data on sea levels, sea surface temperature, barometric pressure and wind speed and direction 	SPC-SOPAC Arthur Webb arthurw@spc.int	Molly Powers-Tora Regional Officer COSPPac	COSPPac	2012–2016	Pacific Sea Level Monitoring stations continued to provide a continuous stream of high-quality data on sea level, temperature (water and air) barometric pressure and wind speed and direction. In addition, land-based continuous GPS stations complemented these data and helped account for any tectonic movement.	Provided policy-makers, development planners and scientists with important and reliable information about sea level variability and climate change associated sea level rise
Disaster risk management <ul style="list-style-type: none"> Disaster risk reduction (DRR) profile recently completed 	SPC-SOPAC Mosese Sikivou moseses@spc.int	Charles Carlson Director Emergency Management Cook Islands (EMCI)	ACP EU NDF	2011–2013	Profile printed and serving as an additional resource for DRM advocacy.	DRR profile, joint national action plan will inform SPC national interventions
<ul style="list-style-type: none"> Joint national action plan (integrated Disaster Risk Reduction/Climate Change Adaptation Plan) 					Development of joint national action plan (integrated Disaster Risk Reduction/Climate Change Adaptation Plan) for Cook islands has commenced.	
<ul style="list-style-type: none"> Development and implementation of DRM national action plan 			EU Development Fund including ACP DRM Facility	2012–2013	Printed and implemented to enhance preparedness and resilience of communities	

<ul style="list-style-type: none"> Improve capacity and performance of disaster management agencies through materials and training 			USAID Pacific Disaster Risk Management Program 2	2010–2013	The following training sessions were delivered to increase safety and resilience: Training for Instructors, April 2012 Disaster Risk Reduction, June 2013 Evacuation Centre Management, June 2013	National capacity enhanced to address DRM issues
<ul style="list-style-type: none"> Develop Disaster Risk Reduction/Climate Change Project Portal 	SPC-SOPAC Jutta May juttam@spc.int		Asian Disaster Preparedness Center	May 2012–April 2013	Disaster Risk Reduction / Climate Change Project Portal for the Cook Islands launched in April 2013, online under http://www.pmooffice.gov.ck/index.php?option=com_wrapper&view=wrapper&Itemid=98	Accessibility of data on disaster risk management and climate change projects available to support the planning and implementation of activities strengthened
<ul style="list-style-type: none"> Provision of disaster risk assessment tools including financial instruments to reduce vulnerability to natural disasters 	SPC-SOPAC Litea Biukoto liteab@spc.int		PCRAFI Phase 2	2010–2012	Risk profile developed to help inform PCRAFI Phase 3.	Enhanced capacity of PICTs to access, manage and use disaster and climate change information for disaster risk reduction, risk management, risk adjusted development planning and risk financing
<ul style="list-style-type: none"> Training and capacity building through disaster risk management training courses 	SPC-SOPAC Kathryn Hawley kathrynh@spc.int Kirstie Meheux kirstiem@spc.int		PDRMP USAID/OFDA/The Asia Foundation	Sep. 2010–June 2013	Training courses delivered in emergency operations centres, initial damage assessment, exercise management, training for instructors, disaster risk reduction, and evacuation centre management.	Increased capacity, knowledge and skills to implement DRM and DRR initiatives with increased management of evacuation centres in country
Fisheries <ul style="list-style-type: none"> Funding for representative to attend Vulnerability of Pacific Fisheries and Aquaculture to Climate Change Workshop 5–8 June 2012, Noumea Provision of technical assistance on assessing the impacts of climate change on Cook Islands fisheries and aquaculture 	SPC-FAME Simon Nicol simonn@spc.int Lindsay Chapman lindsayc@spc.int Johann Bell johannb@spc.int	Ben Ponia Dorothy Solomona D.Solomona@mmr.gov.ck	AusAID ICCAI Phase 2	2012–2014	National workshop to identify priority adaptations to climate change for the fisheries and aquaculture sector, and a report on workshop outcomes. Raised awareness of climate change impacts on contributions of fisheries and aquaculture to national economy, food security and livelihoods, and the range of adaptations and supporting policies to minimise the risks and capitalise on opportunities.	Enhanced resilience of fisheries and aquaculture sector to climate change impacts
<ul style="list-style-type: none"> Preparing knowledge products and guidance documents on key coastal and oceanic fisheries issues for use by fisheries officials and resource users 					Cook Island country summary of regional assessment of vulnerability of fisheries and aquaculture to climate change; SPC Policy Brief 15/2012 'Oceanic Fisheries and Climate Change'; SPC Policy Brief 16/2012 'Coastal Fisheries and Climate Change'; SPC Policy Brief 18/2012 'Aquaculture and Climate Change'.	

					Tailored databases and secured OFP country-specific webpages updated to provide up to the minute information on oceanic ecosystem status.	
<ul style="list-style-type: none"> Preparing a national assessment of climate change impact on oceanic fisheries 					Draft national assessments completed containing projections on future tuna resources to provide government officers with base information to negotiate climate adaptations to sustain oceanic tuna fisheries in the Western and Central Pacific Ocean.	
<ul style="list-style-type: none"> Environmental monitoring in northern atolls to inform and expand the pearl farming industry; provision of education and awareness and improve farming practises 	GCCA: PSIS Gillian Cambers gillianc@spc.int				In progress, project design document signed March 2013 and implementation underway – due to be completed mid-2015.	Livelihoods of pearl farmers in the northern atolls enhanced through improved farming practises, and provision of improved information so as to avoid disease outbreaks and stress to the oysters due to present environmental conditions and future projected conditions under climate change
Mainstreaming <ul style="list-style-type: none"> Preparation of a Climate Change Profile 	SPC SEPPF Graham Sem grahams@spc.int	Anna Tiraa Climate Change Cook Islands	EU GCCA: PSIS	2012-14	Profile available on website June 2012 (used by country, regional organisations and donors for information and planning).	Priority adaptation activities identified and platform for adaptation action established
<ul style="list-style-type: none"> Appoint National In-Country Coordinator 					National coordinator appointed January 2013; impact: capacity built in-country to coordinate and manage climate change activities.	National capacity enhanced to assist government to manage, coordinate and implement SPC climate change activities
<ul style="list-style-type: none"> Assistance in assessing the capacity to receive direct budget support and/or sector budget support for climate change activities 					Technical assistance in-progress to gain National Implementing Entity accreditation, and support to attend COP 18 negotiations. Regional review of readiness for climate change finance using budget support modalities conducted June–Aug. 2013.	Capacity of Ministry of Finance to access climate financing through budget support enhanced
<ul style="list-style-type: none"> Capacity development in proposal preparation and writing to improve access to climate change funding 					Training in proposal preparation provided to 25 government participants, May 2013.	At least 25% of participants able to prepare concise, logical funding proposals over next 12 months

<ul style="list-style-type: none"> Fifteen-minute video on health and climate change in Cook Islands prepared as part of a series of four issue-based videos and one regional video 					Video launched and distributed July 2013.	Awareness of the relationship between climate change and health enhanced in Cook Islands and the region
Water <ul style="list-style-type: none"> Placement of junior professionals to assist in the national water committees' development of draft National Outlooks for Water, Sanitation and Climate Support provided to post-disaster assessments Risk management approaches mainstreamed in integrated water resource management (IWRM) Support provided to the Pacific WASH (Water, Sanitation and Hygiene) Cluster during periods of emergencies and disasters 	SPC-SOPAC Rhonda Robinson rhondar@spc.int				In progress 2013.	Strengthened adaptive capacity through provision, management of water and sanitation



Federated States of Micronesia (FSM)

Climate change and related disaster risk management activity	Relevant SPC programme/division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 1 August 2013)	Projected impact
Agriculture <ul style="list-style-type: none"> • Technical assistance at national level to understand impacts of climate change on agriculture • Consultation to identify target crops/varieties for collection • Establish evaluation sites for crop gene pool enhancement • Receive plantlets from the climate ready collection for evaluation • Distribute climate ready crops (including cassava – 160 plants) from CePaCT for climate change evaluation in Chuuk and Pohnpei • Support participation at workshop on giant swamp taro diversity and duplication of selected accessions from swamp taro collection at CePaCT 	SPC-LRD Valerie Tuia valeriet@spc.int Dean Solofa deans@spc.int		ICCAI	2012–2014	Project has successfully evaluated several varieties of sweet potatoes in FSM states, and technical report has been drafted. Climate ready crops have been distributed with supporting workshops held at state level. PASAP project closing in first half of 2013. AusAID ICCAI project to follow on from PASAP project outputs.	Enhanced resilience of agricultural sector to climate change impacts and improved crop diversity and overall food security
Coastal zone management <ul style="list-style-type: none"> ▪ Identify mangrove experts – FSM local outside of Chuuk State ▪ Draft implementation strategy ▪ Conduct leadership and community consultations ▪ Survey four mangrove sites to selecting project site ▪ Conduct ecosystem and socio-economic survey to determine stressors and threats to mangrove ecosystems and impacts on the people ▪ Conduct monitoring and evaluation of mangrove trends 	SPC/GIZ CCCPIR Fenno Brunken fenno.brunken@giz.de		SPC/GIZ CCCPIR	2009–2015		Increased resilience of mangroves to climate change in Chuuk

<ul style="list-style-type: none"> Updating and analysing data on sea levels, sea surface temperature, barometric pressure and wind speed and direction Array calibration, maintenance and data communications support 	SPC-SOPAC Arthur Webb arthurw@spc.int	Molly Powers-Tora Regional Officer COSPPac	COSPPac	2012–2016	Pacific Sea Level Monitoring stations continued to provide a continuous stream of high-quality data on sea level, temperature (water and air) barometric pressure and wind speed and direction. In addition, land-based continuous GPS stations complemented these data and helped account for any tectonic movement.	Provided policy makers, development planners and scientists with important and reliable information about sea level variability and climate change associated sea level rise
<ul style="list-style-type: none"> Kosrae: developing an adaptive management approach to sustained coastal hazard risk reduction through assessment of shoreline and development change; redrafting the Kosrae Shoreline Management Plan; stakeholder engagement in Kosrae to discuss, redefine and finalise draft shoreline management plan and donor identification and proposal support 	SPC/GIZ CCCPIR Fenno Brunken fenno.brunken@giz.de		SPC/GIZ CCCPIR	2009–2015		Adaptive management approach to sustained coastal hazard risk reduction developed
<ul style="list-style-type: none"> Coastal management for food and water security in the face of climate change in Chuuk and Yap identified as on-the-ground adaptation project for GCCA: PSIS 	SPC-SEPPF Pasha Carruthers pashac@spc.int		EU GCCA: PSIS	2012–2014		Adaptation priorities identified by FSM addressed
Disaster risk management <ul style="list-style-type: none"> Development and implementation of Disaster Risk Management National Action Plan 	SPC-SOPAC Moses Sikiyou moseses@spc.int Kathryn Hawley kathrynh@spc.int George Beck georgeb@spc.int	Andrew Yatilman Office of Environment and Emergency Management	EDF9 ACP- EU NDF	2012–2013	A nationwide Disaster Risk Management and Climate Change Policy was developed in June 2013 to help guide the development of disaster risk management and climate change action plans at the state level.	Platform established to undertake integrated approaches to disaster risk management and climate change across FSM
<ul style="list-style-type: none"> Improve capacity and performance of disaster management agencies through materials and training 			USAID Pacific Disaster Risk Management Program 2	2010–2013		National climate change DRM capacity enhanced
<ul style="list-style-type: none"> Construction of emergency operation centres for all states and at the national level 	SPC-SOPAC Kirstie Meheux kirstiem@spc.int George Beck georgeb@spc.int		EU B Envelope Project	2007–2013	Emergency operation centres constructed/renovated in Chuuk, Pohnpei, Kosrae, Yap and at Palikir. The centre in Palikir – the final one constructed – was officially opened in February 2013.	Improved emergency response coordination capacity at state and national level

<ul style="list-style-type: none"> Provision of disaster risk assessment tools including financial instruments to reduce vulnerability to natural disasters 	SPC-SOPAC Litea Biukoto liteab@spc.int	Andrew Yatilman Office of Environment and Emergency Management	PCRAFI Phase 2	2010-2012	Risk profile developed to help inform PCRAFI Phase 3.	Enhanced capacity of PICTs to access, manage and use disaster and climate change information for disaster risk reduction, risk management, risk adjusted development planning and risk financing
Energy <ul style="list-style-type: none"> Technical assistance from Pacific Power Association (PPA) to refurbish Pohnpei Hydro Power 	SPC-EDD Solomone Fifita solomonef@spc.int		EU EDF 10	2011-2012		Sustaining renewable energy capacity
<ul style="list-style-type: none"> Signed contract for North-REP FSM procurement (RFP 12/05 - NREP-01-03 Agreement Between SPC and CBS Power Solution FJ) 			European Union	2012-2013	Household and mini-grid equipment for Yap transported to the outer islands; additional materials shipped to the outer islands; installation crew including technicians mobilised and commenced installation. Photovoltaic equipment for schools and health centres in Chuuk and Yap transported to the outer islands; additional materials shipped to the outer islands; installation crew including technicians mobilised and commenced installation.	Improved quality of life and reduced dependency of fossil fuels.
<ul style="list-style-type: none"> International Renewable Energy Agency (IRENA) Workshop Series on Efficient Renewable Energy Integration in the Pacific Islands Region 			European Union	2013	Supported participation of six utility personnel from RMI and FSM for the training on photovoltaic standards and grid stability modeling in Palau on 8-12 April, attended by 37 participants.	Strengthened institutions and expertise in the energy and transport sectors.
<ul style="list-style-type: none"> Improve the overall efficiency of the energy sector through energy efficiency and grid connected renewable energy and to increase access of remote populations to reliable renewable electricity services 			European Union	2012-2013	Awareness campaign launched during Earth Day on 22 April in Pohnpei. Arrangements with College of Micronesia-FSM to produce display desks at all four states. Materials will be provided to the schools once they re-open in the 3rd quarter. Discussed with forum organising committee the possibility of having North-REP materials displayed during that week, developed plan with communications specialist for the Forum Leaders Meeting and for energy in general. Supported the Earth Day programme with display of energy efficiency and renewable energy materials.	Improved quality of life on the outer islands and reduced dependency on fossil fuels; the achievement of this goal responds directly to MDG targets 2, 4, 5 and 7
<ul style="list-style-type: none"> Tender and procure works, services and equipment for the rehabilitation /reinstatement of Nanpil hydro power plant 			European Union	2012-2014	Responses to tender evaluated and successful bidder being notified. Contract drawn-up and being signed. Work to begin in August.	Reinstatement of the Nanpil hydro power plant to operational mode where it will supply electricity to the Pohnpei grid (specific outcome will be 725 kW grid-connected renewable energy)

<ul style="list-style-type: none"> Short-term technical assistance to assist the North-REP Project Management Office to carry out specific tasks as outlined in the scope of work for the rehabilitation and reinstatement of the Nanpil hydro, the 725 kW turbine, in Pohnpei, FSM 			European Union	2013	Contract awarded to carry out technical and engineering advice.	Access to affordable and efficient energy and transport services, secure, safe and environmentally friendly energy and transport services
<ul style="list-style-type: none"> Utilities assisted in addressing any issues with EDF photovoltaic systems Long-term maintenance programmes developed with power utilities Safe battery replacement systems developed On-grid renewable energy systems tendered, procured and installed Renewable energy baseline studies conducted Energy efficiency training and awareness campaigns conducted Energy efficiency baseline studies conducted Prepayment/cash power meters tendered, procured and installed in cooperation with power utilities 			European Union	2013	Equipment for Chuuk and Kosrae procured and on island, transportation to outer islands organised. Monthly fee structure for Walung community and Kosrae Energy Workgroup provided; prepayment meters for Yap outer islands procured. Negotiated and agreed on release of REPS spare parts for Chuuk and Pohnpei. Awareness materials completed and translated to five local languages; Facebook page launched. Land secured for wind monitoring sites in Chuuk; support to the biofuels resource assessment. CPUC to finalise the lantern station fee collection modality as this cannot be handled by the school. Ongoing discussions with government, particularly for the payment of subsidy as agreed to earlier.	Enabling environment for development of renewable energy created
Fisheries <ul style="list-style-type: none"> Yap: Expanding the FSM Community-based Ecosystem Approach to Fisheries Management and Climate Change Adaptation (CEAFM-CCA) Project <ul style="list-style-type: none"> Attachment training for two officers at SPC headquarters (Yap State Marine Resources Management Division and Yap Community Action Program) for climate change impact monitoring Development of draft community management plans Launching of CEAFM-CCA Program in Yap Awareness/outreach programmes Training on nearshore fish aggregating devices (FADs – construction, deployment, maintenance, usage) as an adaptation measure Development and implementation of a 	SPC-FAME Lindsay Chapman lindsayc@spc.int Etupati Ropeti etuatir@spc.int Fenno Brunken fenno.brunken@giz.de	Valentin Martin fsmmrd@mail.fm Francis Ruegrong Div. of Agriculture and Forests Mailing Damasus Marine Resources management	SPC/GIZ CCCPIR AusAID ICCAI	2009–2015	Pilot sites established at Riken & Wanyan, West Fanif and Rumung in Yap State with a community management plan developed including attachments for two officers at SPC to draft the plan. FAD programme implemented with several FADs deployed to assist communities; this includes a monitoring programme on the catch to measure change in fishing practises and any other climate change impacts. Now looking at the possibility to expand this work and replicate it in other states in FSM in late 2013/2014.	Enhanced resilience of fisheries and aquaculture sector to climate change impacts

coastal resource monitoring programme to detect climate change impacts <ul style="list-style-type: none"> Installation of a demonstration site on sustainable use of coastal resources 						
<ul style="list-style-type: none"> Funded representative to Vulnerability of Pacific Fisheries and Aquaculture to Climate Change Workshop 5–8 June 2012, Noumea Identification of adaptation responses for coastal fisheries and oceanic fisheries and aquaculture. 	SPC-FAME Johann Bell johannb@spc.int		AusAID ICCAI	2012	Regional workshop to identify priority adaptations to climate change for the fisheries and aquaculture sector, and a joint report with FAO on workshop outcomes. Raised awareness of climate change impacts on contributions of fisheries and aquaculture to national economies, food security and livelihoods, and the range of adaptations and supporting policies to minimise the risks and capitalise on opportunities. FSM summary in regional assessment of vulnerability of fisheries and aquaculture to climate change; SPC Policy Brief 15/2012 'Oceanic Fisheries and Climate Change'; SPC Policy Brief 16/2012 'Coastal Fisheries and Climate Change'; SPC Policy Brief 18/2012 'Aquaculture and Climate Change'.	
<ul style="list-style-type: none"> Establish a pilot site for monitoring the possible effects of climate change on the coastal marine environment and conduct second assessment surveys and capacity development at the national level 	SPC-FAME Lindsay Chapman lindsayc@spc.int Bradley Moore bradleym@spc.int	Valentin Martin fsmmrd@mail.fm Eugene Joseph cspdirector@serehd.org	AusAID ICCAI	2012–2014	Pilot site established in 2012 with baseline data collected covering finfish and invertebrate resources and associated habitat and coral photo quadrats. Capacity development in-country with local counterparts trained in survey methodologies. Two attachments brought to Noumea for data entry and analysis training, including the writing of the draft report. Second assessment planned for the first half of 2014 along with further capacity development.	Enhanced capacity of country to assess and monitor different effects, including climate change effects on the marine environment.
<ul style="list-style-type: none"> Joint SPC/Institut de recherche pour le développement (IRD – French Research Institute for Development) training on aging of reef fish to set baselines for future assessments on climate change related water temperature effects on the growth rates of reef fish 	Bradley Moore bradleym@spc.int	Valentin Martin fsmmrd@mail.fm Eugene Joseph cspdirector@serehd.org	AusAID ICCAI	2012–2013	Attachment training for one person from FSM undertaken in late 2012 on otolith reading for aging fish. Second part of training to be undertaken in late 2013, when the attachment has collected enough otoliths from specific species in FSM.	
<ul style="list-style-type: none"> Establish data logger monitoring site in Pohnpei to measure water temperature to monitor the vulnerability and adaptation of coastal fisheries to climate change 	SPC-FAME Lindsay Chapman lindsayc@spc.int Bradley Moore bradletm@spc.int	Valentin Martin fsmmrd@mail.fm Eugene Joseph cspdirector@serehd.org	AusAID ICCAI	2012–2013	Data loggers installed in Pohnpei (early 2012) and Yap (end of 2012) and will be replaced in the first half of 2014 when the next survey work is undertaken.	

Mainstreaming <ul style="list-style-type: none"> Develop second-cycle joint country strategy that integrates climate change actions 	SPC-SEPPF Cameron Bowles cameronb@spc.int			Core function		SPC climate change work reflected in National and Sectoral Policies and Plans
<ul style="list-style-type: none"> Preparation of a climate change profile to identify ongoing adaptation activities 	SPC-SEPPF Pasha Carruthers pashac@spc.int			2012–2015	Version 1 on Web June 2012, Version 2 in August 2013.	All climate change adaptation activities compiled and updated regularly to inform planning
<ul style="list-style-type: none"> Assistance in assessing the capacity to receive direct budget support and/or sector budget support for climate change activities 	SPC-SEPPF Pasha Carruthers pashac@spc.int				Regional review of climate financing using budget support completed September 2013 and shared at a regional meeting September 2013.	Stakeholders from environmental and finance ministries better informed about accessing climate finance through budget support and have identified steps for future progress
<ul style="list-style-type: none"> Appoint National In-Country Coordinator to assist government to manage, coordinate and implement SPC climate change activities 	SPC-SEPPF Pasha Carruthers pashac@spc.int				Coordinator appointed February 2013.	FSM in a better position to coordinate climate change activities
<ul style="list-style-type: none"> Training in proposal preparation using the logical framework approach 	SPC-SEPPF Pasha Carruthers pashac@spc.int				Training scheduled for first quarter 2014.	Stakeholders better able to prepare professional proposals for future climate change activities
Information technology <ul style="list-style-type: none"> Assess existing geographic information system (GIS) operators and viability to centralise this service – draft concept note with basic requirements from FSM (expected outcomes, beneficiaries, activities, timeline, estimated budget) 	SPC/GIZ Fenno Brunken fenno.brunken@giz.de		SPC/GIZ CCCPIR	2009–2015		Making decisions using GIS applications
Infrastructure <ul style="list-style-type: none"> Training programme ‘on-the-job’ for the infrastructure sector public servants to incorporate climate change into state development policies/action plans to align them with national policies Review of existing policies and plans Technical assistance to review specific sectoral plans in health, water and transport Train public servants and institutions on national and sectoral climate change mainstreaming Distance learning courses at College of Micronesia-FSM campuses 	SPC/GIZ Fenno Brunken fenno.brunken@giz.de		SPC/GIZ CCCPIR	2009–2015		Climate change incorporated in into state development policies for infrastructure

Insurance/reinsurance <ul style="list-style-type: none"> Review existing processes in key insurance and lending institutions operating in FSM Validate the review by bringing together managers from the states Train insurance and loan officers on recommended measures 	SPC/GIZ Fenno Brunken fenno.brunken@giz.de		SPC/GIZ CCCPIR	2009–2015		Climate change addressed in national insurance/reinsurance schemes
Traditional knowledge <ul style="list-style-type: none"> Yap: Document traditional and local marine and agro-forestry knowledge and management practises <ul style="list-style-type: none"> Desktop research (reviewing documented methods/practises) Interviewing elders and traditional farmers Compiling and organising the methods/practises 	SPC-FAME Mike Batty mikeb@spc.int SPC/GIZ Fenno Brunken fenno.brunken@giz.de		SPC/GIZ CCCPIR	2009–2015		Traditional knowledge used in adaptation initiatives
Water <ul style="list-style-type: none"> Improve water resource and wastewater management through policy and legislative reform and encourage implementation of effective IWRM and water use efficiency (WUE) plans through a demonstration project 	SPC-SOPAC Rhonda Robinson rhondar@spc.int	Leerenson Airens National IWRM Technical Focal Point, PNI Utilities Corporation	GEF/UNDP- Australia	2009–2013	Successfully completed and obtained endorsement of framework policy currently used to guide work of national water and sanitation task force. The latter involves participation of all four FSM states. Nett Municipality endorsed the establishment of its watershed boundaries to protect 1,700 hectares of watershed. Water quality monitoring and analysis procedures established and supported via routine information and data collection by Pohnpei Environmental Protection Agency. All key substantive activities outlined in project logical framework matrix delivered. Key success involves piloting of 40 ecosan composting toilets on Funafuti. This enabled leveraging of EU funding to scale up ecosan in Tuvalu by an additional 135 units. Also developed a National Water, Sanitation and Climate Outlook.	Improvement of drinking water quality and significant reduction in pollutants in fresh and marine water around Pohnpei and Chuuk States
<ul style="list-style-type: none"> Documentary video completed and released – Developing ‘Ridge to Reef’ Approaches to Water Resource Management in Pohnpei Island – as a climate resilience measure 	SPC/GIZ Fenno Brunken fenno.brunken@giz.de		SPC/GIZ CCCPIR GEF UNDP IWRM	2011–2013		

<ul style="list-style-type: none"> Providing access to safe drinking water and strengthening emergency operations and communications to build community resilience to climate change 	SPC-SOPAC George Beck georgeb@spc.int		EU Development Fund including ACP DRM Facility-B Envelope	2011–2012		
<ul style="list-style-type: none"> Increasing access to and sustainable use of high-quality water in the outlying islands of FSM states, especially Yap and Chuuk States 	SPC-SEPPF Pasha Caruthers pashac@spc.int		EU GCCA: PSIS	2012–2015	The project will provide FSM national and state government agencies and selected outer island communities with the necessary technical assistance, staff support, equipment, and training opportunities so that they can monitor, maintain, and improve water systems (including those for food production) in the outlying islands.	Increased access to water and protecting food production systems in selected FSM outlying islands

Climate change and related disaster risk management activity	Relevant SPC programme/division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 1 August 2013)	Projected impact
Agriculture and food security <ul style="list-style-type: none"> • Technical assistance to national-level counterparts to understand climate change impacts on agriculture • Case studies to record baseline agrobiodiversity + community observations regarding the climate and crop performance in Vunivunivun (Rewa Delta) and Viwa Island (atoll), and linkages between key drivers for biodiversity uptake and determinants of adaptive capacity • Distribution of climate ready crops (banana, cassava, swamp taro, sweet potato) from CePaCT to enhance on-farm climate change resilience 	SPC-LRD Valerie Tuia valeriet@spc.int Dean Solofa deanss@spc.int		AusAID ICCAI	2011–2013	Case study activities and project partnership with Koronivia Research Station (Ministry of Primary Industries) progressing well, with both Viwa and Vunivunivun community field sites planted with selected crops and regularly monitored. Climate ready crops have been distributed to sites and to project partner research labs.	Enhanced resilience of agricultural sector to climate change impacts
<ul style="list-style-type: none"> • Community engagement activities to enhance the understanding of climate impacts on crops and measures to increase agricultural resilience • Instituting soil amelioration activities to improve fertility at selected sites and increase climate resilience • Building community awareness of the impacts of climate change on agriculture and measures to increase farm resilience through participatory engagement activities • Strengthening food security/climate change information systems using GIS at the national level • Improving availability of agricultural spatial information to inform climate change adaptation decision-making • Provision of baseline GIS data to identify land use in classes and susceptibility to climate change 	SPC-SEPPF Vuki Buadromo vukib@spc.int SPC-LRD Siosua Halavatau siosuah@spc.int SPC-SOPAC Wolf Forstreuter wolff@spc.int		USAID SPC/GIZ CCCPIR	2012–2014	Sabeto endorsed as a project site by the National Climate Change Country Team in October 2013. National workshop on participatory rural appraisals (assessments and evaluation) for officers from the Ministry of Agriculture completed in April 2013. Participatory rural appraisals completed for five communities in Sabeto and adaptation interventions identified. Village steering committees established and adaptation actions endorsed by stakeholders (communities, Ministry of Agriculture and SPC). Trials of climate ready crops (varieties of sweet potatoes) at selected demonstration sites. Establishment of community nurseries and small livestock units (poultry, pigs and bees) at the five selected communities to be completed by September 2013. Training on plant propagation techniques, nursery management and integrated pest and disease management has commenced and will be	Communities' adaptive capacity strengthened National capacity to use GIS tools in decision-making strengthened Baseline data on land-use and land/vegetation maps for Fiji available to inform decision-making on food security and production Increase in awareness on the linkages of food security and climate change as well as how tools such as GIS and cost/benefit analysis could be used to guide adaptation planning and decision-making National capacity on applying GIS tools

<ul style="list-style-type: none"> • Development of baseline information databases for climate change impact monitoring on land resources/crops • Technical assistance to build the capacity of government officials to apply analytical tools to help identify cost effective adaptation responses in the agriculture sector • Strengthening communities' capacity to manage climate change risks, hazards and disasters through awareness and participatory approaches to training • Improve DRR training through the development of a DRR Manual • Build community awareness and knowledge on organic farming as a means to strengthen food security and climate change resilience 					<p>completed for all communities by December 2013. Establish and support the establishment of an organic model community at the project site. Food security and climate change documentary for Fiji to be completed by November 2013. Land use and vegetation maps for Viti Levu completed.</p> <p>GIS training attachments for officers from agriculture, lands, forestry ongoing. Disaster risk reduction training and community disaster response plans completed for Sabeto communities by end of September 2013. Design and implement early warning systems to enable the dissemination of main threats to low-lying communities in Sabeto by December 2013. Joint community simulation disaster risk reduction exercise completed by end of October 2013. DRR training manual completed by October 2013.</p>	<p>to aid decision-making on adaptation planning strengthened</p> <p>Increased knowledge to manage climate change risk, including climate variability affecting food security, hazards and disasters</p> <p>Communities' adaptive capacity strengthened through the development of local organic markets and strengthening farmer capacity</p>
<p>Coastal zone management</p> <ul style="list-style-type: none"> • Updating and analysing data on sea levels, sea surface temperature, barometric pressure and wind speed and direction • Communications support, array calibration, maintenance and data 	<p>SPC-SOPAC Arthur Webb arthurw@spc.int</p>	<p>Molly Powers-Tora Regional Officer COSPPac</p>	COSPPac	2012–2016	<p>Pacific Sea Level Monitoring stations continued to provide a continuous stream of high-quality data on sea level, temperature (water and air) barometric pressure and wind speed and direction. In addition, land-based continuous GPS stations complemented these data and helped account for any tectonic movement.</p>	<p>Provided policy-makers, development planners and scientists with important and reliable information about sea level variability and climate change associated sea level rise</p>
<ul style="list-style-type: none"> • Operational wave forecasting for early warning systems, Viti Levu, Fiji 			<p>ACP-EU Natural Disaster Risk Reduction Program</p>	Operational in 2013		<p>Coastal zone management enhanced through wave forecasting</p>
<ul style="list-style-type: none"> • Changing Waves and Coasts in the Pacific (WACOP) Project 	<p>SPC-SOPAC Jens Kruger jensk@spc.int</p>	Mineral Resources	<p>EU EDF10 / ACP Caribbean and Pacific Research Programme for Sustainable Development</p>	2012–2015	Ongoing.	<p>Technical knowledge base, information and understanding of coastal hazards and wave energy resources developed</p>

<ul style="list-style-type: none"> Assessment of Climate Change Impacts on Drainage Networks and Infrastructure – Rewa and Navua deltas 	SPC-SOPAC Arthur Webb arthurw@spc.int	Ministry of Primary Industries, Fiji	Funded under a contract to SPREP-PACC	2011–2013	Jointly implemented by NIWA (National Institute of Water and Atmospheric Research, New Zealand) and the Ocean and Islands Programme at the request of the Ministry of Primary Industries, Fiji. Work complete.	Resilient drainage networks and infrastructure
Disaster risk management <ul style="list-style-type: none"> Development and implementation of a joint DRM/climate change national adaptation plan 	SPC-SOPAC Moses Sese Sikivou mosese@spc.int		AusAID national Action Plan Facility EU Development Fund including ACP DRM Facility	2012–2013	The Fiji joint national action plan will be developed through a process due to commence in October 2013 in connection with the launch of the Fiji National Platform for DRM and Climate Change.	Platform established to undertake integrated approaches to DRM and climate change
<ul style="list-style-type: none"> Improve capacity and performance of disaster management agencies through materials and training 			USAID Pacific Disaster Risk Management Program 2	2010–2013		Capacity of disaster management agencies enhanced
<ul style="list-style-type: none"> Integrated Flood Management in the Pacific: Nadi pilot 	SPC-SOPAC Litea Biukoto liteab@spc.int			World Bank Global Facility for Disaster Reduction and Recovery 2010–2013	The project commenced in 2012 and in August 2013 flood modelling will be undertaken to help determine a range of mitigation measures. The flood modelling is slated for completion in April 2014.	Integrated flood management solutions available
<ul style="list-style-type: none"> Improve capacity and performance of disaster management agencies through country-specific materials and training 	SPC-SOPAC Kathryn Hawley kathrynh@spc.int Kirstie Meheux kirstiem@spc.int	Manasa Tagicakibau National Disaster Management Office	USAID Pacific Disaster Risk Management Program 2	2010–2013	Training courses delivered in all four divisions of Fiji in emergency operations centres and initial damage assessment, plus disaster risk reduction, evacuation centre management and exercise management for increased stakeholder knowledge and awareness raising.	Increased capacity, knowledge and skills to implement DRR initiatives, better manage evacuation centres and emergency operations centres in country, as well as greater capability to design, develop and conduct national exercises
<ul style="list-style-type: none"> Provision of disaster risk assessment tools including financial instruments to reduce vulnerability to natural disasters 	SPC-SOPAC Litea Biukoto liteab@spc.int	Manasa Tagicakibau National Disaster Management Office	PCRAFI Phase 2	2010–2012	Risk profile developed to help inform PCRAFI Phase 3.	Enhanced capacity of PICTs to access, manage and use disaster and climate change information for disaster risk reduction, risk management, risk adjusted development planning and risk financing

<ul style="list-style-type: none"> Improving and sustainably funding integrated coastal zone management, by setting up payment mechanisms to help maintain ecosystem services at selected pilot sites 	SPC-SEPPF Olivier Auguin oliviera@spc.int		RESCCUE	2013–2018	RESCCUE project.	Increased climate change resilience in Pacific Island land and marine ecosystems through strengthening the services ecosystems provide communities by building local communities' governance and disaster management capabilities
Education <ul style="list-style-type: none"> Development of a picture-based outreach toolkit/resource on climate change for the education sector Integration of climate change and disaster risk management into primary and secondary education (curricula, teacher education) and technical and vocational education and training (as requested) 	SPC-HDP Sereana Tagivakatini sereanat@spc.int Hanna Sabass hanna.sabass@giz.de		AusAID PACCSAP SPC/GIZ CCCPIR	2011–2013 2011–2015	Picture-based education toolkit secondary schools developed in 2013.	Climate change, disaster risk management mainstreamed into the education system
Energy <ul style="list-style-type: none"> Technical support to the Department of Energy for development of a new energy policy and strategic action plan 	SPC-EDD Solomone Fifita solomonef@spc.int SPC/GIZ CCCPIR Katerina Syngellakis katerinas@spc.int in partnership with UNDP Pacific Centre	Department of Energy, Ministry of Works, Transport and Public Utilities	SPC/GIZ CCCPIR	2012–2015	Ongoing. Draft energy policy and strategic action plan completed and undergoing review. National consultation workshop planned for August 2013. Final documents to be prepared by October.	Fiji policy and planning framework for energy sector development strengthened enabling reduced dependency on fossil fuels through energy efficiency and increased deployment of renewable energy
<ul style="list-style-type: none"> IRENA market assessment and capacity needs for renewable energy in small island developing states Training and capacity building 	SPC-EDD Solomone Fifita solomonef@spc.int		IRENA ICI- Government of Germany Gender and Climate Change	2013 2013	Consultations with relevant stakeholders completed and data for the survey collected. Analyse and feed in the IRENA market assessment capacity needs for small island developing states report. The draft Community Based Organisations Gender Toolkit for Climate Change and Energy was trialled at an SPC-USP community-based workshop in Daku Village, Tailevu, Fiji. The workshop brought together 13 community representatives from 13 adaptation project sites in Fiji. This was a good opportunity to trial and peer review our draft toolkit. Workshop held 24–28 June 2013. Now finalising the toolkit and incorporating feedback from the	Enabling environment for renewable energy deployment in Pacific small island developing states (Fiji) promoted Capacity among community leaders built

					workshop in order to fine tune and ensure that the toolkit takes a gender practical approach. The toolkit should be ready end of July, published in August and launched at a regional meeting or training/workshop. This should be completed end August 2013.	
Fisheries <ul style="list-style-type: none"> Documenting national, provincial and local roles, responsibilities for decision-making and governance of integrated coastal zone resource management and climate change adaptation (Kadavu) Identification of specific adaptation responses for coastal fisheries, including support to improve coastal fisheries habitat maintenance and fishing methods Developing and disseminating community awareness materials and guidance documents in Fijian language (iTaukei) to assist coastal communities to effectively manage coastal resources Technical assistance and support to build resilience to climate change impacts on coastal fisheries in Kadavu Integrate gender, youth , human rights and community perspectives into Kadavu coastal fisheries support activities 	SPC-FAME Lindsay Chapman lindsayc@spc.int Etupati Ropeti etupati@spc.int	Suresh Chand suresh.fj@gmail.com Leigh-Anne Buliruarua leighanne.buliruarua@usp.ac.fj	AusAID-ICAAI Multi-Country Support Project	2012–2013	Community consultations held in two districts (Sanima and Ravitaki) with management plans developed to identify priority climate change adaptation and livelihood activities. This has been undertaken through locally established networks via the Institute of Applied Sciences at USP. Ravitaki district has identified seaweed farming as a livelihood activity and the project is assisting with assessment of feasibility in five villages (only one has seaweed at present) and equipment needs to scale up or initiate activities. Sanima district is more focused on improving land management practices given the poor practices and problems with erosion etc. in the catchment areas. Plans are to undertake assessment in the last half of 2013, followed by implementing activities to address the findings of the assessment. As part of both activities, the project is supporting two masters students with fieldwork costs for their data collection, with the fieldwork just getting started on seaweed farming in Ravitaki. Most of the community management information sheets and brochures have been translated into iTaukei and will be printed and distributed in the second half of 2013.	Enhanced resilience of fisheries and the marine environment to climate change impacts
<ul style="list-style-type: none"> Deployment of water temperature data loggers for longer-term monitoring of water temperature inside and outside the reef 	SPC-FAME Bradley Moore bradley@spc.int		AusAID ICCAI French Pacific Fund	2012 Ongoing	Two data loggers deployed in November 2012, recovered in July 2013 and then redeployed.	Data for adaptation options generated

<ul style="list-style-type: none"> Identifying priority adaptations to climate change for fisheries and aquaculture Preparation of knowledge products and guidance documents on key coastal and oceanic fisheries issues to inform national fisheries decision-makers 	<p>SPC-FAME Johann Bell johannb@spc.int</p> <p>SPC/GIZ CCCPIR Penina Tuivanuyalewa peninatui@gmail.com</p>	<p>Shalendra Singh Ministry of Fisheries and Forests gonegalili@yahoo.com</p>	<p>AusAID ICCAI</p>	<p>2012–2013</p>	<p>National workshop to identify priority adaptations to climate change for the fisheries and aquaculture sector, and report on workshop outcomes and recommendations. Raised awareness of climate change impacts on contributions of fisheries and aquaculture to national economies, food security and livelihoods, and the range of adaptations and supporting policies to minimise the risks and capitalise on opportunities.</p> <p>Fiji summary in regional assessment of vulnerability of fisheries and aquaculture to climate change; SPC Policy Brief 15/2012 'Oceanic Fisheries and Climate Change'; SPC Policy Brief 16/2012 'Coastal Fisheries and Climate Change'; SPC Policy Brief 17/2012 'Freshwater Fisheries and Climate Change'; SPC Policy Brief 18/2012 'Aquaculture and Climate Change'.</p>	
<ul style="list-style-type: none"> Preparing a national assessment of climate change impact on oceanic fisheries Technical attachments at SPC to increase understanding and analytical skills in assessing climate change impacts on oceanic fisheries 	<p>SPC-FAME Simon Nicol simonn@spc.int</p>		<p>AusAID ICCAI</p>	<p>2012–2013</p>		<p>Climate change impacts of oceanic resources understood and decision-makers able to plan ahead</p>
<p>Forests</p> <ul style="list-style-type: none"> Capacity building in mapping land/forest cover in Fiji using very high resolution satellite images Remote sensing mapping of forest cover in Fiji using GIS for comparison with historical data and a baseline against which adaptation needs/measures can be assessed Mapping using the latest technology in the Nadi and Ba basins (using aircraft) to produce extremely detailed digital terrain models as part of an ongoing effort to lessen the effects of floods in the area 	<p>SPC-LRD Inoke Ratukalou inoker@spc.int</p> <p>SPC-USAID Vuki Buadromo vukib@spc.int</p> <p>SPC-SOPAC Wolf Forstreuter wolff@spc.int</p>		<p>USAID and UNDP support</p>	<p>2012–2015</p>		<p>Adaptation/mitigation options in forestry sector enhanced</p>

<ul style="list-style-type: none"> Strengthening of institutional arrangements regarding REDD+ readiness; development of a national REDD+ policy for Fiji (endorsed Dec. 2010) and its translation to iTaukei; establishment of the national REDD+ Steering Committee; drafting of national REDD+ Strategy; development of national measurement, reporting and verification methodologies for REDD+ readiness Establishment of REDD+ pilot sites as part of national-level REDD+ readiness Development of national REDD+ social and environmental safeguards Training sessions on REDD+ for forestry divisional and extension officers, and on participatory assessment tools and approaches for government community officers in Fiji Supporting REDD+ demonstration activities in Nakavu; the national REDD+ pilot site surveys include: forest inventory, carbon pool measurements, detailed biodiversity survey and mapping, cultural and archaeological mapping, and participatory socio-economic assessment Conducting a 'carbon rights' study in support of the national REDD+ programmes 	<p>SPC/GIZ CCCPIR Christine Fung christine.fung@giz.de</p> <p>Karl P. Kirsch peter.kirsch-jung@giz.de</p>		<p>SPC/GIZ CCCPIR</p> <p>SPC/GIZ Climate protection through forest conservation in PICs</p>	<p>2009–2015</p> <p>2010–2015</p>		
<p>Governance and mainstreaming</p> <ul style="list-style-type: none"> Provision of technical assistance and funding support to national government to develop and launch Fiji's National Climate Change Policy Provide technical assistance and funding support to develop the National Climate Change Adaptation Strategy for the land-based sector (agriculture, forestry, land use, water) Support the development and publishing of the Fiji National iTaukei Climate Change Glossary Support the development and publishing of the Fiji National Hindi Climate Change Glossary 	<p>SPC/GIZ CCCPIR Christine Fung christine.fung@giz.de</p> <p>SPC-LRD Inoke Ratukalou inoker@spc.int</p>		<p>SPC/GIZ CCCPIR</p>	<p>2012–2014</p> <p>2011–2012</p>		<p>Climate Change mainstreamed into national and sectoral plans and policies</p>

<ul style="list-style-type: none"> • Support the development of National Climate Change Factsheets • Development of the National Relocation Guidelines • Conduct gender and climate change training sessions and workshops • Conduct climate change training for various sector agencies 						
Information technology and knowledge management <ul style="list-style-type: none"> • Design a national climate change portal/website and a national REDD+ website • Support the development and production of the Fiji National Climate Change Newsletter 	SPC/GIZ Christine Fung christine.fung@giz.de		SPC/GIZ CCCPIR	2009–2012		
Land <ul style="list-style-type: none"> • Support Rotuma community-based protection of <i>RANO</i> swamplands and freshwater sources to enhance island resilience to climate change and safeguard food security on Rotuma • Support Navutulevu community coastal rehabilitation and land use planning 	SPC/GIZ Christine Fung christine.fung@giz.de SPC-LRD Sairusi Bulai sairusiB@spc.int			2012–2013		Resilience to climate change enhanced in Rotuma
Relocation <ul style="list-style-type: none"> • Support the development and implementation of a relocation plan for Narikoso Village, Kadavu 	SPC/GIZ Christine Fung christine.fung@giz.de			2013–2015		Security and livelihoods enhanced
Tourism <ul style="list-style-type: none"> • Assessment on reducing greenhouse gas emissions through public private partnerships in the tourism sector 	SPC/GIZ Wulf Killmann wulf.killmann@giz.de			2013–2015		Contributing to low carbon future

Water <ul style="list-style-type: none"> • Improve water resource and wastewater management through policy and legislative reform and encourage implementation of effective IWRM and WUE plans through a demonstration project • Support provided to post-disaster assessments • Risk management approaches mainstreamed in IWRM • Support provided to the Pacific WASH Cluster during periods of emergencies and disasters 	SPC-SOPAC Rhonda Robinson rhondar@spc.int	Vinesh Kumar National Project Manager, Land and Water Resources Management Division, Government of Fiji	GEF IWRM/EU	2009–2013	<p>Country demonstration project in its final year of implementation. The Nadi Basin Catchment Committee meets on a quarterly basis as a primary integration mechanism for stakeholder activities within the Nadi catchment. The project has identified two 'hot spots' covering an area of approximately 80 hectares. These areas previously covered with native forests have been commercially forested and destroyed by uncontrolled burning. To date about 60 hectares of the area has been rehabilitated with fruit trees and staple food trees – coconut and breadfruit trees.</p> <p>Water and Sanitation Programme provided support following 2013 floods for post-disaster assessments where possible as well as the Pacific and Fiji Cluster process.</p>	<p>Improved flood preparedness and integrate land and water management planning within the Nadi basin using an integrated flood risk management approach</p> <p>Strengthened adaptive capacity through provision, management of water and sanitation</p>
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French Polynesia

Climate change and related disaster risk management activity	Relevant SPC programme/division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 1 August 2013)	Projected impact
Coastal zone management <ul style="list-style-type: none"> Acquisition of bathymetric, topographic and oceanographic data in five atolls of the Tuamotu archipelago, with focus on Rangiroa (to create seamless coastal terrain models) Cyclonic wave modelling to identify zones at risk and quantify risk of cyclone wave inundation and impact Economic analysis to inform economic costs and benefits of risk reduction solutions 	SPC-SOPAC Frederique Lehoux frederiquel@spc.int Jens Kruger jensk@spc.int Anna Rios annar@spc.int	Nicolas Bernon Ministry of Equipment, Land Planning, Energy and Land/Maritime Transport, Urban Planning Section	EDF 9C Project: Supporting Disaster Risk reduction in Pacific OCTs	2009–2013	Data acquisition complete. Modelling complete with inundation maps and other outputs available. Economic study finalised. Reporting and project closing planned for mid-November 2013 in French Polynesia.	Enhanced protection of population and infrastructure to cyclonic wave risk in the Tuamotu archipelago through: 1) the quantification of risk and the economic assessment of risk reduction solutions (informing decision-making); 2) the revision of building codes, coastal zone planning, evacuation and disaster plans; 3) the acquisition of geospatial data for use in maritime security, environmental protection (one atoll being a reserve), and economic activities such as pearl culture, fishing, and tourism
<ul style="list-style-type: none"> Improving and sustainably funding integrated coastal zone management, by setting up payment mechanisms to help maintain ecosystem services at selected pilot sites 	SPC-SEPPF Olivier Auguin oliviera@spc.int		RESCCUE	2013–2018	RESCCUE project.	Increased climate change resilience in Pacific Island land and marine ecosystems through strengthening the services ecosystems provide communities by building local communities' governance and disaster management capabilities
<ul style="list-style-type: none"> Defining activities for integrated ridge to reef approaches in pilot sites working with different thematic sectors (agriculture, coastal fisheries, water for example) 	SPC-SEPPF Olivier Auguin oliviera@spc.int		EU INTEGRE project		Project manager being recruited.	Enhanced integrated coastal zone management through ridge to reef approaches

Fisheries <ul style="list-style-type: none"> Funding for representatives to attend Vulnerability of Pacific Fisheries and Aquaculture to Climate Change Workshop 5–8 June 2012, Noumea Identification of adaptation responses for coastal fisheries and oceanic fisheries and aquaculture 	SPC-FAME Johann Bell johannb@spc.int	Arsène Stein Service de la pêche arsene.stein@drm.gov.pf	AusAID ICCAI	2012	<p>Regional workshop to identify priority adaptations to climate change for the fisheries and aquaculture sector, and a joint report with FAO on workshop outcomes. Raised awareness of climate change impacts on contributions of fisheries and aquaculture to national economies, food security and livelihoods, and the range of adaptations and supporting policies to minimise the risks and capitalise on opportunities.</p> <p>French Polynesia summary in French and English from the regional assessment of vulnerability of fisheries and aquaculture to climate change; SPC Note D'Orientation 15/2012 'Pêche hauturière et changement climatique'; SPC Note D'Orientation 16/2012 'La pêche côtière face au changement climatique'; SPC Note D'Orientation 17/2012 'Les ressources dulciicoles face au changement climatique'; SPC Note D'Orientation 18/2012 'L'aquaculture face au changement climatique'.</p>	Enhanced resilience of fisheries and aquaculture sector to climate change impacts
Water <ul style="list-style-type: none"> Supported the involvement in the development of a Regional Framework for Water, Sanitation and Climate and the development of National Water, Sanitation and Climate Outlooks 	SPC-SOPAC Mosese Sikivou moseses@spc.int		EU, French Polynesia Government, Ministry of Territorial Development and Housing, Urban Planning and Lands, Urban Planning Department	2008–2013	French Polynesia has contributed to the development of the Regional Framework for Water, Sanitation and Climate and also the development of a National Water, Sanitation and Climate Outlook as part of this process.	Strengthened adaptive capacity through provision, management of water and sanitation



Guam

Climate change and related disaster risk management activity	Relevant SPC programme/division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 1 August 2013)	Projected impact
Agriculture <ul style="list-style-type: none"> Distribution of climate ready crops (bananas, yams) from CePaCT for climate change evaluation 	SPC LRD Valerie Tuia valeriet@spc.int		AusAID ICCAI	2012	Climate ready crops to be sent to Guam counterparts.	Enhanced resilience of agricultural sector to climate change impacts
Fisheries <ul style="list-style-type: none"> Country summary of vulnerability of fisheries and aquaculture sector to climate change 	SPC-FAME Johann Bell johannb@spc.int		AusAID ICCAI	2012	Guam summary in regional assessment of vulnerability of fisheries and aquaculture to climate change; SPC Policy Brief 15/2012 'Oceanic Fisheries and Climate Change'; SPC Policy Brief 16/2012 'Coastal Fisheries and Climate Change'; SPC Policy Brief 18/2012 'Aquaculture and Climate Change'.	Enhanced resilience of fisheries and aquaculture sector to climate change impacts
Water <ul style="list-style-type: none"> Supported the involvement in the development of a regional framework for Water, Sanitation and Climate 	SPC-SOPAC Rhonda Robinson rhondar@spc.int		Australia	Ongoing	Guam has contributed to the development of the Regional Framework for Water, Sanitation and Climate	Strengthened adaptive capacity through provision and management of water and sanitation

Climate change and related disaster risk management activity	Relevant SPC programme/division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 1 August 2013)	Projected impact
Agriculture <ul style="list-style-type: none"> Provision of technical assistance and guidance documents relating to the impacts of climate change on the agricultural sector 	SPC-LRD Valerie Tuia valerie@spc.int	Andrew Teem Office of Te Beretitenti (OB)	AusAID ICCAI Phase 2	2012–2014	SPC producing a detailed vulnerability assessment of agriculture to climate change that will inform priority adaptation actions (due 2014).	Enhanced resilience of agricultural sector to climate change impacts
<ul style="list-style-type: none"> Developing and testing in-vitro screening method on salinity resilience for swamp taro 	Dean Solofa deans@spc.int SPC-SEPPF Vuki Buadromo vukib@spc.int	Tessie Lamborne Foreign Affairs David Teaabo Foreign Affairs	USAID	2012–2015	The Kiribati intern at CePaCT has initiated the work on the salinity tolerance of seven giant swamp taro cultivars, narrowing down the most tolerant varieties to four, based on the parameters identified for the study (e.g. plant length, root length, corm size etc.). These swamp taro cultivars will be field tested in Kiribati where preparations are currently underway. Field trials of identified varieties now in fields.	
<ul style="list-style-type: none"> Virus testing of climate ready collection swamp taro varieties 	SPC-LRD Siosiu Halavatau siosiuah@spc.int	Tokintekai Bakineti /Taken Redfern Principal Agriculture Officer / Coordinator for CEAARD (Centre for Excellence for Atoll Agriculture, Research and Development)			Currently in field trials four swamp taro cultivars (Teimanra, Kairoro, Kaiura, Temoaine) from Kiribati have been indexed negative (virus free) to four aroid viruses by CePaCT. These four cultivars already included in the climate ready collection and available for distribution.	
<ul style="list-style-type: none"> Impact assessment study of salinity issues for pulaka pits 					Trials still underway and information being collected. By fourth quarter 2014 data collection will be complete, with complete database sent to CePaCT. Some planting materials (pandanus varieties) will be sent back also for multiplication and distribution to other PICTs	
<ul style="list-style-type: none"> Expanding distribution of climate ready collection plantlets 	SPC/GIZ, SPC/USAID, FAME, LRD, SPREP				Kiribati counterparts still working on conducting studies on affected selected taro pits. Activity to continue into fourth quarter 2013.	
<ul style="list-style-type: none"> Expand field trials of climate ready collection varieties of bananas, yams, taro and cassava on selected islands of Kiribati 					Four pandanus varieties have been identified and collected from outer islands in Kiribati. CePaCT already met Fiji Quarantine and made arrangements for importation of these varieties. Currently in the process of being imported to CePaCT.	
<ul style="list-style-type: none"> Instituting soil amelioration activities to improve the fertility at selected sites and increase climate resilience 					Awaiting Government of Kiribati endorsement of SPC/GIZ/SPREP implementation sites. Abaiyang atoll has been selected, and SPREP/SPC/USAID/GIZ teams to begin with PRA work in September.	

<ul style="list-style-type: none"> Build community awareness of the impacts of climate change on agriculture and measures to increase farm resilience through participatory engagement activities 					Awaiting Government of Kiribati endorsement of SPC/GIZ/SPREP implementation sites. Abaiyang atoll has been selected, and SPREP/SPC/USAID/GIZ teams to begin with PRA work in September.	
<ul style="list-style-type: none"> Develop an integrated/vulnerability and adaptation assessment toolkit to promote multi-sectoral assessments and implementation of climate change programmes 					Workshop completed. In the process of finalising the toolkit. Abaiyang atoll has been selected, and SPREP/SPC/USAID/GIZ teams to begin with PRA work in September.	
<ul style="list-style-type: none"> Undertake an integrated vulnerability and adaptation assessment at approved implementation sites 					Awaiting Government of Kiribati endorsement of SPC/GIZ/SPREP implementation sites. Abaiyang atoll has been selected, and SPREP/SPC/USAID/GIZ teams to begin with PRA work in September.	
<ul style="list-style-type: none"> Establish community nurseries and demonstration farms at selected communities 					Awaiting Government of Kiribati endorsement of SPC/GIZ/SPREP implementation sites. Abaiyang atoll has been selected, and SPREP/SPC/USAID/GIZ teams to begin with PRA work in September.	
<ul style="list-style-type: none"> Deliver training on integrated pest and crop management Deliver community training on plant propagation, nursery management, integrated and waste management 					Awaiting Government of Kiribati endorsement of SPC/GIZ/SPREP implementation sites. Abaiyang atoll has been selected, and SPREP/SPC/USAID/GIZ teams to begin with PRA work in July–August.	
<ul style="list-style-type: none"> Distribute climate ready planting material in selected communities/pilot sites 					Awaiting Government of Kiribati endorsement of SPC/GIZ/SPREP implementation sites. Abaiyang atoll has been selected, and SPREP/SPC/USAID/GIZ teams to begin with PRA work in July–August.	
<ul style="list-style-type: none"> Developing learning and communications materials to support climate change adaptation 					Awaiting Government of Kiribati endorsement of SPC/GIZ/SPREP implementation sites. Abaiyang atoll has been selected, and SPREP/SPC/USAID/GIZ teams to begin with PRA work in July–August.	
<ul style="list-style-type: none"> Deliver cost benefit analysis training targeting government officers from key sectors (agriculture, water, health etc). 					Cost benefit analysis training completed in January 2013.	
<ul style="list-style-type: none"> Develop GIS information data and land-use maps to guide food security analysis and planning 	SPC-SOPAC Wolf Forstreuter wolff@spc.int				Technical presentations about different GIS application were given by GIS officers from Kiribati.	
<ul style="list-style-type: none"> New GIS mapping approaches for forest, agriculture vegetation, coconut and other types of land cover 						High-resolution GIS data have placed Government of Kiribati in a position to better plan adaptation options

<ul style="list-style-type: none"> Development of baseline information databases for climate change impact monitoring on land resources/crops 						
<ul style="list-style-type: none"> Improve national capacity to develop, integrate and implement adaptation responses (through the use of GIS, and socio-economic analyses) as part of national and sector adaptation strategies and plans 					Land and vegetation mapping complete. Awaiting ground-truthing.	National capacity enhanced by utilising GIS to inform decision-making
<ul style="list-style-type: none"> Development/upgrading of Kiribati Agriculture and Climate Change Strategy 	SPC LRD Siosuia Halavatau siosiuah@spc.int		SPC/GIZ CCCPIR SPC/USAID	2012-2014	Completed.	Adaptation actions in the agriculture sector identified
<ul style="list-style-type: none"> Development of a Kiribati Livestock Production and Climate Change Strategy 2013–2015 	SPC LRD Siosuia Halavatau siosiuah@spc.int Nichol Nonga nicholn@spc.int SPC/GIZ Hanna Sabass hanna.sabass@gi z.de SPC-SEPPF Vuki Buadromo vukib@spc.int	Tokintekai Anterea Nautong Tianeti Beenna Department of Agriculture and Livestock	SPC/GIZ CCCPIR SPC/USAID	2009-2015	The report is now being completed with the cost benefit analysis report added. Currently in process of being endorsed.	Adaptation actions in livestock sector identified
Coastal zone management <ul style="list-style-type: none"> Environmentally Sustainable Aggregate Extraction from Tarawa Lagoon (ESAT Project) 	SPC-SOPAC Arthur Webb arthurw@spc.int	Naomi Biribo Ministry of Fisheries and Marine Resource Development	European Union / New Zealand Regional Ocean Sciences Grant	2013	The widespread practise of beach mining has been weakening the atoll's vulnerable shoreline along with government efforts to protect communities from the worsening impacts of climate change and rising sea levels.	The ESAT Project facilitates the extraction of construction aggregate from the floor of the Tarawa Lagoon to reduce the atoll's damaging reliance on beach mining

<ul style="list-style-type: none"> Bonriki Inundation Vulnerability Assessment Project 	SPC-SOPAC Arthur Webb arthurw@spc.int	Reenate Willie Ministry of Public Works and Utilities (MPWU)	DIICCS RTE / PACCSAP (AusAID)	2013–2014	Commenced May 2013.	Improved understanding of the potential for wave overtopping at the Bonriki groundwater reserve, and a model for subsequent impacts of saltwater intrusion on the resource. Also, consideration of the potential recovery of the freshwater lens, and investigation of the potential management dynamics and adaptation options
<ul style="list-style-type: none"> Updating and analysing data on sea levels, sea surface temperature, barometric pressure and wind speed and direction Array calibration, maintenance and data communications support 	SPC-SOPAC Arthur Webb arthurw@spc.int	Molly Powers-Tora Regional Officer COSPPac	COSPPac	2012–2016	Pacific Sea Level Monitoring stations continued to provide a continuous stream of high-quality data on sea level, temperature (water and air) barometric pressure and wind speed and direction. In addition, land-based continuous GPS stations complemented these data and helped account for any tectonic movement.	Provided policy-makers, development planners and scientists with important and reliable information about sea level variability and climate change associated sea level rise
Communications <ul style="list-style-type: none"> Development of a climate change video highlighting key issues and response actions in Kiribati 	SPC SEPPF Gillian Cambers gillianc@spc.int		GCCA: PSIS	2012–2014	In progress	Public awareness of climate change issues
Culture <ul style="list-style-type: none"> Mapping of endangered cultural heritage site of Nnabakana in North Tabiteuea 	HDP Elise Huffer eliseh@spc.int		Funded under EU project		Two young women and two young men trained to carry out the mapping of cultural heritage site. Completed in July 2013 with report and poster publication. The Nnabakana site is an important historical site endangered by rising sea levels and human destruction.	Enabled mapping and recording of traditional history of the site through consultation with elders and the community
Disaster risk management <ul style="list-style-type: none"> Development and implementation of Disaster Risk Management Action Plan Improve capacity and performance of disaster management agencies through materials and training 	SPC-SOPAC Moses Sikiyou moseses@spc.int	Michael Foon OB	EU ACP NDF	2012–2013	Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management under development and costing of actions completed in June 2013. Final document is expected to be completed at end of August 2013. Introduction to Disaster Management course delivered in August 2010.	Platform established to undertake integrated approaches to disaster risk management and climate change

<ul style="list-style-type: none"> Provision of disaster risk assessment tools including financial instruments to reduce vulnerability to natural disasters 	SPC-SOPAC Litea Biukoto liteab@spc.int	Michael Foon OB	PCRAFI Phase 2	2010–2012	Risk profile developed to help inform PCRAFI Phase 3	Enhanced capacity for PICTs to access, manage and use disaster and climate change information for disaster risk reduction, risk management, risk adjusted development planning and risk financing
Energy <ul style="list-style-type: none"> Support to develop an online database for energy and water departments 	SPC-EDD Solomone Fifita solomonef@spc.int SPC/GIZ CCCPIR Katerina Syngellakis katerinas@spc.int	Kireua Bureimoa Energy Planner Department of Energy, MPWU Tiaon Aukitino Department of Energy, MPWU Miriam Tikana Department of Energy, MPWU	SPC/GIZ CCCPIR	2012–2015	Support provided for further development of the Kiribati energy database at the Department of Energy and preparation of an energy statistics booklet. Statistics booklet to be published in final quarter 2013.	Kiribati able to reduce dependency on fossil fuels through energy efficiency and increased penetration of mature renewable energy technologies
<ul style="list-style-type: none"> Economic and financial analysis of renewable energy implementation on Kiritimati Island 					Final report submitted to Department of Energy. Presentation of the report to stakeholders on Kiritimati and Tarawa planned for fourth quarter 2013.	
<ul style="list-style-type: none"> Technical assistance in the area of programme policy, implementation and management provided to Kiribati 	SPC-EDD Solomone Fifita solomonef@spc.int SPC/GIZ CCCPIR Katerina Syngellakis katerinas@spc.int	Kireua Bureimoa Energy Planner Department of Energy, MPWU Tiaon Aukitino Department of Energy, MPWU	SPC/GIZ CCCPIR	2012–2015	Participated in the discussions on developing a least cost analysis of electricity generation options for Kiritimati Island with GIZ, consultant and Energy Planning Unit. Four options are being assessed: use of diesel generation, solar-diesel hybrid, wind-diesel hybrid and 1500 kWp solar installation with storage. Commented on the draft report end of June. A renewable energy strategy and action plan to be developed when the report is presented.	Kiribati able to reduce dependency on fossil fuels through energy efficiency and increased penetration of mature renewable energy technologies Use of cleaner fuels and safer and healthier cooking environment in Kiribati promoted Enabling environment for renewable energy deployment promoted Capacity of small island state power utility officials strengthened through training attachment on grid-connected renewable energy systems

<ul style="list-style-type: none"> IRENA market assessment and capacity needs for renewable energy in small island developing states 					Consultations with relevant stakeholders completed and data for the survey collected. Analyse and feed in the IRENA market assessment capacity needs for small islands developing states report.	Renewable energy needs identified
<ul style="list-style-type: none"> Training and capacity building for women and youth 			SPC/GIZ CCCPIR	2009–2015	A gender mainstreaming workshop for communities in Kiribati was conducted in March. A total of 16 women and 2 men were trained. The workshop also provided a platform to trial the draft gender toolkit.	Gender considerations factored into climate change renewable energy policies and plans
Education <ul style="list-style-type: none"> National workshop on integrating climate change into the educational curriculum 	SPC/GIZ CCCPIR Hanna Sabass hanna.sabass@giz.de (in collaboration with UNESCO and SPREP)	Teburantaake Kaei Curriculum Development Unit, Ministry of Education Lucy Kumon Head of Kiribati Teachers College Taitai Teororo Kiribati Institute of Technology Bero Lucic Marine Training Centre	SPC/GIZ CCCPIR PACCSAP	2011–2015	Workshop held 2013.	Youth educated on climate change issues
<ul style="list-style-type: none"> Providing technical assistance to integrate relevant elements relating to climate change and disaster risk management into the school curriculum and teacher education training materials 				2012–2013	Technical assistance provided in 2013.	
<ul style="list-style-type: none"> Developing a unit of competency on climate change and disaster risk management for technical and vocational education and training 					Work in progress.	
<ul style="list-style-type: none"> Provision of technical support to develop a National Action Plan on Education on Climate Change and Disaster Risk Reduction and an education sector strategy on climate change and disaster risk management 					Work in progress.	
<ul style="list-style-type: none"> Developing a picture-based outreach resource toolkit on climate change for school children 					Completed June 2013.	
Fisheries <ul style="list-style-type: none"> Funding for representative to attend Vulnerability of Pacific Fisheries and Aquaculture to Climate Change workshop 5–8 June 2012, Noumea Technical assistance to modify strategic plans in fisheries and aquaculture sector based on the findings of the regional assessment of the vulnerability of fisheries 	SPC FAME Lindsay Chapman lindsayc@spc.int Johann Bell johannb@spc.int	Raikaon Tumoa Acting Director Fisheries Division, Ministry of Fisheries and Marine Resource Development	SPC/GIZ CCCPIR AusAID ICCAI Phase 2	2012–2014 2012–2014	Consultations were held with staff from the policy and development, management and licensing divisions of the Ministry of Fisheries and Marine Resources Development and technical assistance provided on how best to integrate priority adaptations into the National Fisheries Policy, which is currently under revision. Raised awareness of climate change impacts on contributions of fisheries and aquaculture to national economy, food security and livelihoods, and the range of adaptations and supporting policies to minimise the risks and capitalise on opportunities.	Enhanced resilience of fisheries and aquaculture sector to climate change impacts

and aquaculture to climate change, and integration of key findings into climate change adaptation strategies for the sector <ul style="list-style-type: none"> • Providing technical assistance to develop a Fisheries and Climate Change Strategy and integrate climate change and fisheries actions into Kiribati Development Plan Sector Plans 	Bradley Moore bradleym@spc.int Etuati Ropeti etuatir@spc.int	Kautoa Tonganbeia Director Policy Division, Ministry of Fisheries and Marine Resource Development				
<ul style="list-style-type: none"> • Preparing knowledge products and guidance documents on key coastal and oceanic fisheries issues for use by fisheries officials and resource users 					Kiribati country summary of regional assessment of vulnerability of fisheries and aquaculture to climate change; SPC Policy Brief 15/2012 'Oceanic Fisheries and Climate Change'; SPC Policy Brief 16/2012 'Coastal Fisheries and Climate Change'; SPC Policy Brief 18/2012 'Aquaculture and Climate Change'.	
<ul style="list-style-type: none"> • Sector-based training on vulnerabilities and adaptation options for Kiribati Fisheries 						
<ul style="list-style-type: none"> • Installation and maintenance of data loggers at Abemama monitoring site to measure local changes in water temperature 					Temperature loggers deployed; retrieval and redeployment planned for October 2013. Resulting data will be used to better assess the effect of climate change on coastal fisheries and supporting habitats.	
<ul style="list-style-type: none"> • Training of national fisheries officials in coastal fisheries climate impact monitoring and survey methodologies 					Planned for October–November 2013. Training will result in increased capacity by fisheries officers to monitor effects of climate change and other confounding factors on coastal fisheries.	
<ul style="list-style-type: none"> • Conduct second round of surveys at Abemama baseline monitoring site to assess impacts of climate change on coastal fisheries and their supporting habitats 					Planned for October–November 2013. Resulting data to be used to assess climate change impacts and adaptive management practices on coastal fisheries at Abemama Atoll pilot site.	
<ul style="list-style-type: none"> • Technical attachment of Kiribati fisheries officers at SPC to increase understanding and analytical skills in assessing climate change impacts on coastal fisheries 					Planned for November–December 2013. Attachment will develop analytical capacity to assess climate change impacts on coastal fisheries.	
<ul style="list-style-type: none"> • Technical attachment of Kiribati fisheries officer at SPC/IRD for training in age and growth estimation of reef fish for future monitoring of climate-related impacts on fish growth (2012) 					Completed in August 2012. Kiribati fisheries officer now able to estimate age and growth of fish to better assess climate change impacts on fish growth.	

<ul style="list-style-type: none"> Collection of otoliths and biological material from Abemama climate change monitoring site and second technical attachment of Kiribati fisheries officer at SPC/IRD for training in data analysis to monitor climate-related impacts on fish growth (2013) 					Planned for November–December 2013. Results will provide baseline growth estimates of key reef fish species to assess climate change impacts.	
<ul style="list-style-type: none"> Identification and implementation of climate change adaptation actions at selected sites (including FADs, aquaculture, artificial reefs, integrated fish farming, coastal resources management) 					In progress.	
<ul style="list-style-type: none"> Production of information sheets on vulnerability analyses of fisheries in the face of climate change 						
<ul style="list-style-type: none"> Produce a national Tuna Climate Change Impact Assessment Report with national fisheries staff 						
<ul style="list-style-type: none"> Technical attachments at SPC to increase understanding and analytical skills in assessing climate change impacts on ocean fisheries 	SPC-FAME Simon Nicol simonn@spc.int		AusAID ICCAI	2012–2014		
Governance/mainstreaming <ul style="list-style-type: none"> Preparation of a Climate Change Profile to identify ongoing adaptation activities 	SPC-SEPPF Juliana Ungaro julianau@spc.int	Andrew Teem OB's Office Tessie Lamborne Ministry of Foreign Affairs David Teaabo Ministry of Foreign Affairs	SPC-GCCA:PSIS SPC/GIZ CCCPIR	2012–2014 2012–2014	Profile available on website June 2012.	Used by country, regional organisations and donors for information and planning
<ul style="list-style-type: none"> Assistance in assessing the capacity to receive direct budget support and/or sector budget support for climate change activities 	SPC-SEPPF Juliana Ungaro julianau@spc.int				Regional review of readiness for climate change finance using budget support modalities conducted Jun.–Aug. 2013.	Countries better informed about accessing climate change finance through budget support

<ul style="list-style-type: none"> Capacity development in proposal preparation and writing to improve access to climate change funding 	SPC-SEPPF Sanivalati Tubuna sanivalati@spc.int				Training in proposal preparation to be provided in September 2013;	At least 25% of participants prepare concise, logical funding proposals over next 12 months, follow-up monitoring to be conducted later in 2013
<ul style="list-style-type: none"> Fifteen-minute video on social issues and climate change in Kiribati prepared as part of a series of four issue-based videos and one regional video 	SPC-SEPPF Juliana Ungaro julianau@spc.int				Video launched and distributed July 2013.	Awareness of the relationship between climate change and social issues enhanced in Kiribati and the region
<ul style="list-style-type: none"> Training provided in climate change and the media 	SPC-SEPPF Juliana Ungaro julianau@spc.int				Training conducted August 2012.	Twenty-five media providers better able to convey complex climate change issues to a general audience
<ul style="list-style-type: none"> Climate change communications plan prepared 	SPC-SEPPF Juliana Ungaro julianaur@spc.int				Technical assistance in progress: expected completion of plan in September 2013.	Kiribati better able to communicate to international, national and general public audiences in a coordinated and consistent manner
<ul style="list-style-type: none"> Connecting climate change technical assistance to joint national action plan process 	SPC-SOPAC Mosese Sikivou moseses@spc.int	Michael Foon OB			Joint national action plan process revised in favour of Joint Implementation Plan for Climate Change and Disaster Risk Management.	
<ul style="list-style-type: none"> Complete draft DRM governance arrangements and priorities for implementation 	SPC-SOPAC Mosese Sikivou moseses@spc.int				Priorities for implementing the new DRM arrangements captured in the Joint Implementation Plan for Climate Change and Disaster Risk Management.	
<ul style="list-style-type: none"> Appoint National In-Country Coordinator to assist Government of Kiribati to manage, coordinate and implement SPC climate change activities 					Appointment expected September 2013.	Kiribati better able to coordinate climate change projects through OB Office
<ul style="list-style-type: none"> Develop a concept note to Cabinet on the creation of a governance structure for climate change and disaster risk management 						
<ul style="list-style-type: none"> Formation of a National Committee on climate change and disaster risk management 						

<ul style="list-style-type: none"> SPC integrated multi-sector whole of island approach on two outer islands (agriculture, education, energy fisheries, health) 	<p>SPC/GIZ CCCPIR Ms Hanna Sabass hanna.sabass@giz.de</p> <p>SPC-GCCA: PSIS Ms Pasha Carruthers pashac@spc.int</p> <p>SPC-SEPPF Vuki Buadromo vukiB@spc.int</p> <p>SPC-LRD Siosuia Halavatau SiosuiaH@spc.int</p> <p>SPC-FAME Etuatir Ropeti etuatir@spc.int</p>	<p>Andrew Teem OB</p> <p>Multi-Sector Working Group</p>	<p>SPC/GIZ CCCPIR EU GCCA PSIS AusAID ICCAI SPC/USAID</p>		<p>Terms of reference for a national steering committee developed.</p> <p>Multi-sectoral selection criteria developed to identify implementation sites for SPC/GIZ in September 2012.</p> <p>Submission on the proposed implementation sites for SPC/GIZ and SPREP awaiting approval from Cabinet.</p>	<p>Strengthened capacity and coordination at the national level</p>
<p>Health</p> <ul style="list-style-type: none"> Support for Kiribati health official to attend regional symposium on climate change and health Improving implementation of environmental health surveillance and response to climate sensitive health risks in Kiribati identified as on-the-ground adaptation project for GCCA: PSIS 	<p>SPC-PHD Yvan Souares yvans@spc.int</p> <p>SPC-SEPPF Pasha Carruthers pashac@spc.int</p>	<p>Tebikau Tibwe Environmental Health Unit</p>	<p>GCCA: PSIS</p> <p>AusAID ICCAI</p>	2012–2015		<p>Capacity to address climate related health risks improved</p>
<ul style="list-style-type: none"> Improving implementation of environmental health surveillance and response to climate sensitive health risks in Kiribati identified as on-the-ground adaptation project for GCCA: PSIS; project planned, designed and implementation commenced 					<p>design document signed May 2013 and project due to complete mid 2015</p>	<p>Environmental health regularly monitored and government officials better able to respond to potential disease outbreaks</p>

<p>Water</p> <ul style="list-style-type: none"> • Water and Sanitation in the Outer Islands of Kiribati (KIRIWATSAN) • Enhanced application of climate information to cope with climate variability and change • Support provided to post-disaster assessments National Water, Sanitation, and Climate Outlook Overview developed • Calibrated numerical groundwater model of the Boniriki reserve for the Boniriki Inundation Vulnerability Assessment Project 	<p>SPC-SOPAC Rhonda Robinson rhondar@spc.int</p> <p>Arthur Webb arthurw@spc.int</p>	<p>Renate Willie Ministry of Public Works and Utilities, Government of Kiribati</p>	<p>GEF UNDP EU-ACP UNICEF Australia</p>	<p>2012–2014</p>	<p>Progress on KIRIWATSAN Project – five islands completed for the assessments, one draft report. Other reports pending – delayed due to commitments on other projects. Data sets uploaded and summary reports provided to UNICEF and country. Preliminary designs provided to UNICEF and country for consideration in summary presentations, three MPWU staff members and one UNICEF staff member trained in water resource and survey work. MPWU staff trained in analysis and data entry; continuing discussions on appropriate sanitation options with UNICEF and other technical experts; five outer island water technicians trained during site assessment work in rain gauge data recording, use of GPS, and water quality equipment, survey techniques including well and RWH and EM 34 geophysics; large-scale rectified satellite images produced for planning and assessment, provided to island council, MPWU and project staff. Development of web-based information accessible and updatable by many for sharing of water resource information. Contributed to the development of a Regional Framework for Water, Sanitation and Climate and have also developed a National Water, Sanitation and Climate Outlook.</p>	<p>Social and economic development improved and poverty reduced in the outer islands of Kiribati through an increase in access to improved and sustainable water and sanitation and reduction in the prevalence of WASH-related diseases</p>
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Climate change and related disaster risk management activity	Relevant SPC programme/division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 1 August 2013)	Projected impact
Agriculture <ul style="list-style-type: none"> Training and technical assistance for government ministry officials on climate change and agriculture 	SPC-LRD Valerie Tuia valeriet@spc.int Dean Solofa deans@spc.int		AusAID ICCAI Phase 2	2012	SPC producing a comprehensive vulnerability assessment of agriculture to climate change (similar to Fisheries Vulnerability Assessment) that will inform priority adaptation actions (due 2014). Book currently in production with chapter authors working on materials.	Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts
<ul style="list-style-type: none"> Commencing field evaluation trials of climate resilient crops 					Twenty-one climate ready sweet potato varieties sent to RMI, 5 cassava varieties, 9 swamp taro varieties – a combination of climate ready and normal taro varieties. All crops have been planted and are currently in screen house and ready for distribution (to be used in next quarter for RMI Drought Emergency Response, coordinated by UNDP and supported by CePaCT).	
<ul style="list-style-type: none"> Developing crop diversification strategies for outer islands to increase climate resilience and facilitating access to the CePaCT gene bank 					This is a new activity linked to the UNDP emergency response for RMI; it involves developing a long-term engagement with RMI in partnership with UNDP and FAO. Initial meetings with UNDP and FAO have been held, and further progress is expected in third quarter 2013.	
Coastal zone management <ul style="list-style-type: none"> Updating and analysing data on sea levels, sea surface temperature, barometric pressure and wind speed and direction 	SPC-SOPAC Arthur Webb arthurw@spc.int	Molly Powers-Tora Regional Officer COSPPac	COSPPac	2012–2016	Pacific Sea Level Monitoring stations continued to provide a continuous stream of high-quality data on sea level, temperature (water and air) barometric pressure and wind speed and direction. In addition, land-based continuous GPS stations complemented this data and helped account for any tectonic movement.	Provided policy-makers, development planners and scientists with important and reliable information about sea level variability and climate change associated sea level rise
<ul style="list-style-type: none"> Array calibration, maintenance and data communications support 						
<ul style="list-style-type: none"> Rapid assessment of coastal erosion in Eyebe, Kwajalein 	SPC-SOPAC Arthur Webb arthurw@spc.int	Doreen de Brum Romeo Alfred CEO of Kwajalein Atoll Joint Utilities Resources	NZ ROSP / AusAID	Ongoing	Follow-up report and proposal to extend work forwarded to AusAID and RMI authorities.	A climate change adaptation road map for coastal engineering design and protection

Disaster risk management <ul style="list-style-type: none"> Development and implementation of Disaster Risk Management National Action Plan 	SPC-SOPAC Moses Sikiyou moseses@spc.int	Casten Nemra Chief Secretary	AUSAID NAP Facility	2012–2013	Draft completed and approved in 2008. Joint National Action Plan for Climate Change and Disaster Risk Management in draft since April 2011 awaiting finalisation.	Development and implementation of Disaster Risk Management National Action Plan
<ul style="list-style-type: none"> Improve capacity and performance through materials and training 	SPC-SOPAC Moses Sikiyou moseses@spc.int	Casten Nemra Chief Secretary	USAID PRMT Program	2010–2013	The following training was delivered to increase safety and resilience: -Initial Damage Assessment, July 2011 and October 2012; -Introduction to Disaster Management, October 2012.	Improved DRM capacity and performance through materials and training
<ul style="list-style-type: none"> Build resilience to drought and improve access to clean drinking water 	SPC-SOPAC George Beck georgeb@spc.int	Casten Nemra Chief Secretary	EU B-Envelope	2010–2013	Supply and installation of 1,353 rainwater catchments in Majuro, Ebeye and outer islands completed in 2013.	Build resilience to drought and improve access to clean drinking water
<ul style="list-style-type: none"> Provision of disaster risk assessment tools including financial instruments to reduce vulnerability to natural disasters 	SPC-SOPAC Litea Biukoto liteab@spc.int	Casten Nemra Chief Secretary	PCRAFI Phase 2	2010–2012	Risk profile developed to help inform PCRAFI Phase 3. Pacific Disaster Risk Financing Insurance Pilot launched 17 Jan. 2013.	Enhanced capacity of PICTs to access, manage and use disaster and climate change information for disaster risk reduction, risk management, risk adjusted development planning and risk financing
Energy <ul style="list-style-type: none"> Reducing emissions and dependency on fossil fuel Provide pumps for water treatment plants and reticulated systems – a key electricity demand 	SPC-EDD Solomone Fifita solomonef@spc.int		North-REP	2010–2015		RMI able to reduce dependency on fossil fuels through energy efficiency and increased penetration of mature renewable energy technologies
<ul style="list-style-type: none"> Training and capacity building for women 	SPC-EDD Solomone Fifita solomonef@spc.int		Germany/GIZ	2013	Conduct training workshops on gender mainstreaming for 20 RMI women.	
<ul style="list-style-type: none"> Refined national and state energy policies and strategies as required Tender, procure, and install household and mini-grid photovoltaic systems Tender, procure, and install photovoltaic systems in rural schools and health centres Develop and install user-pay and/or cost recovery electricity systems Conduct end-user training on use of renewable energy system 	SPC-EDD Solomone Fifita solomonef@spc.int		European Union	2013	Assist in reviewing/developing of policies as appropriate. 496 solar home systems installed; second batch of 500 batteries arrived in March. Design and tender documents for photovoltaic systems for rural schools are being developed. Training provided to Marshalls Energy Company, collecting household deposit for meters; final draft of North-REP socio-economic baseline report developed. 496 household owners trained; solar home system user manual translated in to local language. Dedicated finance position advertised to assist in the maintenance and development of outer islands	

<ul style="list-style-type: none"> Develop long-term maintenance programmes with power utilities Develop safe battery replacement systems Conduct energy efficiency training and awareness campaigns Develop permanent in-country training programmes and courses Conduct renewable energy baseline studies 					<p>electrification programme financial accounts database. Ongoing discussions with Environmental Protection Authority and Office of Environmental Planning and Policy Coordination on the battery replacement programme; used batteries collected from five atolls and stored in Majuro.</p> <p>Facebook page launched.</p> <p>In Palau, renewable energy course modules developed and train the trainers' workshop conducted in May.</p> <p>This study is on track.</p>	
Fisheries <ul style="list-style-type: none"> Production of guidance documents on key climate change coastal and oceanic fisheries issues confronting RMI to support planning by fisheries sector officials 	SPC-FAME Lindsay Chapman lindsayc@spc.int Johann Bell johannb@spc.int	Florence Edwards Marshall Islands Marine Resources Authority	AusAID ICCAI SPC GIZ CCCPIR	2012–2013 2012–2015	RMI summary in regional assessment of vulnerability of fisheries and aquaculture to climate change; SPC Policy Brief 15/2012 'Oceanic Fisheries and Climate Change'; SPC Policy Brief 16/2012 'Coastal Fisheries and Climate Change'.	Enhanced resilience of fisheries and aquaculture sector to climate change impacts
<ul style="list-style-type: none"> Installation and maintenance of data loggers at Majuro Atoll monitoring site to measure local changes in water temperature 	Bradley Moore bradley@spc.int				Temperature loggers deployed; retrieval and redeployment planned for July 2013. Resulting data will be used to better assess the effect of climate change on coastal fisheries and supporting habitats.	
<ul style="list-style-type: none"> Training of national fisheries officials in coastal fisheries climate impact monitoring and survey methodologies 					Planned for July–August 2013. Training will result in increased capacity of fisheries officers to monitor effects of climate change and other confounding factors on coastal fisheries.	
<ul style="list-style-type: none"> Conduct second round of surveys at Majuro Atoll baseline monitoring site to assess impacts of climate change on coastal fisheries and their supporting habitats 					Planned for July–August 2013. Resulting data to be used to assess climate change impacts and adaptive management practices on coastal fisheries at Abemama Atoll pilot site.	
<ul style="list-style-type: none"> Technical attachment of Marshall Islands fisheries officers at SPC to increase understanding and analytical skills in assessing climate change impacts on coastal fisheries 					Planned for August–September 2013. Attachment will develop analytical capacity to assess climate change impacts on coastal fisheries.	

<ul style="list-style-type: none"> Technical attachment of Marshall Island fisheries officer at SPC/IRD for training in age and growth estimation of reef fish for future monitoring of climate-related impacts on fish growth (2012) 					Completed in August 2012. Marshall Islands fisheries officer now able to estimate age and growth of fish to better assess climate change impacts on fish growth.	
<ul style="list-style-type: none"> Collection of otoliths and biological material from Majuro climate change monitoring site and second technical attachment of Marshall Islands fisheries officer at SPC/IRD for training in data analysis to monitor climate-related impacts on fish growth (2013) 					Otolith collection underway; data analysis attachment planned for late 2013. Results will provide baseline growth estimates of key reef fish species to assess climate change impacts.	
<ul style="list-style-type: none"> Completing summary vulnerability analysis of climate change impacts on oceanic fisheries 						
Governance and climate change mainstreaming <ul style="list-style-type: none"> Developing climate change public awareness campaign with linkages between water, public health, pollution and climate change vulnerability 	SPC-SEPPF Pasha Carruthers pashac@spc.int	Warwick Howland Office of Environmental Planning and Policy Coordination	GCCA: PSIS	2012–2015	Profile available on website June 2012.	Used by country, regional organisations and donors for information and planning; second version available June 2013
<ul style="list-style-type: none"> Preparation of a Climate Change Profile to identify ongoing adaptation activities 					National coordinator position is being advertised July 2013.	Capacity built in-country to coordinate and manage climate change activities
<ul style="list-style-type: none"> Assistance in assessing the capacity to receive direct budget support and/or sector budget support for climate change activities 					Regional review of readiness for climate change finance using budget support modalities conducted June–August 2013.	Countries better informed about accessing climate change finance through budget support
<ul style="list-style-type: none"> Capacity development in proposal preparation and writing to improve access to climate change funding 					Training in proposal preparation to be provided in August 2013.	At least 25% of participants prepare concise, logical funding proposals over next 12 months, follow-up monitoring to be conducted later in 2013
<ul style="list-style-type: none"> Regional video on climate change and its impacts prepared as part of a series of four issue-based videos and one regional video 					Video to be launched and distributed July 2013.	Awareness of the relationship between climate change and its impacts enhanced in RMI and the region

<ul style="list-style-type: none"> • Training in climate change and the media provided 						Media providers better able to convey complex climate change issues to a general audience
<ul style="list-style-type: none"> • Connecting climate change technical assistance to joint national action plan process 						
<ul style="list-style-type: none"> • Appoint National In-Country Coordinator to assist government to manage, coordinate and implement SPC climate change activities 						
<ul style="list-style-type: none"> • Updating joint country strategy to integrate climate change activities 						
<ul style="list-style-type: none"> • Develop and deliver climate change training modules for RMI government staff in selected ministries 						
<ul style="list-style-type: none"> • Multiple in-country technical support missions by SPC programme staff to finalise pilot adaptation projects and sites in 2012–2013 						
<ul style="list-style-type: none"> • Assistance to develop a national awareness campaign on climate change water, pollution and public health matters and evaluate awareness impact through stakeholder engagement processes 						

<p>Water</p> <ul style="list-style-type: none"> • Improve water resource and wastewater management through policy and legislative reform and encourage implementation of effective IWRM and WUE plans through a demonstration project • Support provided to post-disaster assessments • Risk management approaches mainstreamed in IWRM • Support provided to the Pacific WASH Cluster during periods of emergency and disasters • Development and planning • National Water, Sanitation, and Climate Outlooks consulted and developed 	<p>SPC-SOPAC Rhonda Robinson rhondar@spc.int</p>	<p>Julius Lucky Environment Protection Authority</p> <p>Lowell Alik IWRM Focal Point</p>	<p>GEF UNDP IWRM</p> <p>EU Australia</p>	<p>2012–2013</p> <p>2009–2013</p>	<p>Under the GEF IWRM project in RMI, all key substantive coordination and stress reduction activities outlined in the project logical framework matrix were delivered. Work to be finalised includes Laura zoning and management plan. National Water and Sanitation Policy drafted with supporting implementation/action plan under development. Cabinet approval will be sought during third quarter 2013. Regular engagement of traditional leaders, landowners, and Laura residents with government through the operation of the community-based Laura Lens Committee has assisted with developing a common understanding and trust within the community, with on average 12 community leaders meeting on a quarterly basis with government. One commercial piggery (up to 100 pigs) in the Laura area converted from a wash down system to a waterless, dry litter pig waste compost system. This involved pump out and infilling of piggery septic system. An additional 20 household dry litter (waterless) pig pens piloted in Laura community. A draft water safety plan was developed and its implementation revitalised by new Environmental Protection Authority administration. Support was also provided to the post-disaster needs assessment work provided during the drought in 2013 in the northern atolls, including the cluster process.</p>	<p>Strengthened national and local coordination for water resource management with a focus on reducing stress on and planning longer-term sustainable use of the Laura lens</p>
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Climate change and related disaster risk management activity	Relevant SPC programme/division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 1 August 2013)	Projected impact
Agriculture <ul style="list-style-type: none"> In-country technical assistance to prepare the Nauru agriculture policy/strategy incorporating climate change response activities 	SPC-LRD Valerie Tuia valeriet@spc.int Dean Solofa deans@spc.int		AusAID ICCAI	2012–2014	SPC producing a comprehensive vulnerability assessment of agriculture to climate change (similar to Fisheries Vulnerability Assessment) that will inform priority adaptation actions (due 2014). Book currently in production with chapter authors working on materials.	Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts
<ul style="list-style-type: none"> Supporting field trials of climate resilient crops and expanding distribution of climate ready crop collection from CePACT (banana, sweet potato, cassava, taro, yam) 					Crops are ready for distribution.	
<ul style="list-style-type: none"> Promote crop diversification strategies for Nauru farmers sourcing climate resilient genebank material from CePACT 					This is a new activity linked to the UNDP emergency response for RMI; it involves developing a long-term engagement with Nauru in this area, in partnership with UNDP and FAO. Initial meetings with UNDP and FAO have been held and further progress is expected in third quarter 2013.	
Coastal zone management <ul style="list-style-type: none"> Updating and analysing data on sea levels, sea surface temperature, barometric pressure and wind speed and direction 	SPC-SOPAC Arthur Webb arthurw@spc.int	Molly Powers-Tora Regional Officer COSPPac	COSPPac	2012–2016	Pacific Sea Level Monitoring stations continued to provide a continuous stream of high-quality data on sea level, temperature (water and air) barometric pressure and wind speed and direction. In addition, land-based continuous GPS stations complemented this data and helped account for any tectonic movement.	Provided policy-makers, development planners and scientists with important and reliable information about sea level variability and climate change associated sea level rise
<ul style="list-style-type: none"> Array calibration, maintenance and data communications support 	SPC-SOPAC Arthur Webb arthurw@spc.int		AusAID Bureau of Meteorology Geoscience Australia	Ongoing		

Disaster risk management <ul style="list-style-type: none"> Development and implementation of Disaster Risk Management Action Plan 	SPC-SOPAC Mosese Sikivou mosses@spc.int	Roy Harris Deputy Controller, NDMO	AUSAID NAP Facility	2012–2013	DRM action plan revised in favor of climate change/DRM Joint National Action Plan (revision of RONADAPT plan).	Platform and capacity developed to base national action on climate change and DRM
<ul style="list-style-type: none"> Improve capacity and performance of disaster management agencies through materials and training 			USAID PDRMT	2010–2014	The following training was delivered to increase safety and resilience: -Introduction to Disaster Management, November 2011; -Emergency Operation Centres, April 2012.	
<ul style="list-style-type: none"> Provision of disaster risk assessment tools including financial instruments to reduce vulnerability to natural disasters 	SPC-SOPAC Litea Biukoto liteab@spc.int		PCRAFI Phase 2	2010–2012	Risk profile developed to help inform PCRAFI Phase 3. Pacific Disaster Risk Financing Insurance Pilot launched 17 January 2013.	Enhanced capacity of PICTs to access, manage and use disaster and climate change information for disaster risk reduction, risk management, risk adjusted development planning and risk financing
Energy <ul style="list-style-type: none"> Technical assistance for the development of a Nauru Energy Road Map 	SPC-EDD Solomone Fifita solomonef@spc.int SPC/GIZ CCCPIR Katerina Syngellakis katerinas@spc.int in partnership with the International Renewable Energy Agency (IRENA)	Bryan Star Department of Commerce, Industry and Environment	SPC/GIZ CCCPIR	2012–2015	Support for the recruitment of an Energy Coordinator completed. Recruitment of a consultant to assist with the preparation of the Energy Road Map (July 2012–October 2013) completed. Technical assistance for National Consultation Workshops in May 2012 and November 2012. Development of an Institutional Strengthening proposal. Recruitment of a consultant to assist with the preparation of the Energy Road Map (July 2012–October 2013). Power utilities assessment study in partnership with the Pacific Power Association (May 2013). Preparation of the Energy Sector Summary Report (June 2013). Support for a solar pre-feasibility study. Draft Road Map under preparation.	Nauru able to reduce dependency on fossil fuels through energy efficiency and increased penetration of mature renewable energy technologies
<ul style="list-style-type: none"> Reducing emissions and dependency on fossil fuel Provide pumps for water treatment plants and reticulated systems – a key electricity demand 	SPC-EDD Solomone Fifita solomonef@spc.int		North-REP	2010–2015		Nauru able to reduce dependency on fossil fuels through energy efficiency and increased penetration of mature renewable energy technologies

Fisheries <ul style="list-style-type: none"> Provision of technical assistance on assessing the impacts of climate change on Nauru fisheries and aquaculture 	SPC-FAME Johann Bell johannb@spc.int				National workshop to identify priority adaptations to climate change for the fisheries and aquaculture sector, and a report on workshop outcomes. Raised awareness of climate change impacts on contributions of fisheries and aquaculture to national economy, food security and livelihoods, and the range of adaptations and supporting policies to minimise the risks and capitalise on opportunities.	Enhanced resilience of fisheries and aquaculture sector to climate change impacts
<ul style="list-style-type: none"> Prepare knowledge products and guidance documents on key coastal and oceanic fisheries issues to assist national decision-making on response measures 	SPC-FAME Johann Bell johannb@spc.int Simon Nicol simonn@spc.int	Monte Depaune Marine Resources Authority monstartuna@gmail.com	SPC/GIZ CCCPIR AusAID ICCAI Phase 2	2012–2013	Nauru country summary of regional assessment of vulnerability of fisheries and aquaculture to climate change; SPC Policy Brief 15/2012 'Oceanic Fisheries and Climate Change'; SPC Policy Brief 16/2012 'Coastal Fisheries and Climate Change'; SPC Policy Brief 18/2012 'Aquaculture and Climate Change'.	
<ul style="list-style-type: none"> Funding for representative to attend Vulnerability of Pacific Fisheries and Aquaculture to Climate Change Workshop 5–8 June 2012, Noumea 					Coastal and Oceanic Fisheries Manager for Nauru attended regional workshop.	
<ul style="list-style-type: none"> Technical attachment of Nauru fisheries officer at SPC to increase understanding and analytical skills in assessing climate change impacts on oceanic fisheries 					Technical attachment scheduled for last quarter 2013–first quarter 2014.	
<ul style="list-style-type: none"> Technical assistance to produce, in conjunction with national ministry counterparts, a Tuna Climate Change Impact Report 					Draft National Assessments completed providing projections on future tuna resources providing government officers with base information to negotiate climate adaptations to sustain oceanic tuna fisheries in Western and Central Pacific Ocean. Finalisation of report to be completed with technical attachment providing Nauru with technical capabilities for interpretation of climate change adaptation advice.	
<ul style="list-style-type: none"> Compile an ecosystem component to the EU SciFish Climate Change summary report 					Scheduled for last quarter 2013–first quarter 2014.	
<ul style="list-style-type: none"> Supporting the development of community coastal fisheries climate change plans in two districts 	SPC-FAME Lindsay Chapman lindsayc@spc.int	Monte Depaune Nauru Fisheries and Marine Resources	SPC/GIZ CCCPIR	2012–2014		

<ul style="list-style-type: none"> Technical attachment of Nauru fisheries officer at SPC/IRD for training in age and growth estimation of reef fish for future monitoring of climate-related impacts on fish growth (2012) 	Bradley Moore bradleym@spc.int Etupati Ropeti etuatir@spc.int	Authority monstartuna@gmail.com	AusAID ICCAI GIZ funding to SPC		Completed in August 2012. Nauru fisheries officer now able to estimate age and growth of fish to better assess climate change impacts on fish growth.	
<ul style="list-style-type: none"> Collection of otoliths and biological material and second technical attachment of Nauru fisheries officer at SPC/IRD for training in data analysis to monitor climate-related impacts on fish growth (2013) 			French Pacific Fund EU-SciCOFish		Otolith collection underway; data analysis attachment planned for late 2013. Results will provide baseline growth estimates of key reef fish species to assess climate change impacts.	
<ul style="list-style-type: none"> Installation and maintenance of data loggers to monitor local changes in water temperature 					Temperature loggers deployed June 2012; retrieval and redeployment planned for June 2013. Resulting data will be used to better assess the effect of climate change on coastal fisheries and supporting habitats.	
Governance and climate change mainstreaming <ul style="list-style-type: none"> Provision of technical assistance/training for national and sector level climate change plans and strategies 	SPC-SEPPF Graham Sem grahams@spc.int	Department of Commerce, Industry and Environment	GCCA: PSIS	2012–2014		Climate change and DRM mainstreamed into national and sector plans
<ul style="list-style-type: none"> Preparation of a Climate Change Profile to identify ongoing adaptation activities 					Profile available on website June 2012.	Used by country, regional organisations and donors for information and planning; version 2 available June 2013
<ul style="list-style-type: none"> Assistance in assessing the capacity to receive direct budget support and/or sector budget support for climate change activities 					Regional review of readiness for climate change finance using budget support modalities conducted June-August 2013.	Countries better informed about accessing climate change finance through budget support
<ul style="list-style-type: none"> Develop financing options for supporting climate change adaptation responses 						
<ul style="list-style-type: none"> Capacity development in proposal preparation and writing to improve access to climate change funding 					Training in proposal preparation to be provided in October 2013.	At least 25% of participants prepare concise, logical funding proposals over next 12 months; follow-up monitoring to be conducted later 2013
<ul style="list-style-type: none"> Connecting climate change technical assistance to joint national action plan process 						
<ul style="list-style-type: none"> Updating joint country strategy to integrate climate change activities 						

<ul style="list-style-type: none"> Development of Climate Change Policy and a Joint National Action Plan for Climate Change and Disaster Risk Reduction 					GCCA: PSIS technical assistance in progress to complete RONADAPT and prepare a climate change policy.	Nauru has an integrated joint national action plan and climate change policy to guide future planning
<ul style="list-style-type: none"> Appoint National In-Country Coordinator to assist Nauru Government to manage, coordinate and implement SPC climate change activities 					National coordinator appointed June 2013.	Capacity built in-country to coordinate and manage climate change activities
<ul style="list-style-type: none"> Complete technical review and input to finalise RONADAPT 						
<ul style="list-style-type: none"> Complete programming of EDF-10 DRR support activities 						
<ul style="list-style-type: none"> Complete several technical assistance missions to Nauru during 2012–2013 to finalise climate change adaptation projects and sites 						
Water <ul style="list-style-type: none"> Improving water security through constructing catchment sheds and 45 community water tanks Development and good practise toolkits for good water catchment management in the home 	SPC-SEPPF Graham Sem grahams@spc.int	Department of Commerce, Industry and Environment	GCCA: PSIS	2011–2013 2012–2014	In progress in 2013.	Strengthening adaptive capacity through provision, management of water resources
<ul style="list-style-type: none"> Rainwater catchments for up to 200 houses enhanced; together with other projects this will provide Nauru with improved rainwater storage and supply 						Enhanced rainwater supply and storage for houses in Nauru which will help residents cope with water shortages especially during droughts, which are a common feature of climate variability in Nauru
<ul style="list-style-type: none"> 20-year sector plan for water and sanitation incorporating climate change 	GCCA: PSIS				Ongoing technical assistance to guide water sector for next 20 years in light of climate change.	
<ul style="list-style-type: none"> Improve storage capacity with repair of six storage tanks that receive water from desalination plant Construct a new building over the six storage tanks to protect against possible contamination Install guttering targeting 150 households Construct shelters over 45 community tanks for rainwater collection 	SPC-SOPAC George Beck georgeb@spc.int	Nauru Utilities Authority and Department of Commerce, Industry and Environment	EU B-Envelope	2010–2012	Work completed in 2012 with repair of leaks to the storage tanks and new building constructed over the tanks. Forty-five shelters also constructed over the community tanks to improve access to clean water. Guttering installed at 150 households.	Improved access to clean drinking water with the six large storage tanks at Nauru Utilities Authority capable of holding a reserve for longer periods during dry weather

<ul style="list-style-type: none"> • Improve water resource and waste water management through policy and legislative reform and encourage implementation of effective IWRM and WUE plans through a demonstration project • Enhanced application of climate information to cope with climate variability and change • Risk management approaches mainstreamed in IWRM • Provide support for Nauru to contribute to the development of a Regional Framework for Water, Sanitation and Climate, and to develop National Water, Sanitation and Climate Outlooks 	SPC-SOPAC Rhonda Robinson rhondar@spc.int	Haseldon Buraman Department of Commerce, Industry and Environment Russ Kun IWRM Focal Point	GEF/UNDP /IWRM Australia EU	2009–2013	National IWRM Project progress: National Water Policy approved by Cabinet. Community consultation groups established and represented on National Steering Committee. This mechanism now used by other sectors. Secondary filtration established in pilot community septic systems. Eight compost toilets established in two pilot schools with an estimated 30% reduction in water usage. Supported the development of the Regional Framework for Water, Sanitation and Climate and development of National Water, Sanitation and Climate Outlook.	Enhanced water security for Nauru through better water management and reduced contamination of groundwater
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New Caledonia

Climate change and related disaster risk management activity	Relevant SPC programme/division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 1 August 2013)	Projected impact
Agriculture <ul style="list-style-type: none"> Distribution of climate ready crops (yams) from CePaCT for climate change evaluation 	SPC-LRD Valerie Tuia valeriet@spc.int Dean Solofa deans@spc.int		AusAID ICCAI	2012	Climate ready crops (selected sweet potatoes, taro varieties) have been sent to New Caledonia counterparts and monitoring is in progress.	Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts
Coastal zone management <ul style="list-style-type: none"> Improving and sustainably funding integrated coastal zone management, by setting up payment mechanisms to help maintain ecosystem services at selected pilot sites 	SPC-SEPPF Olivier Auguin oliviera@spc.int		RESCCUE	2013-2018		Increased climate change resilience in Pacific Island land and marine ecosystems through strengthening the services ecosystems provide communities by building local communities' governance and disaster management capabilities
<ul style="list-style-type: none"> Defining activities for integrated ridge to reef approaches in pilot sites working with different thematic sectors (agriculture, coastal fisheries, water for example) 	SPC-SEPPF Olivier Auguin oliviera@spc.int		EU INTEGRE project		Project Manager being recruited.	Enhancing integrated coastal zone management through ridge to reef approaches
Fisheries <ul style="list-style-type: none"> Identification of adaptation responses for coastal fisheries, oceanic fisheries and aquaculture to climate change 	SPC-FAME Johann Bell johannb@spc.int	Régis Etaix-Bonnin Service de la Marine Marchande et des Pêches Maritimes regis.etaix-bonnin@gouv.nc Nathaniel Cornuet Province Nord – Direction du Développement n.cornuet@province-nord.nc	AusAID ICCAI	2012	Regional workshop to identify priority adaptations to climate change for the fisheries and aquaculture sector, and a joint report with FAO on workshop outcomes. Raised awareness of climate change impacts on contributions of fisheries and aquaculture to national economy, food security and livelihoods, and the range of adaptations and supporting policies to minimise the risks and capitalise on opportunities. New Caledonia summary in French and English from the regional assessment of vulnerability of fisheries and aquaculture to climate change; SPC Note D'Orientation 15/2012 'Peche hauturiere et changement climatique'; SPC Note D'Orientation 16/2012 'La peche cotiere face au changement climatique'; SPC Note D'Orientation 17/2012 'Les ressources dulcicoles face au changement climatique'; SPC Note D'Orientation 18/2012 'L'aquaculture face au changement climatique'.	Enhanced resilience of fisheries and aquaculture sector to climate change impacts

Health <ul style="list-style-type: none"> Mitigating public health risk arising from contaminated drinking water and inadequate sanitation, and increasing climate resilience 	SPC-SOPAC Rhonda Bower rhondab@spc.int		EU	2008–2012		
Water <ul style="list-style-type: none"> Mitigating public health risk arising from contaminated drinking water and inadequate sanitation and increasing climate resilience Enhancing New Caledonia's ability to manage wastewater collaboratively Ensuring adequate water supply in the face of economic growth and a changing climate 	SPC-SOPAC Frederique Lehoux frederiquel@spc.int Rhonda Bower rhondab@spc.int	Julien Thiria Chief, Environment and Health section, Sanitary and Social Affairs Division (DASS-NC) Tiaré Le Goff Member of Jean-Claude Briault's Cabinet, Member of Government Luc Bataillé Chief, Accompaniment of Koniambo Factory, Northern Province Government	EDF 9 C Envelope Reducing DRR in Pacific OCTs	2008–2013	<p>Nine municipalities are systematically monitoring the quality of their drinking water and have implemented corrective measures to reduce contamination, as per their water safety plans.</p> <p>Five municipalities have developed water safety plans, including water quality baselines and identification of measures to reduce contamination.</p> <p>New Caledonia has received training and coaching in water safety planning and developed a set of tools to implement the approach nationally. - Feasibility study complete with identification of scenarios for future sanitation agency to be known as Organisme Partenarial d'Assainissement de NC.</p> <p>Provisions for the legal status and seed funding for the agency currently under review by Congress and Government</p> <p>Establishment (and ongoing operation) of a formal Water Management Committee to pool dispersed responsibilities and coordinate management of water issues</p> <p>A number of studies completed to gain knowledge to a range of water issues</p> <p>Water-conserving irrigation methods currently being tested with farmers</p>	<p>Enhanced country capacity to reduce drinking water sanitary risk</p> <p>Municipalities more attuned to sanitary risk and have tools and support to reinforce the safety of their drinking water</p> <p>Improvements in drinking water quality in municipalities where water safety planning is implemented</p> <p>Once created, agency will support municipalities in addressing sanitation issues, thereby reducing threats to freshwater resources, World Heritage lagoon, and public health</p> <p>Adequate protection, management and availability of water for a growing population and in a changing climate</p> <p>Knowledge gained on existing water resources and access to new sources, on water uses and risks faced by resources (including climate threats)</p> <p>Enhanced management of water resources</p> <p>Enhanced protection of ecosystems</p>



Niue

Climate change and related disaster risk management activity	Relevant SPC programme/division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 1 August 2013)	Projected impact
Agriculture <ul style="list-style-type: none"> In-country technical assistance to prepare the Niue agriculture policy/strategy incorporating climate change response activities 	SPC-LRD Valerie Tuia valeriet@spc.int Dean Solofa deans@spc.int				SPC producing a comprehensive vulnerability assessment of agriculture to climate change (similar to Fisheries Vulnerability Assessment) that will inform priority adaptation actions (due 2014). Book currently in production with chapter authors working on materials.	Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts
<ul style="list-style-type: none"> Supporting field trials of climate resilient crops and expanding distribution of climate ready crop collection from CePaCT (banana, sweet potato, cassava, taro, yam) 					Sixteen climate ready sweet potato varieties, seven cassava varieties, nine taro leaf blight-resistant varieties, and one yam variety sent to Niue. Crops are ready for distribution.	
<ul style="list-style-type: none"> Promoting crop diversification strategies for Niuean farmers sourcing climate resilient genebank material from CePaCT 					This is a new activity linked to the UNDP emergency response for RMI; it involves developing a long-term engagement with Niue in this area, in partnership with UNDP and FAO. Initial meetings with UNDP and FAO have been held, and further progress in 3rd quarter 2013.	
Disaster risk management <ul style="list-style-type: none"> Development and implementation of Disaster Risk Management Action Plan 	SPC-SOPAC Mosese Sikivou moseses@spc.int	Richard Hipa Secretary to Government	EU Development Fund including ACP DRM Facility	2012–2013	Joint National Action Plan under development – awaiting finalisation.	Platform to ground DRM action established; enhanced capacity to access, manage and use disaster and climate change information for disaster risk reduction, risk management, risk adjusted development planning and risk financing
<ul style="list-style-type: none"> Provision of disaster risk assessment tools including financial instruments to reduce vulnerability to natural disasters 	SPC-SOPAC Litea Biukoto liteab@spc.int		PCRAFI Phase 2	2010–2012	Risk profile developed to help inform PCRAFI Phase 3. Pacific Disaster Risk Financing Insurance Pilot launched 17 January 2013.	
Fisheries <ul style="list-style-type: none"> Identification of priority adaptations to climate change for fisheries 	SPC-FAME Lindsay Chapman lindsayc@spc.int	James Tafatu Fisheries Division	AusAID ICCAI	2012–2013	Niue summary in regional assessment of vulnerability of fisheries and aquaculture to climate change; SPC Policy Brief 15/2012 'Oceanic Fisheries and Climate Change'; SPC Policy Brief	Priority adaptation actions will enhance resilience of fisheries and aquaculture sector to climate change impacts

<ul style="list-style-type: none"> Completion of community consultations on coastal fisheries management plan for Alofi South and incorporation of climate change factors 	Johann Bell johannb@spc.int Etuatir Ropeti etuatir@spc.int				16/2012 'Coastal Fisheries and Climate Change'.	
Governance and mainstreaming <ul style="list-style-type: none"> Provision of technical assistance/training for national and sector level climate change plans and strategies 	SPC-SEPPF Graham Sem grahams@spc.int SPC-SOPAC Mosese Sikivou moseses@spc.int	Department of Environment	GCCA: PSIS	2012-2014	Ongoing.	
<ul style="list-style-type: none"> Preparation of a Climate Change Profile to identify ongoing adaptation activities 					Profile available on website June 2012.	Used by country, regional organisations and donors for information and planning; version 2 available June 2013
<ul style="list-style-type: none"> Assess eligibility for direct budget support and sector budget support, and support measures to address climate change finance access constraints 					Regional review of readiness for climate change finance using budget support modalities conducted June–August 2013.	Countries better informed about accessing climate change finance through budget support
<ul style="list-style-type: none"> Capacity development in proposal preparation and writing to improve access to climate change funding 					Training in proposal preparation to be provided in August 2013.	At least 25% of participants prepare concise, logical funding proposals over next 12 months
<ul style="list-style-type: none"> Regional video on climate change and its impacts prepared as part of a series of four issue-based videos and one regional video 						
<ul style="list-style-type: none"> Technical assistance to develop a Joint National Action Plan integrating climate change and disaster risk management actions 						
<ul style="list-style-type: none"> Appoint National In-Country Coordinator to assist Government to manage, coordinate and implement SPC climate change activities 					National coordinator position is being advertised July 2013.	Capacity built in-country to coordinate and manage climate change activities

Water <ul style="list-style-type: none"> • Improve water resource and waste water management through policy and legislative reform and encourage implementation of effective IWRM and WUE plans through a demonstration project • Risk management approaches mainstreamed in IWRM • National Water, Sanitation, and Climate Outlooks developed 	SPC-SOPAC Rhonda Robinson rhondar@spc.int	Andre Siohane Public Works Department Deve Talagi Public Works Department	GEF/UNDP/IW RM Australia EU	2009–2013	Niue IWRM Project progress: The establishment and implementation of the National Drinking Water Safety Plan and the Village Drinking Water Safety Plans through the GEF IWRM project provides confidence that these risks are being managed and that the 450 people of Alofi are receiving safe drinking water. The project has established a national collection and disposal mechanism, and 56% of national waste oil has been collected and stored in safe containers and shipped to New Zealand for recycling and/or safe disposal. A guideline of these mechanisms has been drafted for NWSC endorsement. The project has seen the replacement of the existing tank with two new 240 kL storages, increasing storage by over 45% and significantly reducing leakage. Provided input towards the development process for the Pacific Framework for Water, Sanitation and Climate as well as the development of a National Water, Sanitation and Climate Outlook for Niue.	Alofi groundwater supply and nearshore reef fisheries protected using an integrated land use, water supply and wastewater management model
<ul style="list-style-type: none"> • Rainwater storage capacity enhanced for three villages in Niue; together with other projects this will provide all of Niue with improved rainwater storage and supply 	SPC GCCA Graham Sem grahams@spc.int		GCCA: PSIS		Project design documents completed – expected start date September 2013.	Enhanced rainwater storage for houses in Niue, which will help residents cope with water shortages, especially during cyclones



Northern Mariana Islands

Climate change and related disaster risk management activity	Relevant SPC programme/division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 1 August 2013)	Projected impact
Coastal zone management <ul style="list-style-type: none"> Establishment of a hydrodynamic model describing water flow in the lagoon 	SPC-SOPAC Arthur Webb arthurw@spc.int		CNMI Government and the US National Oceanic and Atmospheric Administration (NOAA)	2010–2011		Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts
<ul style="list-style-type: none"> Collection of oceanographic, coastal and topographic baseline data 	SPC-SOPAC Arthur Webb arthurw@spc.int		CNMI Government and NOAA	2010–2011		
Fisheries <ul style="list-style-type: none"> Country summary of vulnerability of fisheries and aquaculture sector to climate change 	SPC-FAME Johann Bell johannb@spc.int		AusAID ICCAI	2012	CNMI summary in regional assessment of vulnerability of fisheries and aquaculture to climate change; SPC Policy Brief 15/2012 'Oceanic Fisheries and Climate Change'; SPC Policy Brief 16/2012 'Coastal Fisheries and Climate Change'	Priority adaptation actions will enhance resilience of fisheries and aquaculture sector to climate change impacts

Climate change and related disaster risk management activity	Relevant SPC programme/division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 1 August 2013)	Projected impact
Agriculture <ul style="list-style-type: none"> Providing technical assistance to identify the impacts of climate change on farming systems 	SPC-LRD Valerie Tuia valeriet@spc.int Dean Solofa deans@spc.int		AusAID ICCAI	2012–2014	SPC producing a comprehensive vulnerability assessment of agriculture to climate change (similar to Fisheries Vulnerability Assessment) that will inform priority adaptation actions (due 2014). Book currently in production with chapter authors working on materials.	Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts
<ul style="list-style-type: none"> Identifying target crops for inclusion in the climate ready crop collection 					Crops have been identified and transferred to CePaCT from Community College of Palau. Crops now undergoing virus indexing, to be complete in 2014.	
<ul style="list-style-type: none"> Establishing evaluation sites for gene pool enhancement projects to reduce climate change vulnerability 					Palau has two ongoing salt tolerant field trial studies. The second planting of the first trial in Ngimis Natpang has been in the field for 7 months. An evaluation in a second site with saltwater intrusion into a taro patch in Ollei, Ngarchelong has been underway for 3 months. One trial is soon to be completed, others still ongoing for completion by end of 2013.	
<ul style="list-style-type: none"> Increasing the delivery and distribution of plantlets from the climate ready crop collection (cassava, sweet potato, banana) 					The college has begun distribution in the second quarter of 2013 and monitoring is in progress.	
Coastal zone management <ul style="list-style-type: none"> Study on coastal changes and mapping of shorelines of Rock Islands 	SPC-SOPAC Arthur Webb arthurw@spc.int SPC/GIZ Fenno Brunken fenno.brunken@giz.de	Koror State Government, Rock Is. Park Authorities	SPC GIZ CCCPIR	2012–2013	Technical report completed and delivered, briefing of Palauan authorities scheduled for late 2013.	Coastal zone management enhanced through mapping and studies
<ul style="list-style-type: none"> Rapid assessment of shoreline erosion in Omekang, Ngermeaus and Ngerkesill Islands, Rock Islands, Palau 						

Disaster risk management <ul style="list-style-type: none"> Development and implementation of Disaster Risk Management Action Plan 	SPC-SOPAC Moses Sikiyou moseses@spc.int	Alonzo Kyota NEMO	ACP EU NDF	2012–2013	DRM Framework endorsed and guiding DRM activities.	Platform to ground DRM action established; enhanced capacity to access, manage and use disaster and climate change information for disaster risk reduction, risk management, risk adjusted development planning and risk financing
<ul style="list-style-type: none"> Improve capacity and performance of disaster management agencies through materials and training 	SPC-SOPAC Moses Sikiyou moseses@spc.int	Alonzo Kyota NEMO	ACP EU NDF	2012–2013	The following training increased the number of people who can assist in disaster response: - Emergency Operations Centres, March 2012; - Initial Damage Assessment, March 2012.	
<ul style="list-style-type: none"> Construction of National Emergency Operations Centre 	SPC-SOPAC George Beck georgeb@spc.int	Alonzo Kyota NEMO	EU EDF 9 B Envelope	2007–2012	National Emergency Operations Centre completed.	Coordinated national response to disasters
<ul style="list-style-type: none"> Provision of disaster risk assessment tools including financial instruments to reduce vulnerability to natural disasters 	SPC-SOPAC Litea Biukoto liteab@spc.int	Alonzo Kyota NEMO	PCRAFI Phase 2	2010–2012	Risk profile developed to help inform PCRAFI Phase 3.	Enhanced capacity in PICTs to access, manage and use disaster and climate change information for disaster risk reduction, risk management, risk adjusted development planning and risk financing
Energy <ul style="list-style-type: none"> Provide pumps for water treatment plants and reticulated systems – a key electricity demand 	SPC-EDD Solomone Fifita solomonef@spc.int		North-REP	2010–2015		Palau able to reduce dependency on fossil fuels through energy efficiency and increased penetration of mature renewable energy technologies
<ul style="list-style-type: none"> Permanent in-country training programmes and courses developed Renewable energy and energy efficient appliances promoted for small business development National and state energy policies and strategies refined as required Household and mini-grid photovoltaic systems tendered, procured, and installed Photovoltaic systems tendered, procured, and installed in rural schools and health centres User-pay and/or cost recovery electricity systems developed and installed Long-term maintenance programmes developed with power utilities On-grid renewable energy systems tendered, procured, and installed Renewable energy baseline studies conducted Energy efficiency training and awareness campaigns conducted 	SPC-EDD Solomone Fifita SolomoneF@spc.int		European Union	2013–2014	On-grid renewable energy systems tendered, procured, and installed (RFP and technical specification and developed; advertised in April). Renewable energy baseline studies conducted. Grid stability study for Palau Public Utilities Corporation completed. One mast for wind monitoring installed; two more masts to be installed once land access issues resolved. Developed awareness and educational materials; disseminated materials and organised for campaigns. Facebook page launched. Collated baseline data on electricity consumption. Wind masts installed (includes measurements of wind speed and solar radiation). Baseline information on household electricity consumption gathered for households participating in the energy efficiency retro fitting loans programme. Wind masts installed (includes measurements of wind speed and solar radiation). Renewable energy/energy efficiency promoted through development banks/other private sector institutions.	

<ul style="list-style-type: none"> Energy efficiency baseline studies conducted Renewable energy/energy efficiency promoted through development banks/other private sector institutions 						
Fisheries <ul style="list-style-type: none"> Funding for representative to attend Vulnerability of Pacific Fisheries and Aquaculture to Climate Change Workshop, 5–8 June 2012, Noumea Prepare knowledge products and guidance documents on key coastal and oceanic fisheries issues to assist Palau in addressing future climate change impacts 	SPC-FAME Johann Bell johannb@spc.int	David Orrukem Bureau of Marine Resources tekoilchei@palaunet.com	AusAID ICCAI	2012	Regional workshop to identify priority adaptations to climate change for the fisheries and aquaculture sector, and a joint report with FAO on workshop outcomes. Raised awareness of climate change impacts on contributions of fisheries and aquaculture to national economies, food security and livelihoods, and the range of adaptations and supporting policies to minimise the risks and capitalise on opportunities. Palau summary in regional assessment of vulnerability of fisheries and aquaculture to climate change; SPC Policy Brief 15/2012 'Oceanic Fisheries and Climate Change'; SPC Policy Brief 16/2012 'Coastal Fisheries and Climate Change'; SPC Policy Brief 18/2012 'Aquaculture and Climate Change'.	Priority adaptation actions will enhance resilience of fisheries and aquaculture sector to climate change impacts
<ul style="list-style-type: none"> Installation and maintenance of data loggers to monitor local changes in water temperature 	SPC-FAME Bradley Moore bradleym@spc.int	Percy Rechelluul Bureau of Marine Resources	AusAID ICCAI, French Pacific Fund	2012–2013	Temperate loggers deployed March 2012; first retrieval and redeployment completed November 2012. Resulting data will be used to better assess the effect of climate change on coastal fisheries and supporting habitats.	
Governance and climate change mainstreaming <ul style="list-style-type: none"> Reviewing joint country strategy to reflect climate change support activities 	SPC-SEPPF Pasha Carruthers pashac@spc.int SPC-SOPAC Mosese Sikivou moseses@spc.int	Office of Environmental Response and Coordination	GCCA: PSIS	2012–2014		Used by country, regional organisations and donors for information and planning; version 2 available June 2013
<ul style="list-style-type: none"> Developing disaster risk management action plans for selected communities 						
<ul style="list-style-type: none"> Preparation of a Climate Change Profile to identify ongoing adaptation activities 					Profile available on website June 2012.	
<ul style="list-style-type: none"> Provision of technical assistance and resources to develop and roll out a national climate change awareness and communication strategy, publication of materials and brochures, staff climate change training activities 						

<ul style="list-style-type: none"> Appoint National In-Country Coordinator to assist Government to manage, coordinate and implement SPC climate change activities 	SPC-SEPPF Pasha Carruthers pashac@spc.int				National coordinator appointed August 2013.	Capacity built in-country to coordinate and manage climate change activities
<ul style="list-style-type: none"> Regional video on climate change and its impacts prepared as part of a series of four issue-based videos and one regional video 					Video launched and distributed July 2013.	Awareness of the relationship between climate change and its impacts enhanced in Palau and the region
<ul style="list-style-type: none"> Training in climate change and the media provided 					Training provided September 2012.	Media providers better able to convey complex climate change issues to a general audience
<ul style="list-style-type: none"> Assist Palau with the preparation of a climate change policy supported by a prioritised and costed financial plan 					Commenced February 2013; expect completion in first quarter 2014.	Government of Palau will be in a position to coordinate its climate change priorities and address them in a coordinated manner over the next five years
<ul style="list-style-type: none"> Provision of climate change mainstreaming training for agriculture, forestry and fisheries staff and to assist them to identify climate change adaptation priorities in their sectors 						
<ul style="list-style-type: none"> Assess eligibility for direct budget support and sector budget support, and support measures to address climate change finance access constraints 					Regional review of readiness for climate change finance using budget support modalities conducted June–August 2013.	Countries better informed about accessing climate change finance through budget support
<ul style="list-style-type: none"> Multiple country missions by SPC climate change advisers to identify specific adaptation projects for implementation 						
Water <ul style="list-style-type: none"> Improve water resource and waste water management through policy and legislative reform and encourage implementation of effective IWRM and WUE plans through a demonstration project Risk management approaches mainstreamed in IWRM National Water, Sanitation, and Climate Outlooks developed 	SPC-SOPAC Rhonda Robinson rhondar@spc.int SPC-SOPAC George Beck georgeb@spc.int	Metiek Kimie Ngirchechol IWRM Focal Point Joe Aitaro Bureau of Protected Areas Network	GEF/UNDP/IWRM	2009–2013	Palau IWRM Demonstration project progress: There has been an estimate 60% increase in awareness and willingness to protect watersheds during the reporting period. This has been supported via regular community outreach focused on the importance of water and how best to manage and conserve it. The entire Ngerikiil watershed is managed as a watershed conservation area, with national commitment of financial support for activities such as replication and scaling-up of revegetation efforts and invasive species removal pilot activities. Baseline sanitation and pollutant survey undertaken at the Ngerikiil River covering ridge to the Airai Bay. All pollutant sources and land uses along these river banks were mapped and those that could potentially become problems are	Improved water quality through Ngerikiil watershed restoration

					helped with best management practices as a pre-emptive measure. Routine monitoring of river water quality has been strengthened through the project to ensure safety baselines are met and to inform efforts to remediate pollutant source sites. SPC provided input towards the development of the Pacific Framework for Water, Sanitation and Climate as well as the development of a National Water, Sanitation and Climate Outlook for Palau.	
<ul style="list-style-type: none"> Develop and implement water operations certification programmes by Palau Water and Sewer Corporation; programmes will focus on monitoring and maintenance Prepare a report on a mechanism for sustainable water maintenance at the national level, giving the states the capacity to maintain and troubleshoot Recruit a Project Manager/Coordinator to oversee the implementation of this project within Palau Water and Sewer Corporation Contribute to the water sector infrastructure needs in Angaur: effective community water catchment demonstration site, repair of water leaks, repair of existing pumps and filters, new backup generator for coastguard well, new aerator and carbon filter system, repair existing holding tanks, new solar power system as backup for pumps Contribute to the water sector infrastructure needs in Sonsorol: repair 	SPC SEPPF Pasha Carruthers pashac@spc.int		GCCA PSIS	2010–2013	Project design documents signed July 2013, implementation commenced.	Increased resilience of the water sector to climate change impacts in Palau
<ul style="list-style-type: none"> Enhance the water capacity, storage and distribution in the face of climate variability and change in the outlying island states of Palau 						Residents of the outlying islands of Palau will have a more reliable water supply, especially during droughts and extreme events



Papua New Guinea

Climate change and related disaster risk management activity	Relevant SPC programme/ division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 01 August 2013)	Projected impact
Agriculture and food security <ul style="list-style-type: none"> • Technical assistance to Kivori pilot site to determine impacts of climate change on agriculture • Distribution of climate-ready crops (banana, cassava, swamp taro, sweet potato) from CePaCT to enhance on-farm climate change resilience • Establishment of multiplication sites (for food security) and implementation of food processing and preservation technologies in the Kivori pilot site (Central Division) and Wamira pilot site (Milne Bay) • Development of community manuals and information kits relating to climate change and agriculture 	SPC-LRD Valerie Tuia valeriet@spc.int SPC-GIZ Christine Fung christine.fung@giz.de		AusAID ICCAI SPC-GIZ CCCPIR	2011–2013 2011–2015	Climate-ready selection of crops has been organised and crops sent to NARI for onward distribution and own monitoring	Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts
Coastal zone management <ul style="list-style-type: none"> • Updating and analysis of data on sea levels, sea surface temperature, barometric pressure, and wind speed and direction. • Communications support Array calibration, maintenance and data 	SPC-SOPAC Arthur Webb arthurw@spc.int	Molly Powers-Tora Regional Officer COSPPac	COSPPac	2012–2016	Pacific sea level monitoring stations continued to provide a stream of high quality data on sea level, temperature (water and air), barometric pressure, and wind speed and direction. In addition, land-based continuous GPS (CGPS) stations complemented these data and helped account for any tectonic movement	Provided policy makers, development planners and scientists with important and reliable information about sea level variability and climate change associated sea level rise.
Communication and awareness <ul style="list-style-type: none"> • Develop communication strategy for delivering information to local communities. • Develop awareness materials in Tok Pisin and Motu. • Develop media programmes on climate change, including coverage on climate change initiatives on Kundu 2/EMMTV and radio talk back show on NBC. • Conduct training on graphic design and media tools for relevant stakeholders. 	SPC-GIZ Christine Fung christine.fung@giz.de		SPC-GIZ			Community awareness of disaster risk management and climate change issues enhanced
Disaster risk management <ul style="list-style-type: none"> • Development and implementation of Disaster Risk Management Mainstreaming Programme 	SPC-SOPAC Moses Sikivou moseses@spc.int		EDF9 ACP-EU NDF	2012–2013	Support is ongoing for the implementation of a DRM mainstreaming programme for PNG. The progress to date of all activities is as follows:	Platform developed on which to ground national action

<ul style="list-style-type: none"> Strengthen weather monitoring through supply and installation of automatic weather stations at Alotau, Misima, Mt Hagen, Siassi and Buka, including 20 data-logging rain gauges. Strengthen seismic monitoring through supply and installation of ten seismic stations at POM, Lae, Mt Hagen, Tabubil, Kavieng, Kimbe, Buka, Wewak, Misima and Alotau. 	SPC-SOPAC George Beck georgeb@spc.int	Port Moresby Geophysical Observatory and National Weather Service	EU B-Envelope	2008–2013	Installation of automatic weather stations and seismic equipment completed in July 2013 with all stations operational.	Improved capacity of NWS and PMGO to monitor weather and seismic activity to reduce risk to related hazards
<ul style="list-style-type: none"> Provision of disaster risk assessment tools, including financial instruments, to reduce their vulnerability to natural disasters 	SPC-SOPAC Litea Biukoto liteab@spc.int	Martin Mose National Disaster Centre	PCRAFI Phase 2	2010–2012	Risk profile developed to help inform PCRAFI Phase 3	Enhanced capacity of PICTs to access, manage and use disaster and climate change information for disaster risk reduction, risk management, risk adjusted development planning and risk financing
Fisheries <ul style="list-style-type: none"> Country summary of vulnerability of fisheries and aquaculture sector to climate change Updating National Tuna Climate Change Impact Reports Establish coastal fisheries monitoring site in Manus to assess climate change impacts and vulnerabilities to aid adaptation decision-making. Deployment of water temperature data loggers for longer-term monitoring of water temperature inside and outside the reef 	SPC-FAME Johann Bell johannb@spc.int Etuari Ropeti etuair@spc.int Simon Nicol simonn@spc.int Lindsay Chapman lindsayc@spc.int Bradley Moore bradley@spc.int	Leban Gisawa lgisawa@fisheries.gov.pg	AusAID ICCAI	2012–2013	PNG summary in regional assessment of vulnerability of fisheries and aquaculture to climate change. SPC Policy Brief 15/2012 <i>Oceanic Fisheries and Climate Change</i> ; SPC Policy Brief 16/2012 <i>Coastal Fisheries and Climate Change</i> ; SPC Policy Brief 18/2012 <i>Aquaculture and Climate Change</i> . Pilot site established in 2012 with baseline data collected, covering finfish and invertebrate resources and associated habitat and coral photo quadrats. Capacity development in-country with local counterparts trained in survey methodologies. Two attachments brought to Noumea for data entry and analysis training, including the writing of the draft report. Second assessment planned for the first half of 2014 along with further capacity development. Two data loggers deployed off Manus Island in May 2012 and they will be retrieved and replaced in the first half of 2014 when the second surveys are undertaken.	Priority adaptation actions will enhance resilience of fisheries and aquaculture sector to climate change impacts Enhanced capacity of country to assess and monitor different effects, including climate change effects on the marine environment
<ul style="list-style-type: none"> Hosting fisheries officer technical attachments to SPC and providing training and support to increase understanding and analytical skills in assessing climate change impacts on ocean fisheries 	SPC-OF John Hampton johnh@spc.int Simon Nicol simonn@spc.int		AusAID ICCA1	2012–2013		National capacity enhanced to address national responses in relation to climate change impacts on ocean fisheries

Forests <ul style="list-style-type: none"> • Organisation of a national planning meeting on implementing the project 'Climate Protection Through Forest Conservation in the Pacific Island Countries' • Consultations to develop a regional policy framework guiding the implementation of REDD+ • Conducting a 'carbon rights' study in support of the national REDD+ programmes • REDD+ demonstration activities in Central Suao (Milne Bay, PNG) • Conducting a pre-feasibility study for the site as basis for developing a project design document, including rough cost-benefit analysis for different activity types 	SPC-LRD Inoke Ratukalou iratukalou@spc.int SPC-GIZ Karl P. Kirsch karl-peter.kirsch-jung@giz.de		USAID Pacific Disaster Risk Management Program 2	2010–2013		Adaptation/mitigation options in forestry sector enhanced
Governance and mainstreaming <ul style="list-style-type: none"> • Support the institutional structuring of the newly formed PNG Climate Change Authority (from Office of Climate Change and Development) • Put in place a Project Assistant within the Office of Climate Change and Development • Support climate change mainstreaming training for national and provincial planning officers • Review of marine management plans to incorporate climate change • Conduct gender and climate change training and workshops 	SPC-GIZ Christine Fung christine.fung@giz.de SPC-FAME Lindsay Chapman lindsayc@spc.int		SPC/GIZ CCCPIR	2012–2013		
Water <ul style="list-style-type: none"> • Supported and facilitated input to the development of a Regional Framework for Water, Sanitation, and Climate Outlooks 	SPC-SOPAC Rhonda Bower rhondab@spc.int	Roger Kara Corporate Planner Water PNG P.O Box 2779, Boroko, National Capital District Papua New Guinea	Australia	2009–2013	Contributed to the development of the Regional Framework for Water, Sanitation and Climate	
<ul style="list-style-type: none"> • Providing access to safe drinking water and strengthening emergency operations and communications to build community resilience to climate change 			EU ACP Facility B	2007–2012		



Pitcairn Islands

Climate change and related disaster risk management activity	Relevant SPC programme/ division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 01 August 2013)	Projected impact
Agriculture and food security <ul style="list-style-type: none"> Distribution of climate-ready crops (banana, cassava, swamp taro, sweet potato) from CePaCT to enhance on-farm climate change resilience 	SPC-LRD Valerie Tuia valeriet@spc.int		NZAID	2011–2013	Climate-ready selection of crops has been organised; awaiting shipment in August/September for local distribution and own monitoring	Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts.
Coastal zone management <ul style="list-style-type: none"> Defining activities for integrated ridge to reef approaches in pilot sites, working with different thematic sectors (e.g. agriculture, coastal fisheries, water) 	SPC-SEPPF Olivier Auguin oliviera@spc.int		EU INTEGRÉ project		Project manager being recruited	Enhancing integrated coastal zone management through ridge to reef approaches
Fisheries <ul style="list-style-type: none"> Territory summary of vulnerability of fisheries and aquaculture sector to climate change 	SPC-FAME Johann Bell johannb@spc.int		AusAID ICCAI	2012	Pitcairn Islands summary in regional assessment of vulnerability of fisheries and aquaculture to climate change. SPC Policy Brief 15/2012 <i>Oceanic Fisheries and Climate Change</i> ; SPC Policy Brief 16/2012 <i>Coastal Fisheries and Climate Change</i>	Priority adaptation actions will enhance resilience of fisheries and aquaculture sector to climate change impacts.
Water <ul style="list-style-type: none"> Increasing the water collection, storage and distribution capacity to prevent water scarcity and boost emergency reserves (drought) 	SPC-SOPAC Frederique Lehoux frederique@spc.int	Michele Christian , Head of Natural Resources Evan Dunn/Pitcairn Island Office (Auckland)	EU EDF9 C Envelope		Design of water improvements completed and improvements under way (shipping and installation of additional water tanks, gutter guards, as well as rehabilitation of existing infrastructure)	Enhanced water security in a climate of increasing drought
<ul style="list-style-type: none"> Supported and facilitated input to the development of a Regional Framework for Water, Sanitation, and Climate Outlooks 	SPC-SOPAC Rhonda Robinson rhondar@spc.int	Kevin Lynch Deputy Governor of the Pitcairn Islands Level 17, 151 Queen Street PO Box 92014, Auckland 1142 New Zealand	Australia/ French Pacific Funds	2009–2013	Contributed to the development of the Regional Framework for Water, Sanitation and Climate.	

Weather/climate <ul style="list-style-type: none"> Supporting monthly monitoring of weather and water resource data (springflow, groundwater level, temperature, rainfall, etc.) to identify trends and anticipate dry spells 					Current procedures enhanced and additional material (i.e. rain gauges) provided to enhance water/weather monitoring Analysis provided to anticipate dry periods and related water needs	Increased capacity on Pitcairn to predict dry spells and access adequate water supplies at all times
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Climate change and related disaster risk management activity	Relevant SPC programme/ division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 01 August 2013)	Projected impact
Agriculture <ul style="list-style-type: none"> • Technical assistance to national level to understand climate change impacts on agriculture • Building community awareness of the impacts of climate variability, and measures to increase agricultural resilience • Design, implementation and evaluation of adaptation interventions in selected communities • Improve productivity of terrestrial food production systems through the establishment of integrated cropping systems, farmer training, comparative research of drought tolerant sweet potatoes and developing livestock production systems. • Distribution of climate-ready crops (banana, cassava, sweet potato) from CePaCT for climate change evaluation • Strengthen communities' capacities to manage climate change risks, hazards and disasters through awareness and participatory approaches to training. 	<p>SPC-LRD Valerie Tuia valeriet@spc.int</p> <p>SPC-SEPPF Vuki Buadromo vukib@spc.int</p> <p>SPC-LRD Siosiuua Halavatau siosiuah@spc.int</p> <p>SPC-LRD Dean Solofa deans@spc.int</p>	<p>Peter Fong ACEO</p> <p>Jasmine Sila Project Coordinator</p> <p>Misa Konelio Director – Extension Ministry of Agriculture and Fisheries</p> <p>Anne Rasmussen ACEO, Ministry of Natural Resources and Environment</p>	<p>AusAID ICCAI</p> <p>USAID</p>	<p>2011–2013</p> <p>2012–2015</p>	<p>Food security/climate change project sites identified and endorsed in April 2013</p> <p>Participatory rural appraisals (PRAs) completed for project sites in May 2013</p> <p>Adaptation interventions identified and endorsed by communities in July 2013</p> <p>Establish community nurseries and demonstration sites at selected project sites by the end of 2013.</p> <p>Trial climate-ready collection at selected project sites by the end of 2013.</p> <p>Multi-sector cost and benefit analysis training for technical ministries implementing climate change adaptation projects/programmes delivered by 2014</p> <p>Disaster risk reduction training and the development of community disaster response plans delivered by 2014</p> <p>Design and implement early warning systems to enable the dissemination of main threats to communities by 2014.</p> <p>Train personnel and communities to operate and maintain early warning systems (EWS).</p> <p>Recruit a food security officer by January 2014 to support project implementation and other SPC food security related activities</p>	<p>Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts.</p> <p>National capacity in technical ministries on applying cost and benefit analysis to guide adaptation planning strengthened</p> <p>Increased knowledge to manage climate change risk, including climate variability affecting food security; hazards and disasters</p>
Coastal zone management <ul style="list-style-type: none"> • Updating and analysis of data on sea levels, sea surface temperature, barometric pressure, and wind speed and direction. • Communications support Array calibration, maintenance and data 	<p>SPC-SOPAC Arthur Webb arthurw@spc.int</p>	<p>Molly Powers-Tora Regional Officer COSPPac</p>	<p>COSPPac</p>	<p>2012–2016</p>	<p>Pacific sea level monitoring stations continued to provide a stream of high quality data on sea level, temperature (water and air) barometric pressure, and wind speed and direction. In addition, land-based continuous GPS (CGPS) stations complemented these data and helped account for any tectonic movement.</p>	<p>Provided policy makers, development planners and scientists with important, reliable information about sea level variability and climate change-associated sea level rise.</p>
Disaster risk management <ul style="list-style-type: none"> • Development and implementation of Disaster Risk Management National Action Plan 	<p>SPC-SOPAC Moses Sikiyou moseses@spc.int</p>		<p>AusAID NAP Facility</p>	<p>2012–2013</p>	<p>Support for the development of the Samoa DRM National Action Plan provided in 2011. Some implementation support was provided in 2012 as follows:</p>	<p>Platform established to build resilience to DRM and CC related risks.</p>

<ul style="list-style-type: none"> Improve capacity and performance of disaster management agencies through materials and training 	SPC-SOPAC Kathryn Hawley kathrynh@spc.int		USAID Pacific Disaster Risk Manage- ment Program 2	2010–2013		Enhanced capacity of PICTs to access, manage and use disaster and climate change information for disaster risk reduction, risk management, risk-adjusted development planning and risk financing
<ul style="list-style-type: none"> Provision of disaster risk assessment tools, including financial instruments to reduce their vulnerability to natural disasters 	SPC-SOPAC Litea Biukoto liteab@spc.int	Filomena Nelson Disaster Management Division	PCRAFI Phase 2	2010–2012	Risk profile developed to help inform PCRAFI Phase 3 Pacific Disaster Risk Financing Insurance Pilot launched 17Jan 2013	
Education <ul style="list-style-type: none"> Pilot of the Samoan version of a picture-based outreach tool kit/resource on climate change for the education sector 	SPC/GIZ Hannah Sabass hannahs@spc.int		PACCSAP SPC/GIZ CCCPIR	2011–2015	Picture-based education toolkit secondary schools developed in 2013	Climate change and DRM awareness enhanced through education
Energy <ul style="list-style-type: none"> Conduct public awareness campaigns in at least three PICTs. National workshop on the development of legislation for labelling and standards in Samoa Printing and dissemination of Samoa energy calculator and sleeves Country support in appliance labelling and standards in Samoa 	SPC-EDD Solomone Fifita SolomoneF@spc.int		Australia	2013	Energy standards and labelling public awareness campaigns conducted in Samoa – commenced with airing of television adverts on energy rating labels and purchasing of energy efficient appliances; 1500 energy smart calculators provided to the NC for distribution. Labelling and standards legislation for labelling and standards Public awareness – advertisement /publication Implementation of labelling and standards for selected electrical appliances	Strengthen institutions and expertise in energy and transport sectors. Enabling environment for economic development and RE
Fisheries <ul style="list-style-type: none"> Funded representatives to 'Vulnerability of Pacific Fisheries and Aquaculture to Climate Change' Workshop 5–8 June 2012, Noumea Technical assistance to modify strategic plans in fisheries and aquaculture sector, based on findings of vulnerability assessment report, and integrate key findings into climate change adaptation strategies Preparation of knowledge products and guidance documents on key coastal and oceanic fisheries issues to inform PICT decision-makers 	SPC-FAME Johann Bell johannb@spc.int	Joyce Samuelu Ah-Leong Ministry of Agriculture and Fisheries joyce.ahleong@maf.gov.ws Taua Latu Afioga Ministry of Natural Resources and Environment latu.afioga@mnre.gov.ws	AusAID ICCAI	2012–2013	Regional workshop to identify priority adaptations to climate change for the fisheries and aquaculture sector, and a joint report with FAO on workshop outcomes. Raised awareness of climate change impacts on contributions of fisheries and aquaculture to national economies, food security and livelihoods, and the range of adaptations and supporting policies to minimise the risks and capitalise on opportunities. Samoa summary in regional assessment of vulnerability of fisheries and aquaculture to climate change. SPC Policy Brief 15/2012 <i>Oceanic Fisheries and Climate Change</i> ; SPC Policy Brief 16/2012 <i>Coastal Fisheries and Climate Change</i> ; SPC Policy Brief 17/2012 <i>Freshwater Fisheries and Climate Change</i> ; SPC Policy Brief 18/2012 <i>Aquaculture and Climate Change</i> .	Priority adaptation actions will enhance resilience of fisheries and aquaculture sector to climate change impacts

<ul style="list-style-type: none"> Development of the integrated coastal fisheries management policy Application of the new policy into local management plans and practices Implementation of adaptation measures into local coastal fisheries management practice through two case studies (planned) 	SPC-FAME Etuati Ropeti etuatir@spc.int SPC/GIZ	Joyce Samuelu-Ah Leong Joyce.AhLeong@m.af.gov.ws	SPC-GIZ- CCCPIR	2012–2014	Integrated coastal fisheries management policy developed and printed in collaboration with the fisheries department and other stakeholders. The next stage to commence in the second half of 2013 is to implement the policy through integrating climate change into local management plans with some specific communities. Through this process, some climate change adaptation activities will be identified for future implementation.	Development of the integrated coastal fisheries management policy Application of the new policy into local management plans and practices Implementation of adaptation measures into local coastal fisheries management practice through two case studies (planned)
<ul style="list-style-type: none"> Deployment of water temperature data loggers for longer-term monitoring of water temperature change Work with several communities to develop and implement a range of climate change adaptation activities 	SPC-FAME Lindsay Chapman lindsayc@spc.int Bradley Moore bradley@spc.int Etuati Ropeti etuatir@spc.int	Joyce Samuelu-Ah Leong Joyce.AhLeong@m.af.gov.ws		2012–2013	Two water temperature data loggers were deployed in April 2012. One was stolen shortly after and a replacement deployed in August 2012. Workshops planned with several communities for August 2013 to identify climate change effects and concerns so that adaptation activities can be identified and implemented.	Better understanding of climate change effects on coastal communities and possible adaptation activities to address these
Tourism <ul style="list-style-type: none"> Assessment of climate change and community tourism initiatives and mainstreaming climate change in tourism policies 	SPC-GIZ Wulf Killmann Wulf.killmann@giz.de		SPC-GIZ CCCPIR	2013–2015		Climate change mainstreamed into tourism policies
Water <ul style="list-style-type: none"> Improve water resource and waste water management through policy and legislative reform, and encourage implementation of effective IWRM and WUE plans through a demonstration project. Support provided to post-disaster assessments. Risk management approaches mainstreamed in Integrated Water Resource Management. Support provided to the Pacific WASH cluster during periods of emergencies and disasters National Water, Sanitation, and Climate Outlooks consulted and developed 	SPC-SOPAC Rhonda Robinson rhondar@spc.int	Mr Suluimalo Amataga Penaia ACEO – Water Resources Division Ministry of Natural Resources, Environment (MNRE) Sam Semisi National Project Manager, MNRE.	GEF IWRM/EU	2009–2013	Samoa IWRM demonstration project progress: The Samoan government purchased ~1500 hectares of upland catchment from the Catholic church for designation as a watershed protection area in 2012. Four watershed management plans (WMPs) were finalised, covering all watersheds of the Apia catchment. A key feature of the WMPs is the definition of buffer zones and natural reserves. The project has also legally defined buffer zones as 20 m from the bank of the river or 20 m from the top of a steep slope where a river flows. The Watershed Conservation Policy was completed and endorsed. Key features include reservation of upland watershed areas for the specific purpose of water resources conservation. Up to 300 m from sea level is encouraged to be developed; 300–600 m is classified as restricted development; and 600 m upward is classified as an exclusion zone, where no developments are allowed. Rehabilitation measures such as tree planting	Rehabilitation and management of the Apia Catchment

					<p>around the sources and water intakes to improve water quantity and quality have been key ongoing activities. Construction and installation of rubbish stands in vulnerable watershed areas reduces the dumping of rubbish in/on the river. The waste water treatment plant in Sogi is operational and is currently upgrading its capacity to include other new buildings around the urban area. There is also a sludge facility at Tafaigata for the rest of the toilet waste disposal. Waste water treatment for Fulusou Treatment Plant was finalised in cabinet. Support was also provided to the post disaster needs assessment and cluster work associated with the impacts of TC Evan early in 2013. Provided input towards the development process of the Pacific Framework for Water, Sanitation and Climate, as well as the development of a national water, sanitation and climate outlook for Samoa.</p>	
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Solomon Islands

Climate change and related disaster risk management activity	Relevant SPC programme/ division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 01 August 2013)	Projected impact
Agriculture and food security <ul style="list-style-type: none"> Providing technical assistance and training at the national level to build understanding of the impacts of climate change on agricultural crops Building community capacity to manage the impacts of climate change and measures to increase agricultural resilience Implementation of participatory engagement activities with farmers and local communities in several provinces to help identify climate change vulnerability Design, implementation and evaluation of different options and climate change coping strategies to manage climate-related risks Strengthening food security-climate change information systems using GIS Capacity building for agriculture ministry officers and national planning officials to apply analytical tools to help identify cost effective adaptation responses in the agriculture sector Distribution of climate-ready crops (banana, cassava, swamp taro, sweet potato) from CePaCT to enhance on-farm climate change resilience 	<p>SPC-LRD Valerie Tuia valeriet@spc.int</p> <p>SPC-SEPPF Vuki Buadromo vukib@spc.int</p> <p>SPC-LRD Siosiuua Halavatau siosiuah@spc.int</p> <p>SPC-SOPAC Wolf Forstreuter wolff@spc.int</p>	Melchior Mataki PS Ministry of Environment, Climate Change, Disaster and Meteorology (MECCDM)	<p>AusAID ICCAI</p> <p>USAID GIZ</p>	<p>2011–2013</p> <p>2012–2015</p>	<p>Food security/climate change project sites identified and endorsed by national governments</p> <p>Participatory rural appraisals (PRAs) completed for project sites in April 2013</p> <p>Adaptation interventions identified and endorsed by communities in July 2013</p> <p>Establish community nurseries and demonstration sites at selected project sites by the end of 2013.</p> <p>Deliver training on plant propagation techniques, nursery management, integrated pest and disease management to communities and provincial officers by the end of 2013.</p> <p>Trial climate-ready collection at selected project sites by the end of 2013.</p> <p>Multi-sector cost and benefit analysis training for technical ministries implementing climate change adaptation projects/programmes delivered by the end of 2013.</p> <p>Recruit a food security officer by September 2013 to support project implementation and other SPC food security related activities.</p>	<p>Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts.</p>
<ul style="list-style-type: none"> Establish community pilot sites on SLM and agroforestry systems in Choiseul. Support establishment of community nurseries for food production in Choiseul. Support establishment of farmer field schools in Choiseul. 	<p>SPC-GIZ Rence Sore Rence.sore@giz.de</p>				<p>Pilot sites identified</p> <p>Work on community nurseries in progress</p>	

Coastal zone management <ul style="list-style-type: none"> Updating and analysis of data on sea levels, sea surface temperature, barometric pressure, and wind speed and direction. Communications support Array calibration, maintenance and data 	SPC-SOPAC Arthur Webb arthurw@spc.int	Molly Powers-Tora Regional Officer COSPPac	COSPPac	2012–2016	Pacific sea level monitoring stations continued to provide a stream of high quality data on sea level, temperature (water and air) barometric pressure, and wind speed and direction. In addition, land-based continuous GPS (CGPS) stations complemented these data and helped account for any tectonic movement	Provided policy makers, development planners and scientists with important and reliable information about sea level variability and climate change-associated sea level rise.
<ul style="list-style-type: none"> Technical assistance and on-ground staff support to develop and implement an integrated provincial-level climate change response strategy (ridge to reef) in Choiseul Province 	SPC-GIZ Rence Sore rence.sore@giz.de		SPC-GIZ CCCPIR	2012–2015		Integrated ridge to reef approach in place to address climate change and disaster related risks.
Communication and awareness <ul style="list-style-type: none"> Compile glossary of climate change terms in Babatana (local Choiseul language). Develop media programmes on climate change. Develop various climate change related awareness materials in the local language. Support the development and publishing of V and A assessment report for Choiseul Province and village profiles for the Province 	SPC-GIZ Rence Sore rence.sore@giz.de		SPC-GIZ CCCPIR	2012–2013		Climate Change and DRM awareness raised.
Disaster risk management <ul style="list-style-type: none"> Development of a joint DRM and climate change adaptation national plan Construction of provincial emergency operation centres at Lata, Kirakira and Gizo provincial headquarters. 	SPC-SOPAC Mosese Sikivou moseses@spc.int George Beck georgeb@spc.int	Loti Yates Director, Solomon Islands NDMO	AusAID NAP Facility EU B-Envelope	2012–2013	A new strategy for the integration of disaster and climate risk into the national sustainable development plan was developed in draft in March 2013. Further work is required. Construction of EOCs scheduled for completion in October 2013.	Improved coordination and management of DRM.
<ul style="list-style-type: none"> Capacity building for local government authorities in both technical and socio-economic aspects of DRM Develop guidelines and decision-making tools to assist local authorities to manage risks and support planning for appropriate infrastructure. 						Enhanced capacity of PICTs to access, manage and use disaster and climate change information for disaster risk reduction, risk management, risk adjusted development planning and risk financing.
<ul style="list-style-type: none"> Strengthening emergency operations and communications to build community resilience to climate change. 	SPC-SOPAC George Beck georgeb@spc.int		Eu EDF9 B Envelope Project	2007–2013		

<ul style="list-style-type: none"> Improve capacity and performance of disaster management agencies through materials and training. 	SPC-SOPAC Kathryn Hawley kathrynh@spc.int		USAID Pacific Disaster Risk Manage- ment Program 2	2010–2013		
<ul style="list-style-type: none"> Provision of disaster risk assessment tools including financial instruments to reduce their vulnerability to natural disasters 	SPC-SOPAC Litea Biukoto liteab@spc.int	Loti Yates National Disaster Management Office	PCRAFI Phase 2	2010–2012	Risk profile developed to help inform PCRAFI Phase 3 Pacific Disaster Risk Financing Insurance Pilot launched Jan 17 2013	
Energy <ul style="list-style-type: none"> Technical assistance provided to Solomon Islands to support adoption of national energy policy/roadmap/strategy and investment plan energy. 	SPC-EDD Solomone Fifita SolomoneF@spc.int		AusAID	2013	Review of the <i>Solomon Islands National Energy Policy (2007)</i> and draft of the Petroleum and Energy Efficiency Strategies and Investment Plans (continuation from 2012). Following the Nov 2012 energy consultation workshop, the 2007 national energy policy was reviewed and petroleum and EE strategies and investment plans were drafted. These were further discussed at a National Energy Forum conducted in June, attended by 40 participants. The policy, strategies and investment plans will now be finalised for 'higher' (CEO) level consultations in SI before submission to Cabinet for endorsement.	Support an enabling environment through energy efficiency strategies
Fisheries <ul style="list-style-type: none"> Funded representatives to "Vulnerability of Pacific Fisheries and Aquaculture to Climate Change" Workshop June 5-8, 2012, Noumea Technical assistance to modify strategic plans in fisheries and aquaculture sector based on findings for Vulnerability Assessment Report and integration of key findings into climate change adaptation strategies Preparation of knowledge products and guidance documents on key coastal and oceanic fisheries issues to inform PICT decision-makers 	SPC-FAME Johann Bell johannb@spc.int	James Teri Ministry of Fisheries and Marine Resources jteri@fisheries.gov.s b Rosalie Masu Ministry of Fisheries and Marine Resources rmasu@fisheries.gov .au	AusAID ICCAI	2012–2013	National workshop to identify priority adaptations to climate change for the fisheries and aquaculture sector, and report on outcomes and recommendations of workshop. Raised awareness of climate change impacts on contributions of fisheries and aquaculture to national economies, food security and livelihoods, and the range of adaptations and supporting policies to minimise the risks and capitalise on opportunities Solomon Islands summary in regional assessment of vulnerability of fisheries and aquaculture to climate change. SPC Policy Brief 15/2012 <i>Oceanic Fisheries and Climate Change</i> ; SPC Policy Brief 16/2012 <i>Coastal Fisheries and Climate Change</i> ; SPC Policy Brief 17/2012 <i>Freshwater Fisheries and Climate Change</i> SPC Policy Brief 18/2012 <i>Aquaculture and Climate Change</i> . Workshop for Choiseul Province on priority adaptations to climate change for fisheries, and report on recommendations of workshop	Priority adaptation actions will enhance resilience of fisheries and aquaculture sector to climate change impacts

<ul style="list-style-type: none"> Host technical trainee attachments to increase understanding and analytical skills in assessing climate change impacts on oceanic fisheries. 	SPC-OFF Simon Nichol simonn@spc.int		AusAID ICCAI	2012–2013		
<ul style="list-style-type: none"> Deployment of water temperature data loggers for longer-term monitoring of water temperature change 	SPC-FAME Bradley Moore bradley@spc.int		AusAID ICCAI French Pacific Fund	2012–2013	Two water temperature data loggers deployed in February 2012 off Guadalcanal and these will be replaced in early 2014.	Enhanced understanding of water temperature fluctuations over time
<ul style="list-style-type: none"> Awareness on sustainable fisheries in Choiseul Deployment of FADS by local communities in Choiseul Community fisheries monitoring in Choiseul 	SPC-GIZ Rence Sore rences.sore@giz.de					
<ul style="list-style-type: none"> Develop a coastal fisheries and community-based management component to the multi-donor project in Choiseul Province, taking into account climate change effects and adaptation approaches to implement activities at the community level. 	Ian Bertram ianb@spc.int Etupati Ropeti etupati@spc.int	James Teri jteri@fisheries.gov.sb Rosalie Masu rmasu@fisheries.gov.sb	SPC-GIZ CCCPIR	2012–2014	Two fisheries officers have been trained in community consultations and the development of community-based management plans, including possible climate change effects. Community consultations have been conducted in two communities with the two fisheries officers, and draft management plans have been developed. The fisheries officers will undertake the same activities with the other three communities identified to be covered under this project (5 communities in total).	Enhanced capacity of communities in Choiseul Province to adapt to climate change effects
Forests <ul style="list-style-type: none"> National planning and technical support for implementing climate protection through forest conservation activities REDD+ demonstration activities in Tetepare, East Rennell and two sites in Choiseul National REDD+ pilot site surveys that include: forest inventory, carbon pool measurements, detailed biodiversity survey and mapping, cultural and archaeological mapping, and participatory socio-economic assessment Conducting a 'carbon rights' study in support of the national REDD+ programmes Rehabilitation of coastal vegetation and degraded forest areas in Choiseul Province Upgrading of tree nursery in Taro, Choiseul and community tree nurseries in Choiseul Promotion of agroforestry systems in Choiseul 	SPC-GIZ Karl P. Kirsch karl-peter.kirsch-jung@giz.de SPC-GIZ Rence Sore rences.sore@giz.de		SPC-GIZ <i>Climate protection through forest conservation in PICs</i>	2011–2013		Adaptation/mitigation options in forestry sector enhanced

Governance and mainstreaming <ul style="list-style-type: none"> • Completion of final joint SPC/Solomon Islands country strategy reviews to incorporate climate change matters • Supporting Ministry of Environment with SPC Climate Change Coordinator position dedicated to coordinating SPC climate change support activities at the national level • Support climate change mainstreaming training for national and provincial planning officers. • Support the development of the national adaptation programme. • Review and mainstream climate change adaptation into existing legislation: environment, lands, agriculture, water, fisheries. • Include climate change considerations in local and provincial planning processes. • Conduct gender and climate change training and workshops. 	Mia Rimon miar@spc.int SPC-GIZ Rence Sore rence.sore@giz.de	Chanel Iroi Douglas Yee Susan Sulu Ministry of Planning and Aid Coordination	SPC Core funding	2012 2012–2015 2012–2013	SPC national coordinator climate change/DRM position in place to support SI government coordinate climate change and related disaster risk management initiatives. Also retained to assist SPC initiatives in country	Climate Change and DRM mainstreamed into national, provincial, sectoral, community plans and policies
Health <ul style="list-style-type: none"> • Support the Solomon Islands Ministry of Health and Medical Services to conduct a needs assessment for an integrated national epidemiology unit (a key purpose of which is to more effectively monitor and respond to climate change effects on health). 	SPC-PHD Yvan Souares yvans@spc.int		AusAID ICCAI	2013	Short-term: needs assessment complete	Established integrated national epidemiology unit

Land <ul style="list-style-type: none"> Produce land cover maps for Solomon Islands to inform decision making on food security and climate change Build national and provincial capacity to apply geographical information systems (GIS) in decision making and adaptation planning 	SPC USAID Vuki Buadromo , vukib@spc.int SPC-SOPAC Wolf Forstreuter wolff@spc.int		USAID	2012–2015	Land cover maps at 1:50,000 for Isabel, Malaita, Guadalcanal, Makira and parts of New Georgia completed. Mapping for the remaining provinces is ongoing. Soil mapping at 1:250,000 is completed for Solomon Islands. Three officers from the Ministry of Agriculture and Forestry have completed GIS training attachments with SOPAC. Land cover maps at 1:10,000 for Choiseul, Rennell and Temotu should be complete by December 2014.	Baseline data available to identify food insecure hotspots and inform decision making on climate change adaptation and food security National and provincial capacity on using GIS tools to inform climate change adaptation planning strengthened
<ul style="list-style-type: none"> Support for two persons to be trained in remote sensing data processing and mapping at SOPAC Suva 	SPC-GIZ Karl P. Kirsch karl-peter.kirsch-jung@giz.de		SPC/GIZ CCCPiR	2012–2014		
<ul style="list-style-type: none"> Development of land-use plan with Choiseul communities 	SPC-GIZ Rence Sore rence.sore@giz.de					
Water <ul style="list-style-type: none"> Provision of equipment, technologies and capacity to monitor the status and trends of water resources within the pilot basins and aquifers 	SPC-SOPAC Arthur Webb arthurw@spc.int		WMO, UNESCO and the Fiji Meteorological Service	2007–2010		
<ul style="list-style-type: none"> Improve water resource and wastewater management through policy and legislative reform and encourage implementation of effective IWRM and WUE plans through a demonstration project. Risk management approaches mainstreamed in integrated water resource management National water, sanitation, and climate outlooks consulted and developed 	SPC-SOPAC Rhonda Robinson rhondar@spc.int	Isaac Iekelau , National Project Manager, Ministry of Mines, Energy and Rural Electrification Rence Sore IWRM Focal Point, Permanent Secretary, Ministry of Mines, Energy and Rural Electrification	GEF IWRM/EU	2009 –2013	Solomon IWRM demonstration project progress: Landowner negotiations are ongoing, Staff are engaged in the development of new national IWRM policy. One staff member has completed Grad Cert in IWRM, a national Water Advisory Committee was established by cabinet, and a draft national water strategy was prepared and is awaiting final committee endorsement prior to seeking cabinet endorsement, Communities in the Kovi and Kongulai catchments are engaged in consideration of catchment preservation for ecological services and improved water quality. Provided input towards the development process of the Pacific Framework for Water, Sanitation and Climate, as well as the development of a national water, sanitation and climate outlook for SI.	Honiara City Water Supply managed and pollution reduced through integrated water resources management.



Climate change and related disaster risk management activity	Relevant SPC programme/ division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 01 August 2013)	Projected impact
Agriculture <ul style="list-style-type: none"> Distribution of climate-ready crops (cassava, yam) from CePaCT for CC evaluation 	SPC LRD Ms Valerie Tuia Valeriet@spc.int Dean Solofa deans@spc.int	Otiniele Tu'umuli c/o Mose Pelasio, Fakaofu Taupulega Dept. of Economic Development and Natural Resources, Apia	AusAID ICCAI Phase 2	2012	Climate-ready selection of crops from CePaCT organised and awaiting shipment to Tokelau in September for local distribution and own monitoring and assessment	Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts.
Education <ul style="list-style-type: none"> Water, Sanitation and Hygiene (WASH) awareness campaigns in villages and schools to reduce the impact of waste on water resources and improve community health outcomes, including media programmes and development of information support materials in local language 	SPC-HDD Linda Petersen lindap@spc.int SPC/GIZ Hanna Sabass hanna.sabass@giz.de		AusAID ICCAI SPC/GIZ CCCPIR	2012–2013		Climate Change and DRM awareness enhanced through education
Fisheries <ul style="list-style-type: none"> Technical training attachments for at least three Tokelau fisheries officers in data analysis and interpretation for assessing marine stocks and help guide management efforts to maintain the climate resilient coastal marine resources 	SPC FAME Lindsay Chapman LindsayC@spc.int Ian Bertram ianB@spc.int Bradley Moore BradleyM@spc.int Etuati Ropeti etuatir@spc.int		AusAID French Pacific Fund SPC core	2012–2013	Following initial capacity development in Tokelau on survey methods at one atoll, the trained staff completed surveys in the other two atolls in the first half of 2013. Attachment training provided for three fisheries officers in July/August 2013 to enter and analyse the invertebrate and habitat data collected at the three atolls. The results have been written up into management advice to be presented back to the councils on each of the three atolls in the second half of 2013.	Enhanced capacity of fisheries staff in Tokelau to assess and manage the effects of climate change on the marine environment
<ul style="list-style-type: none"> Development of community-based management arrangements incorporating climate change considerations for at least one atoll 					Using the management advice in the above report, individual atoll management plans for invertebrates will be developed for the three Tokelau atolls by the fisheries officers with some assistance from SPC.	

<ul style="list-style-type: none"> Deployment of water temperature data loggers for longer-term monitoring of water temperature inside and outside the reef 					Two water temperature data loggers deployed off Nukunonu in May 2012. One has been recovered in July and will be replaced in August 2013.	
<ul style="list-style-type: none"> Territory summary of vulnerability of fisheries and aquaculture sector to climate change 	Johann Bell johannb@spc.int		AusAID ICCAI	2012–2013	Tokelau summary in regional assessment of vulnerability of fisheries and aquaculture to climate change. SPC Policy Brief 15/2012 <i>Oceanic Fisheries and Climate Change</i> ; SPC Policy Brief 16/2012 <i>Coastal Fisheries and Climate Change</i>	Priority adaptation actions will enhance resilience of fisheries and aquaculture sector to climate change impacts.
Human development (gender, youth, women) <ul style="list-style-type: none"> Integration of gender, youth, human rights and community perspectives into proposed work 	SPC-HDD Linda Petersen lindap@spc.int SPC/GIZ Hanna Sabass hanna.sabass@giz.de	Otiniehu Tu'umuli c/o Mose Pelasio, Fakaofu Taupulega, Department of Economic Development and Natural Resources, Apia, Samoa	AusAID ICCAI	2012–2013		
Water <ul style="list-style-type: none"> Establishment and strengthening of national water resource governance structures to guide water resource and waste management activities that enhance water security and climate resilience Integration of climate change considerations into management of marine resources and provision of clean water Development and implementation of water resource policies and plans, including national consultation processes Training activities on drinking water safety planning, water quality monitoring and water security Provision of equipment to undertake water resources monitoring and assessment activities to determine the adequacy of existing supplies to deal with increased climate extremes (drought) GIS survey of rainwater harvesting systems and community storage tanks to promote water security on atolls Increase water storage facilities Reduction of pollution and waste streams to improve the water lens 	SPC-SOPAC Rhonda Bower rhondab@spc.int	Ms Jewel Toloa Project Support Officer TALO office, Apia Samoa	AusAID ICCAI Multi Country Support Project	2012–2013	Project is currently in progress with WASH training-of-trainers being undertaken early in 2013, along with training on community-based water quality testing and drinking water safety planning. Work was under way in August 2013 for in-country field missions to each of the atolls to carry out a GIS survey, further the WASH training in the community and improve water resources monitoring through the installation of rainwater monitoring stations on each of the atolls. Provided input towards the development process of the Pacific Framework for Water, Sanitation and Climate, as well as the development of a national water, sanitation and climate outlook for Tokelau.	Strengthened capacity of Tokelau to effectively manage freshwater resources for enhanced water security.

Climate change and related disaster risk management activity	Relevant SPC programme/ division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 01 August 2013)	Projected impact
Agriculture <ul style="list-style-type: none"> Eua pilot site – development of a land-use plan, rehabilitation of degraded watershed management areas, and utilisation of abandoned town allotments for food security Identify appropriate climate resilient crop varieties. Promote sustainable agricultural practices/land management technologies. Establish appropriate farming systems at Nakolo pilot site and Vava'u pilot site. Establish meteorological instruments in pilot sites to monitor weather and climatic conditions against agricultural parameters. Build community awareness of the impacts of climate variability and measures to increase agricultural resilience. Implement participatory engagement activities with farmers and local communities. Develop information materials and learning resources. Build the capacity of ministries and planning offices to apply analytical tools to help identify cost-effective adaptation responses. Technical assistance at national level to understand impacts of climate change on agriculture. Support taro improvement programme to breed taro for good performance in drought conditions. Distribute climate-ready crops from CePaCT for climate change evaluation. Evaluate crops and varieties for climate tolerant traits. 	<p>SPC-LRD Valerie Tuia valeriet@spc.int</p> <p>Dean Solofa deans@spc.int</p> <p>SPC/GIZ Christine Fung christine.fung@giz.de</p> <p>SPC-SEPPF Vuki Buadromo vukib@spc.int</p> <p>SPC-LRD Siosua Halavatau siosuah@spc.int</p>		<p>SPC/GIZ CCCPIR</p> <p>AusAID ICCAI</p>	<p>2009–2013</p> <p>2011–2013</p>	<p>SPC/USAID project sites identified and endorsed; Kolonga, Tongatapu. Houmea, 'Eua and Tefisi, Vava'u</p> <p>Participatory rural appraisals (PRAs) completed for project sites</p> <p>Adaptation interventions identified and endorsed by communities – completed</p> <p>Establish community nurseries and demonstration sites for integrated farming systems at selected sites by the end of 2013.</p> <p>Deliver training on plant propagation techniques, nursery management, integrated pest and disease management to communities and provincial officers by the end of 2013.</p> <p>Trial climate-ready collection at selected project sites by the end of 2013.</p> <p>Multi-sector cost and benefit analysis training for technical ministries implementing climate change adaptation projects/programmes delivered by end of 2013.</p> <p>Recruit a food security officer by September 2013 to support project implementation and other SPC food security related activities.</p>	<p>Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts.</p>

<ul style="list-style-type: none"> Support collecting of root crops to evaluate for climate tolerant traits. 						
<ul style="list-style-type: none"> Build community awareness of the impacts of climate variability and measures to increase agricultural resilience. Implement participatory engagement activities with farmers and local communities. Establish climate field schools to train farmers; design, implement and evaluate different options and coping strategies. Develop information materials and learning resources for the USAID project. Strengthen food security/climate change information systems using GIS. Engage officials and technical specialists from relevant ministries and departments. Build the capacity of ministries and planning offices to apply analytical tools to help identify cost-effective adaptation responses. 	<p>SPC-SEPPF Vuki Buadromo vukib@spc.int</p> <p>SPC-LRD Siosiuua Halavatau siosiuah@spc.int</p> <p>SPC-LRD Valerie Tuia valeriet@spc.int</p> <p>SPC-SOPAC Wolf Forstreuter wolff@spc.int</p> <p>SPC/GIZ Christine Fung christine.fung@giz.de</p>		USAID	2012–2015		
<p>Coastal zone management</p> <ul style="list-style-type: none"> Develop an improved inundation model for Nukualofa, Tonga, and baseline data quality needs to support tsunami inundation modelling and evacuation mapping. 	<p>SPC-SOPAC Arthur Webb arthurw@spc.int</p> <p>Noa Tokavou noat@spc.int</p>		PACCSAP-DCCEE PSL	2012–2013	Tsunami inundation model developed and used to inform evacuation plans for Tongatapu. Tsunami evacuation plan developed.	Resilience to climate change and disaster risks enhanced.
<ul style="list-style-type: none"> Trialling coastal protection measures in eastern Tongatapu identified as GCCA: PSIS on-the-ground adaptation project Preparation of a coastal management plan for Tongatapu 	SPC-SEPPF Graham Sem grahams@spc.int		EU GCCA: PSIS	2012–2014	<p>Project design document signed August 2013 and implementation starting. The purpose is to trial coastal protection measures in eastern Tongatapu using a coastal engineering approach called 'Buying time through managed advance'.</p> <p>TA in progress to develop a diagnostic assessment and coastal management plan for Tongatapu</p>	<p>Lessons learnt from coastal protection measures using a combination of soft and hard engineering methods and applicable elsewhere in Tonga</p> <p>Tonga can move from a piecemeal coastal planning approach to an integrated comprehensive approach that includes long-term climate change.</p>

<ul style="list-style-type: none"> Updating and analysis of data on sea levels, sea surface temperature, barometric pressure, and wind speed and direction. Communications support Array calibration, maintenance and data 	SPC-SOPAC Arthur Webb arthurw@spc.int	Molly Powers-Tora Regional Officer COSPPac	COSPPac	2012–2016	Pacific sea level monitoring stations continued to provide a stream of high quality data on sea level, temperature (water and air) barometric pressure, and wind speed and direction. In addition, land-based continuous GPS (CGPS) stations complemented these data and helped account for any tectonic movement	Provided policy makers, development planners and scientists with important and reliable information about sea level variability and climate change associated sea level rise.
<ul style="list-style-type: none"> Assessing vulnerability and adaptation to sea level rise in Lifuka Is., Ha'api - Tonga. 	SPC-SOPAC Arthur Webb arthurw@spc.int SPC-SOPAC Jens Kruger jensk@spc.int SPC-HDP Linda Petersen lindap@spc.int	Govt. of Tonga and Lifuka Is. local authorities.	Funded by the DCCEE	2012–2013	Ongoing	The project will deliver an evidence-based adaptation strategy with options to reduce the impacts of coastal vulnerability on the western shores of Lifuka Island. It also supports inter-agency planning in Tonga, practical on the ground capacity building opportunities, and will provide data as a basis for decision-making at the national and sub-regional level.
Communication and awareness <ul style="list-style-type: none"> Develop a Tongan climate change glossary. Develop local awareness materials and conduct awareness programmes on climate change. Conduct awareness-raising programmes on climate change for 'Eua and Nakolo communities. Support the development of a national climate change portal/website. 	SPC/GIZ Hanna Sabass hanna.sabass@giz.de SPC/GIZ Christine Fung christine.fung@giz.de		SPC/GIZ CCCPIR	2012–2013	Support being provided to develop national climate change portal	Climate change and DRM awareness enhanced through education
Disaster risk management <ul style="list-style-type: none"> Development and implementation of <i>Joint Climate Change and Disaster Risk Management National Action Plan</i> 	SPC-SOPAC Moseses Sikivou moseses@spc.int		EDF9 ACP-EU NDF	2009–2013	The <i>Joint Climate Change and DRM National Action Plan</i> was developed in October 2009 and approved by Tonga's Cabinet in July 2010. Implementation of a range of activities has been under way since 2010.	Improved safety and resilience of Tonga to both climate and geological hazards
<ul style="list-style-type: none"> Improve capacity and performance of disaster management agencies through materials and training 	SPC-SOPAC Kathryn Hawley kathrynh@spc.int Kirstie Meheux kirstiem@spc.int	Leveni Aho National Emergency Management Office	USAID Pacific Disaster Risk Management Program 2	2010–2013	Training at the sub-national level for the islands of Ha'apai and Va'vau in disaster management.	Increased understanding and capacity at the island level for better DRM arrangements – looking towards better management of hazard impacts

<ul style="list-style-type: none"> Provision of disaster risk assessment tools, including financial instruments to reduce their vulnerability to natural disasters 	SPC-SOPAC Litea Biukoto liteab@spc.int	Leveni Aho National Emergency Management Office	PCRAFI Phase 2	2010-2012	Risk profile developed to help inform PCRAFI Phase 3 Pacific Disaster Risk Financing Insurance Pilot launched Jan 17 2013	Enhanced capacity of PICTs to access, manage and use disaster and climate change information for disaster risk reduction, risk management, risk adjusted development planning and risk financing.
Education <ul style="list-style-type: none"> Integration of climate change and DRM into primary and secondary education (curricula and teacher education) and technical and vocational education and training (as requested) Students in 'Eua, Tonga, learn about climate change. Development of a picture-based outreach tool kit/resource on climate change for the education sector 	SPC/GIZ CCCPIR Hanna Sabass hanna.sabass@giz.de Melitiana Kaitamy melikaisamy@gmail.com	Teresa Pahulu CDU teresapahulu@gmail.com Talahiva Fine CDU talahivafine@gmail.com Masasso Paunga USP-IOE Masasso@gmail.com	SPC/GIZ CCCPIR SPC Australian Multi Country Support Project Component 1b) AusAID PACCSAP	2009–2015 2012–2013 2012–2013	Picture-based education toolkit for secondary schools developed Translation of Pou and Miri into Tongan Review of education curriculum and how climate change and DRM can be incorporated into the syllabus by Curriculum Development Unit Outreach activities in schools- (adaptation projects) underway throughout Tonga. This activity is also raising broader community awareness and has featured in media	Climate change and DRM awareness raised through education so that people are informed and can take appropriate action.
Energy <ul style="list-style-type: none"> Support for commissioning and inspection of solar home systems Support for preparation of an outer islands solar home systems case study 	SPC -EDD Mr Solomon Fifita solomonef@spc.int SPC/GIZ CCCPIR Ms Katerina Syngellakis katerinas@spc.int	Asipeli Palaki, CEO, MECC Ofa Sefana, Energy Planner, Energy Division, MECC	SPC-GIZ CCCPIR	2012–2015	Ongoing. Preparation of case study on solar home systems for electrification in outer islands of Tonga under way.	Strengthening implementation of solar home systems for islands' electrification and identifying factors to improve sustainability in the long-term.
<ul style="list-style-type: none"> Draft the appliance labelling and standards legislation in Samoa, Tonga, Vanuatu and Kiribati. National workshop on the development of legislation for labelling and standards in Tonga. Printing and dissemination of Tonga energy calculator and sleeves. Country support in appliance labelling and standard for Tonga 	SPC/EDD Solomone Fifita SolomoneF@spc.int		Australia	2013–2014	Legal expert to draft legislation has been recruited. Legal expert participated in a workshop on 26 June as part of capacity building to understand the issues to be reflected in the draft legislation. Draft legislation is to be completed by October. The workshop was attended by 34 participants from government, chamber of commerce, store owners, electrical contractors, TERM, Energy office and two representatives from Samoa.	

Fisheries <ul style="list-style-type: none"> Funding representative to attend the 'Vulnerabilities of Pacific Fisheries and Aquaculture to Climate Change' Workshop, 5–8 June 2012, Noumea Country summary of vulnerability of fisheries and aquaculture sector to climate change Prepare guidance documents on key coastal and oceanic fisheries issues to inform fisheries managers Technical attachment of fisheries officer at SPC/IRD for otolith assessment training to monitor climate-related changes 	SPC-FAME Johann Bell johannb@spc.int Bradley Moore bradleym@spc.int	Siola'a Malimali malimali@tongafish.gov.to Sione Vailala Matoto Ministry Agriculture & Food, Forests and Fisheries vailala@kalianet.to Luisa Malolo Ministry of Environment & Climate Change ltuiafitumalolo@gmail.com	SPC/GIZ CCCPIR AusAID ICCAI	2012–2014	Tonga summary in regional assessment of vulnerability of fisheries and aquaculture to climate change. SPC Policy Brief 15/2012 <i>Oceanic Fisheries and Climate Change</i> ; SPC Policy Brief 16/2012 <i>Coastal Fisheries and Climate Change</i> ; SPC Policy Brief 18/2012 <i>Aquaculture and Climate Change</i> . One officer trained in otolith extraction and reading for estimating fish age. There will be a second stage in early 2014 when the officer will work on otoliths collected in Tonga for specific species.	Priority adaptation actions will enhance resilience of fisheries and aquaculture sector to climate change impacts Enhanced capacity in Tonga for aging of reef fish to detect possible impacts of climate change on fish age/growth
<ul style="list-style-type: none"> Complete summary of vulnerability analysis of climate change impacts on oceanic fisheries Compile an ecosystem component to the EU SciFish Climate Change summary report Technical attachment to SPC to build analytical skills in assessing climate change impacts on oceanic fisheries 	SPC-FAME Simon Nicol simonn@spc.int		EU SciFish			
<ul style="list-style-type: none"> Watershed restoration on 'Eua Island Rehabilitation of degraded and cleared forest areas in the 'Eua National Forest Park Provision of pine seeds for forest rehabilitation work Support the upgrading of the 'Eua forest nursery. Support community tree planting programmes. 	SPC/GIZ Christine Fung christine.fung@giz.de		SPC GIZ			
Mainstreaming <ul style="list-style-type: none"> Prepare a climate change profile to identify ongoing adaptation activities. 	SPC-SEPPF Graham Sem grahams@spc.int		GCCA : PSIS		V1 on website June 2012, v2 August 2013	All CCA activities compiled and summarised in one place, providing a sound foundation for future planning
<ul style="list-style-type: none"> Appoint national in-country coordinator to assist government to manage, coordinate and implement SPC climate change activities. 	SPC-SEPPF Graham Sem grahams@spc.int		GCCA: PSIS		CC Coordinator in MLECCNR in March 2013	Tonga in a better position to coordinate its CC activities

<ul style="list-style-type: none"> Assist Tonga with readiness for climate change funding, using budget support. 	SPC-SEPPF Graham Sem grahams@spc.int		GCCA: PSIS		Regional review in progress June – September and results to be shared at a regional meeting in September 2013	Tonga better informed about accessing climate change finance through budget support
<ul style="list-style-type: none"> Provide training in proposal preparation using logical framework approach. 	SPC-SEPPF Graham Sem grahams@spc.int				Training in proposal preparation scheduled for Q1 2013	Practitioners able to prepare sound logical proposals for accessing CC funding
<ul style="list-style-type: none"> Prepare detailed and substantive national- and sector-level climate change plans and strategies. Assist the country to qualify for direct budget support from development partners for climate change response actions in the coming years. Form working level linkages and strengthen linkages between national line ministry officials and sector specialists in Pacific regional organisations. Develop a draft national climate change adaptation strategy for the land-based sector. Support the development and publication of a national land-use policy to incorporate climate change considerations. Publication of the Tonga National Forest Policy Climate change training for all island district and town officers 	SPC-SEPPF Graham Sem grahams@spc.int SPC-GIZ Christine Fung christine.fung@giz.de		EU GCCA: PSIS SPC-GIZ CCCPIR	2012–2014 2012–2014		
IT and knowledge management <ul style="list-style-type: none"> Design a national climate change portal 	SPC-GIZ Christine Fung christine.fung@giz.de		SPC-GIZ CCCPIR	2011–2015		
Land <ul style="list-style-type: none"> Training-of-trainers on land-use planning, watershed management, sustainable agriculture and climate change GIS/GPS training conducted Training on the integrated modeling system for assessing climate change impacts and adaptation SimClim Land-use survey – Eua Support the scanning and rectification of all aerial photos of Tonga. Support the Lands Department and Forestry GIS officers training in SOPAC Suva. 	SPC-GIZ Christine Fung christine.fung@giz.de SPC-SOPAC Wolf Forstreuter wolff@spc.int		SPC-GIZ CCCPIR	2011–2015		

<p>Water</p> <ul style="list-style-type: none"> • Improve water resource and wastewater management through policy and legislative reform and encourage implementation of effective IWRM and WUE plans through a demonstration project. • Risk management approaches mainstreamed in integrated water resource management. • National water, sanitation, and climate outlooks consulted and developed. 	<p>SPC-SOPAC Rhonda Robinson rhondar@spc.int</p>	<p>Taniela Kula IWRM Deputy Secretary, Natural Resources Division</p>	<p>GEF IWRM/EU</p>	<p>2009–2013</p>	<p>Tonga IWRM demonstration project progress: Well functioning committee has been expanded and assumed responsibility for the ICCAI IWCM Project. The project has dramatically raised community engagement through consultative meetings, direct engagement on the Steering Committee and several community initiatives, such as household audits. Gender mainstreaming and community engagement initiatives have been met with strong positive community responses, with a demonstrable increase of about 60% in community engagement in both awareness raising and active engagement activities. Assessment on Neiafu groundwater and sustainable management has been completed. It identified 70% water losses, much higher than previously anticipated. The assessment concluded that the majority of water loss was attributable to failing old infrastructure, including leaking pipes and valves, Neiafu had high sanitation system failure rates, largely attributable to the lack of a pump-out system availability. The project established a septic pump-out and disposal system, eco-sanitation and household level treatment trials, and has removed many of the risks associated with failing sanitation systems. Provided input towards the development process of the Pacific Framework for Water, Sanitation and Climate, as well as the development of a national water, sanitation and climate outlook for Tonga.</p>	<p>Improved and sustainable management of Neiafu, Vava'u's groundwater resources</p>
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Tuvalu

Climate change and related disaster risk management activity	Relevant SPC programme/ division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 1 August 2013)	Projected impact
Agriculture <ul style="list-style-type: none"> Provision of technical assistance/training for national- and sector-level climate change plans and strategies 	SPC-LRD Valerie Tuia valeriet@spc.int Dean Solofa DeanS@spc.int	Mr Itaia Lausaveve Director of Agriculture itaialausaveve@gmail.com	AusAID ICCAI	2012–2014	SPC is producing a comprehensive vulnerability assessment of agriculture to climate change (similar to Fisheries VA) that will inform priority adaptation actions (due 2014). Book currently under production with chapter authors working on materials.	Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts.
<ul style="list-style-type: none"> Undertaking an assessment on the salinity tolerance of swamp taro and the salinity status of the swamp taro pits in Tuvalu 					Climate-ready selection of crops has been shipped to Tuvalu under UNDP support, with additional crops to be shipped later under EU GCCA support.	
<ul style="list-style-type: none"> Scaling up the distribution and use of climate resilient crop varieties from the climate-ready collection of CePaCT (sweet potato, cassava, taro, banana) 					Assessment is still under way. Some delays are being experienced.	
<ul style="list-style-type: none"> Supporting community-based conservation approaches in selected communities for highly vulnerable ecosystems to underpin food security 					Some crops have already been identified for further distribution to outer islands, including sweet potatoes, cassava, and taro. Final report is awaited from Tuvalu counterparts.	
<ul style="list-style-type: none"> Production of land cover vegetation and food crop maps to assist in identifying and monitoring climate change impacts 						
Coastal zone management <ul style="list-style-type: none"> Changing Waves and Coasts in the Pacific (WACOP) Project 	SPC-SOPAC Jens Kruger jensk@spc.int	Faatasi Malologa Director of Land and Surveys fmalologa@gov.tv	EU EDF10 / ACP Caribbean & Pacific Research Programme for Sustainable Development	2012–2015	In progress in 2013	The overall objective of the WACOP Project is to contribute to adaptation and energy security in the Pacific Islands region, with the specific objective of improving the technical knowledge base, information and understanding of coastal hazards and wave energy resources at scales relevant to small Pacific islands.

<ul style="list-style-type: none"> Updating and analysis of data on sea levels, sea surface temperature, barometric pressure, and wind speed and direction. 	SPC-SOPAC Arthur Webb arthurw@spc.int	Molly Powers-Tora Regional Officer COSPPac	COSPPac	2012–2016	Pacific sea level monitoring stations continued to provide a stream of high quality data on sea level, temperature (water and air) barometric pressure, and wind speed and direction. In addition, land based continuous GPS (CGPS) stations complemented these data and helped account for any tectonic movement.	Provided policy makers, development planners and scientists with important and reliable information about sea level variability and climate change-associated sea level rise.
<ul style="list-style-type: none"> Communications support Array calibration, maintenance and data 						
Culture <ul style="list-style-type: none"> Endangered cultural heritage mapping in Vaitupu, Tuvalu 	SPC HDP Elise Huffer eliseh@spc.int	Alamai Sioni alamai.sioni@gmail.com asioni@gov.tv	EU		Assisted Tuvalu with a cultural mapping, planning and policy process, which was carried out by a national consultant and Alamai Sioni.	Preserving cultural heritage through mapping
Disaster risk management <ul style="list-style-type: none"> Development and implementation of disaster risk management national action plan 	SPC-SOPAC Mosese Sikivou moseses@spc.int	Mr Sumeo Silu National Disaster Coordinator silumeo@yahoo.com	EU Development Fund including ACP DRM Facility	2012–2013	The Tuvalu National Strategic Action Plan for Climate Change and DRM was completed in 2012. Discussions are ongoing with SPREP and other partner organisations on the convening of a donor round table to present the document and seek funding support.	Enhanced capacity of PICTs to access, manage and use disaster and climate change information for disaster risk reduction, risk management, risk adjusted development planning and risk financing
<ul style="list-style-type: none"> Improve capacity and performance of disaster management agencies through materials and training 	SPC-SOPAC Mosese Sikivou moseses@spc.int		USAID Pacific Disaster Risk Management Program 2	2010–2013		
<ul style="list-style-type: none"> Provision of disaster risk assessment tools including financial instruments to reduce their vulnerability to natural disasters 	SPC-SOPAC Litea Biukoto liteab@spc.int		Pacific Catastrophe Risk Assessment and Financing Initiative: Phase 2	2010–2012	Risk profile developed to help inform PCRAFI Phase 3 Pacific Disaster Risk Financing Insurance Pilot launched 17 Jan 2013	
Energy <ul style="list-style-type: none"> Technical assistance for policy and planning, including data base development 	SPC -EDD Mr Solomon Fifita solomonef@spc.int SPC/GIZ CCCPIR Ms Katerina Syngellakis katerinas@spc.int	Molipi Tausi , Department of Energy Mafalu Lotolua , TEC	SPC/GIZ CCCPIR	2012–2015	Ongoing. Preparation of a least-cost analysis for solar and wind options on Funafuti. Preparation of a work plan for least-cost analysis of transport options to reduce fossil fuel imports. Support to the development of an energy database and publication of an energy statistics booklet.	Tuvalu will be able to reduce dependency on fossil fuels through energy efficiency and increased penetration of matured renewable energy technologies.

Fisheries <ul style="list-style-type: none"> Funded representatives to 'Vulnerability of Pacific Fisheries and Aquaculture to Climate Change' Workshop 5–8 June 2012, Noumea. Providing technical assistance to modify strategic plans in fisheries and aquaculture sector, based on findings of regional assessment of vulnerability of fisheries and aquaculture to climate change Preparing knowledge products and guidance documents on key coastal and oceanic fisheries issues for use by fisheries officials and resource users Installation and maintenance of data loggers at Funafuti Atoll monitoring site to measure local changes in water temperature Training of national fisheries officials in coastal fisheries climate impact monitoring and survey methodologies Conduct second round of surveys at Funafuti Atoll baseline monitoring site to assess impacts of climate change on coastal fisheries and their supporting habitats. Technical attachment of Tuvalu fisheries officers to SPC to increase understanding and analytical skills in assessing climate change impacts on coastal fisheries Preparing guidance documents on key coastal and oceanic fisheries issues to inform fisheries managers 	SPC-FAME Johann Bell johannb@spc.int Lindsay Chapman lindsayc@spc.int Etuati Ropeti etuati@spc.int	Moeao Homasi mfinauga@gmail.com Samasoni Finikaso Ministry of Communication, Transport and Fisheries sfinikaso@yahoo.com Pepetua Latasi Department of Environment Funafuti pepetua@gmail.com Gary Preston Fisheries Department	AusAID ICCAI Phase 2	2012–2013	Meeting to identify priority adaptations to climate change for the fisheries sector, and a report on workshop outcomes. Raised awareness of climate change impacts on contributions of fisheries to national economy, food security and livelihoods, and the range of adaptations and supporting policies to minimise the risks and capitalise on opportunities.	Priority adaptation actions will enhance resilience of fisheries and aquaculture sector to climate change impacts.
					Tuvalu country summary of regional assessment of vulnerability of fisheries and aquaculture to climate change. SPC Policy Brief 15/2012 <i>Oceanic Fisheries and Climate Change</i> ; SPC Policy Brief 16/2012 <i>Coastal Fisheries and Climate Change</i> ; SPC Policy Brief 18/2012 <i>Aquaculture and Climate Change</i> .	
					Temperate loggers deployed August 2011; first retrieval and re-deployment completed June 2012, second retrieval and re-deployment completed April 2013. Resulting data will allow for more effective assessments of the effect of climate change on coastal fisheries and supporting habitats.	
					Completed April–May 2013. Nine Tuvalu fisheries officers trained in various aspects of climate change monitoring survey methodologies. Fisheries officers now better placed to monitor effect of climate change and other confounding factors on coastal fisheries.	
					Surveys completed in April–May 2013 and data entry and analysis currently under way. Resulting data to be used to assess climate change impacts and adaptive management practices on coastal fisheries at Funafuti Atoll pilot site.	
					Completed in June–July 2013. Fisheries officers now with increased analytical capacity to assess climate change impacts on coastal fisheries.	

<ul style="list-style-type: none"> • Compiling an ecosystem component to the EU SciFish climate change summary report 						
<ul style="list-style-type: none"> • Technical attachment of Tuvalu fisheries officer at SPC- IRD for training in age and growth estimation of reef fish for future monitoring of climate-related impacts on fish growth (2012) 					Completed in August 2012. Tuvalu fisheries officer now able to estimate age and growth of fish to better assess climate change impacts on fish growth.	
<ul style="list-style-type: none"> • Collection of otoliths and biological material from Funafuti Atoll climate change monitoring site and second technical attachment of Tuvalu fisheries officer at SPC/IRD for training in data analysis to monitor climate-related impacts on fish growth (2013) 					Collection of otoliths completed in May–June 2013. Data analysis attachment planned for late 2013. Results will provide baseline growth estimates of key reef fish species to assess climate change impacts.	
<ul style="list-style-type: none"> • Completing summary vulnerability analysis of climate change impacts on oceanic fisheries • Technical attachment to SPC to build analytical skills in assessing climate change impacts on oceanic fisheries 	SPC-FAME Simon Nicol simonn@spc.int		AusAID ICCAI Phase 2	2012–2013	Drafted national assessments completed, providing projections on future tuna resources and providing government officers with base information to negotiate climate adaptations to sustain oceanic tuna fisheries in WCPO.	Technical training and capacity supplementation provided to attachment currently completing PhD at USP on climate change adaptations, resulting in enhanced capacity for in-country analyses of climate change impacts on tuna resources.
Gender and climate change <ul style="list-style-type: none"> • Training of trainers for gender mainstreaming in climate change adaptation and low carbon development • Production of guidance material for mainstreaming gender and climate change matters in sector planning 	EDD Koin Etuati koine@spc.int	Mrs Asita Moloti- Director of Women asita.moloti@gmail.com	AusAID ICCAI	2011–2013		
Governance and climate change mainstreaming <ul style="list-style-type: none"> • Providing technical assistance and support for the development of a joint national action plan incorporating climate change and DRM 	SPC-SEPPF Graham Sem grahams@spc.int	Mrs Pepetua Latasi Acting Director of Environment pepetua@gmail.com	SPC-GIZ CCCPIR EU GCCA: PSIS	2010–2015		
<ul style="list-style-type: none"> • Review and update joint country strategy to incorporate climate change activities 				2012–2013		
<ul style="list-style-type: none"> • Appoint national in-country coordinator to assist government to manage, coordinate and implement SPC climate change activities 					National coordinator position is being advertised August 2013;	Capacity built in-country to coordinate and manage climate change activities

<ul style="list-style-type: none"> Preparation of a climate change profile to identify ongoing adaptation activities 					Profile available on website June 2012; version 2 available June 2013	Used by country, regional organisations and donors for information and planning; awareness of the relationship between climate change and its impacts enhanced in Tuvalu and the region.
<ul style="list-style-type: none"> Assess eligibility for direct budget support and sector budget support, and support measures to address climate change finance access constraints 					Regional review of readiness for climate change finance using budget support modalities conducted Jun-Aug 2013.	Countries better informed about accessing climate change finance through budget support.
<ul style="list-style-type: none"> Regional video on climate change and its impacts prepared as part of a series of four issue-based videos and one regional video. The Tuvalu video focuses on climate change and water 					Video to be launched and distributed July 2013	Media providers better able to convey complex climate change issues to a general audience.
<ul style="list-style-type: none"> Training in climate change and the media provided 					Training in proposal preparation to be provided in November 2013	At least 25% of participants prepare concise, logical funding proposals over the next 12 months, follow-up monitoring to be conducted later in 2014.
<ul style="list-style-type: none"> Technical assistance to develop a revised climate change policy 					Technical attachments offered in the last quarter of 2012 to Kiribati and to Tuvalu. The attachment is the recipient of the Greg Urwin Scholarship Award	
<ul style="list-style-type: none"> Development database and website to take stock of past and existing climate change projects and provide a system for ongoing monitoring of the <i>National Strategic Action Plan for Climate Change and Disaster Risk Management</i> 						
Developing best practice guidelines and measures from community experiences to adapt to climate change						
Multiple technical advisory missions by SPC climate change advisers to identify adaptation projects for future implementation						

Water <ul style="list-style-type: none"> Improve water resource and wastewater management through policy and legislative reform and encourage implementation of effective IWRM and WUE plans through a demonstration project Risk management approaches mainstreamed in Integrated Water Resource Management National Water, Sanitation, and Climate Outlooks consulted and developed 	SPC-SOPAC Rhonda Robinson rhondar@spc.int	Pisi Seleganiu IWRM Project Manager Ministry of Public Utilities Tuvalu Olioliga Iosua IWRM Focal Point Ministry of Public Utilities	GEF IWRM/EU	2009–2013	All key substantive activities outlined in project logical framework matrix delivered. Key success involves piloting of 40 ecosan composting toilets on Funafuti. This enabled leveraging of EU funding to scale up ecosan in Tuvalu by an additional 135 units. Ecosan design adopted for replication by five additional Pacific Island countries. Design picked up by EU and US Department of Interior for scaling up ecosan approach in Tuvalu and Micronesia. Project engaged more than 25% of Funafuti's population through adoption of ecosanitation at the household level. Community engagement in governance has increased through community leaders' membership on the project committee and the national APEX body. National water policy, plan and indicator framework developed. Government endorsement of these policy instruments is sought by end 2013. Installation of 40 compost toilets has removed the sewage pollution into groundwater and subsequently into coastal waters from these houses. This represents about a 5% reduction in pollution into the groundwater. Household water use reduced by 30% in the participating households. Provided input towards the development process of the Pacific Framework for Water, Sanitation and Climate as well as the development of a National Water, Sanitation and Climate Outlook for Tonga.	Protection of primary and secondary water resources, marine biodiversity, livelihoods and food security through Improved sanitation technology and practices.
<ul style="list-style-type: none"> Installation and repair of water tanks and collection infrastructure to address climate-related water security 	SPC-SOPAC George Beck georgeb@spc.int	Mr Pisi Afaso IWRMP Olioliga Iosua IWRM	EU Development Fund including ACP DRM Facility-B Envelope	2012–2013		
<ul style="list-style-type: none"> Providing access to safe drinking water and strengthening emergency operations and communications to build community resilience to climate change 	SPC-SOPAC George Beck georgeb@spc.int		EU Development Fund B Envelope	2007–2012		

Climate change and related disaster risk management activity	Relevant SPC programme/ division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 01 August 2013)	Projected impact
Agriculture and food security <ul style="list-style-type: none"> Technical assistance at national level to build capacity to assess the impacts of climate change on agriculture Distribution of climate resilient crops from CePaCT climate-ready collection to enhance on-farm climate change resilience Conducting in-field assessment of the social and economic value of germplasm and crop improvement as a climate change adaptation strategy 	SPC-LRD Valerie Tuia valeriet@spc.int Dean Solofa Deans@spc.int		AusAID ICCAI	2011–2013	Climate-ready selection crops prepared and awaiting transfer to Vanuatu. DARD direction of designated local NGOs to whom crops will be distributed. Transfer likely by 4 th quarter 2013.	Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts.
<ul style="list-style-type: none"> Building community capacity to understand and monitor the impacts of climate change on agriculture and implementing measures to build on-farm resilience in selected communities Implement participatory climate change engagement activities with farmers and local communities Establish climate field schools to train farmers on climate change responses and to provide direct access to climate information for seasonal preparedness Design, implement and evaluate different climate change options and coping strategies in selected communities Develop community-level information materials and learning resources Provision of technical assistance to officials and technical specialists from relevant ministries and departments on climate change and agriculture response measures Building the capacity of ministries and planning offices to apply analytical tools to help identify cost effective adaptation responses 	SPC-SEPPF Vuki Buadromo vukib@spc.int SPC-LRD Siosua Halavatau siosuah@spc.int SPC-LRD Gibson Susumu GibsonS@spc.int	Livo Mele Director, Ministry of Agriculture lmele@vanuatu.gov.vu	USAID	2012–2015	SPC/USAID Project sites identified and endorsed by the National Advisory Board in April 2013 – Ureparapara, Torba Province Participatory rural appraisals completed for project site Adaptation interventions identified and endorsed by communities – completed Establish community nurseries and demonstration sites for integrated farming systems at selected sites by the end of 2013. Deliver training on plant propagation techniques, nursery management, integrated pest and disease management to communities and provincial officers by the end of 2013. Trial climate-ready collection at selected project sites by the end of 2013. Multi-sector cost and benefit analysis training for technical ministries implementing climate change adaptation projects/programmes to be completed by April 2013. Recruit a Food Security Officer by September 2013 to support project implementation and other SPC food security related activities	Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts Communities adaptive capacity strengthened through training and awareness National capacity to apply cost benefit analysis as a tool to guide adaptation planning strengthened

<ul style="list-style-type: none"> • Develop Bislama-language manuals and guidebooks on assessing the impacts of climate change on community agriculture and food security • Provision of technical assistance to officials and technical specialists from relevant ministries and departments on climate change and agriculture adaptation measures • Support the establishment and function of a national food security cluster • Train extension officers on how to utilise and tailor seasonal forecasts and practise agro-meteorology and use traditional knowledge for DRM and climate change adaptation • Implement demonstration plots on alley cropping, island cabbage diversity, yam minisets, and banana replication • Implement demonstrations on adapting honey bee husbandry to climate factors • Implement demonstrations on livestock breeding, feeding and maintenance for climate change resilience • Develop guidebooks, manuals and materials on climate resilient farming techniques and integrated agriculture practices to reduce climate risks • Introduce income diversification strategies/practices in climate change-vulnerable communities (solar fruit drying, honey production) • Undertake cost-benefit analysis studies of animal husbandry and forestry nursery programmes that enhance climate resilience • Trial and document integrated agriculture/animal husbandry technologies and approaches to enable effective climate change adaptation and DRM integration • Develop a project to link traditional cropping calendars and meteorological data and forecasts • Supporting Department of Agriculture to develop national agricultural policy and interim CC and 	SPC/GIZ Christopher Bartlett christopher.bartlett@giz.de		SPC/GIZ CCCPIR	2012–2015		
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<ul style="list-style-type: none"> agriculture directive development and implementation of community-based climate field school approach for training rural farmers on CC adaptation Technical contribution to annual agro-meteorology summits held with VMGD, NAB and DARD 						
Biodiversity <ul style="list-style-type: none"> Mainstream climate change issues into the <i>National Biodiversity Strategic Action Plan</i> Development of the National Environment Policy Support towards new National Sustainable Development Plan w/ IUCN & PMO Work with DEPC and MSG on Vanuatu Green Growth Framework and Roundtable 	SPC-GIZ Christopher Bartlett Christopher.Bartlett@giz.de		SPC-GIZ CCCPIR	2012–2015		Climate change mainstreamed into NBSAPs
Coastal zone management <ul style="list-style-type: none"> Updating and analysis of data on sea levels, sea surface temperature, barometric pressure, and wind speed and direction. Communications support Array calibration, maintenance and data 	SPC-SOPAC Arthur Webb arthurw@spc.int	Molly Powers-Tora Regional Officer COSPPac	COSPPac	2012–2016	Pacific sea level monitoring stations continued to provide a stream of high quality data on sea level, temperature (water and air), barometric pressure, and wind speed and direction. In addition, land based continuous GPS (CGPS) stations complemented these data and helped account for any tectonic movement.	Provide policy makers, development planners and scientists with important and reliable information about sea level variability and climate change-associated sea level rise.
<ul style="list-style-type: none"> Finalise and promote the Integrated <i>Coastal Zone Resource Management Policy</i> and Area Plans with SPREP and Dept of Fisheries Trial and document coastal stabilisation/coastal erosion control techniques (including small-scale seawalls and forest replanting) Develop a guidebook and materials on soil erosion control for coastal and sloping areas, to include information on root systems of tolerant species, growth rates, planting patterns and maintenance regimes Support expansion and trialing of fish aggregating devices programme with Dept of Fisheries Support Nguna-Pele Marine and Land Protected Area Network for coastal adaptation Support Malapoa College and reef check Vanuatu educational programmes 	SPC-GIZ Christopher Bartlett Christopher.Bartlett@giz.de SPC-SOPAC Arthur Webb arthurw@spc.int		SPC-GIZ CCCPIR	2012–2014		Platform to address DRM issues

<ul style="list-style-type: none"> Improving and sustainably funding integrated coastal zone management, by setting up payment mechanisms to help maintain ecosystem services at selected pilot sites 	SPC-SEPPF Olivier Auguin oliviera@spc.int		RESCCUE	2013–2018		Increased climate change resilience of Pacific Island land and marine ecosystems by strengthening the services that ecosystems provide to communities by building local communities' governance and disaster management capabilities.
Communications and media <ul style="list-style-type: none"> Development of draft climate change communication strategy Climate change training for journalists Climate change Vanuatu Facebook page National Advisory Board web portal Bislama language DVDs: <i>Climate Change Vanuatu, Climate Change and Agriculture, Climate Change and Food Security, Climate Change and Traditional Knowledge</i> English language DVDs: Climate Change and Marine Management Bislama Language guidebooks and manuals on adaptation technologies 	SPC-GIZ Christopher Bartlett Christopher.Bartlett@giz.de		SPC-GIZ CCCPIR	2012–2015	Web portal established http://www.nab.vu/projects/coping-climate-change-pacific-island-region-spc-giz National Advisory Board established www.nab.vu DVDs developed Guidebooks and manuals developed	Resilience to climate change and related DRM risks enhanced through communications and media
Culture/traditional knowledge <ul style="list-style-type: none"> Assist with the development of culture policy (mapping, planning, policy) Support the documentation of local knowledge and traditions associated with weather predictions and climate adaptation, food preservation and storage Support the documentation on traditional and imported fertilisers and pesticides used throughout the islands Mainstream climate knowledge into the Met Act and the traditional knowledge bill Development of NAB guidelines on the collection and use of traditional knowledge for climate change and disaster risk reduction 	SPC-HDP Linda Petersen lindap@spc.int Christopher Bartlett christopher.bartlett@giz.de		SPC-GIZ CCCPIR	2012–2015		Culture and traditional knowledge mainstreamed into climate change and disaster risk management action
Disaster risk management <ul style="list-style-type: none"> Integration of climate change DRM under the Vanuatu National Advisory Board 	SPC/GIZ Christopher Bartlett christopher.bartlett@giz.de		SPC/GIZ CCCPIR	2012–2014	NAB on Climate Change & Disaster Risk Reduction www.nab.vu	Platform established to address DRM and CC related risks

<ul style="list-style-type: none"> Improve capacity and performance of disaster management agencies through materials and training 	SPC-SOPAC Kathryn Hawley kathrynh@spc.int Kirstie Meheux kirstiem@spc.int	Shadrack Weligbit National Disaster Management Office	USAID Pacific Disaster Risk Management Program 2	2010–2013	Emergency operations centres and initial damage assessment training for national office staff and key stakeholders	Increased capacity of national staff
<ul style="list-style-type: none"> Provision of disaster risk assessment tools including financial instruments to reduce their vulnerability to natural disasters 	SPC-SOPAC Litea Biukoto liteab@spc.int	Shadrack Weligbit National Disaster Management Office	Pacific Catastrophe Risk Assessment and Financing Initiative: Phase 2	2010–2012	Risk profile developed to help inform PCRAFI Phase 3 Pacific Disaster Risk Financing Insurance Pilot launched Jan 17 2013	Enhanced capacity of PICTs to access, manage and use disaster and climate change information for disaster risk reduction, risk management, risk adjusted development planning and risk financing.
Education <ul style="list-style-type: none"> Production of climate change awareness DVD in Bislama National climate change and DRM curriculum development Climate change specific training for teachers and lecturers, curriculum writers Train technical and vocational education and training Development of a picture-based outreach tool kit/resource on climate change for the education sector Training for curriculum writers on mainstreaming climate change and DRM into specific subjects Collection, assessment and uploading of all climate resources for teachers 	SPC/GIZ CCCPIR Hanna Sabass hanna.sabass@giz.de Christopher Bartlett christopher.bartlett@giz.de SPC/GIZ CCCPIR Hanna Sabass hanna.sabass@giz.de		SPC/GIZ CCCPIR AusAID ICCAI PACCSAP	2011–2015 2012–2015	Picture based education resource secondary schools developed in 2013 Climate change-specific training for teachers and lecturers, curriculum writers carried out	Climate change and DRM awareness raised through education so that people are informed and can take appropriate action.

Energy <ul style="list-style-type: none"> Energy audit of the Vanuatu Met Services and National Advisory Board building to identify emission reduction options Technical assistance for preparation of solar feasibility studies and funding proposal preparation 	SPC -EDD Mr Solomon Fifita solomonef@spc.in SPC-GIZ CCCPIR Ms Katerina Syngellakis katerinas@spc.int SPC-GIZ Christopher Bartlett christopher.Bartlett@giz.de in partnership with ADB PEEP2 Vanuatu activities	Jotham Napat Director-General, Ministry of Climate Change Adaptation, Meteorology, Geo-Hazards, Energy and Environment (MoCCA) Leo Moli Director, Department of Energy Jesse Benjamin Mitigation Officer, Climate Change Unit, MoCCA	SPC/GIZ CCCPIR	2012–2015	Ongoing. Preparation of a solar feasibility study for Meteo building and technical specifications under way. Preparation of a funding proposal under way.	Vanuatu able to reduce dependence on fossil fuels through energy efficiency and increased penetration of matured renewable energy technologies.
<ul style="list-style-type: none"> Technical support provided to the Talise Hydropower Project Energy standards and labelling public awareness campaigns conducted in Vanuatu Energy legislation is reviewed/drafted in Vanuatu Implementation of labelling and standards for selected electrical appliances 	SPC/EDD Solomone Fifita SolomoneF@spc.int		Australia	2013	Officer that looked after the Talise project has left the Energy Programme and Vanuatu is yet to identify other sources of funding to complement SPC's. Survey conducted. Visited Kiribati, Samoa and Vanuatu as part of the survey / data collection. A draft report has been commented on by IRENA and is currently being finalised. Funds for Vanuatu's local costs, including public awareness activities (FJD 9,908) have been transferred to Vanuatu. Cabinet approved the development of legislation in April, expression of interest for drafting of legislation to be advertised in July.	Enabling environment for development of RE
Fisheries <ul style="list-style-type: none"> Fund representatives to 'Vulnerability of Pacific Fisheries and Aquaculture to Climate Change' Workshop 5–8 June 2012, Noumea Prepare knowledge products and guidance documents on key coastal and oceanic fisheries climate change issues to inform fisheries decision-makers 	SPC-FAME Johann Bell johannb@spc.int SPC-GIZ Christopher Bartlett christopher.Bartlett@giz.de	Sompert Gereva Department of Fisheries Sfb-ra@vanuatu.gov.vu	AusAID ICCAI SPC/GIZ CCCPIR	2012–2013	National workshop to identify priority adaptations to climate change for the fisheries and aquaculture sector, and a report with workshop outcomes and recommendations. Raised awareness of climate change impacts on contributions of fisheries and aquaculture to national economies, food security and livelihoods, and the range of adaptations and supporting policies to minimise the risks and capitalise on opportunities.	Priority adaptation actions will enhance resilience of fisheries and aquaculture sector to climate change impacts

<ul style="list-style-type: none"> Provide technical assistance to modify strategic plans in the fisheries and aquaculture sector based on findings of vulnerability assessment report and integrate key findings into climate change adaptation strategies 	Simon Nicol simonn@spc.int				Vanuatu summary in regional assessment of vulnerability of fisheries and aquaculture to climate change. SPC Policy Brief 15/2012 Oceanic Fisheries and Climate Change; SPC Policy Brief 16/2012 <i>Coastal Fisheries and Climate Change</i> ; SPC Policy Brief 17/2012 <i>Freshwater Fisheries and Climate Change</i> ; SPC Policy Brief 18/2012 <i>Aquaculture and Climate Change</i> .	
<ul style="list-style-type: none"> National training course on coral reef assessment methodology for extension officers, community-based organisations and NGOs 	SPC-FAME Lindsay Chapman lindsayc@spc.int Etuatī Ropeti		SPC/GIZ CCCPiR			
<ul style="list-style-type: none"> Summary of vulnerability analyses of climate change on oceanic fisheries for Vanuatu Addition of ecosystem component to climate change summary report 	SPC-FAME John Hampton johnh@spc.int Simon Nicol simonn@spc.int		AusAID ICCAI EU SciFish	2012–2013		Greater understanding of impact of climate change on oceanic fisheries to plan for future action
<ul style="list-style-type: none"> Crown of thorns starfish control programmes to enhance resilience of coastal reefs to climate change Support to expand the use of small-scale household aquaculture for climate change adaptation on Santo and Efate Expand the use of new designs of fish aggregating devices (FADs) Support to <i>Nguna-Pele Marine and Land Protected Area Network</i> for fisheries adaptation 	SPC-GIZ Christopher Bartlett christopher.bartlett@giz.de		SPC-GIZ CCCPiR	2012–2015	Most activities in progress. For details of 2013 progress contact christopher.bartlett@giz.de	
Forests <ul style="list-style-type: none"> Technical assistance to complete the Vanuatu national forest policy Review and republish the Department of Forests nursery guide to incorporate climate change and lessons learned about climate proofing the nursery Establish demo-research plots on the use of trees for adaptation activities (wind breaks, shade, water retention, food security), including community training on planting and husbandry techniques Conduct studies and assessments on the climate adaptive qualities (salt, wind, heat, 	SPC-LRD Inoke Ratukalou inoker@spc.int Christopher Bartlett christopher.bartlett@giz.de SPC-GIZ Karl P. Kirsch karl-peter.kirsch-jung@giz.de		SPC-GIZ CCCPiR	2102–2015 2012	Most activities in progress. For details of 2013 progress contact christopher.bartlett@giz.de and karl-peter.kirsch-jung@giz.de	Adaptation/mitigation options in forestry sector enhanced

<p>moisture, drought tolerance, timber production) of lesser known tree species, including information on planting and farming</p> <ul style="list-style-type: none"> • Conducting a 'carbon rights' study in support of the national REDD+ programmes • Development of the national REDD+ pilot site surveys in Penauru (Santo, Vanuatu) that include: forest inventory, carbon pool measurements, detailed biodiversity survey and mapping, cultural and archaeological mapping, participatory socio-economic assessment, and pest control • Support of development of national methodologies for determining reference emission level and systems for measurement, reporting and verification with regard to changes in carbon stock in the forestry sector • Conduct training on forest inventory • Support for seven participants to attend training on forest inventory • Support joint implementation of pre-test inventory on Santo (20 plots) to prepare national forest inventory • Support for one person to be trained in remote sensing data processing at SOPAC 						
<p>Governance/ mainstreaming</p> <ul style="list-style-type: none"> • Amendment of Foreshore Development Act, Environment Act, Met. Act and Disaster Act to include climate risks • Develop climate change- and DRM-relevant regulations for the Foreshore Development Act and the Environmental Act • Review and mainstream climate change adaptation and DRM issues into the Priority Action Agenda, National Forest Policy, National Land-use Policy, National Environment Policy, Livestock and Quarantine Policy, Overarching Agriculture Sector Policy, and National Curriculum Statement • Support the development of a national climate change adaptation and DRM policy, strategy 	<p>SPC/GIZ Christopher Bartlett christopher.bartlett@giz.de</p>		<p>SPC/GIZ CCCPIR</p>	<p>2012–2015</p>	<p>Most activities in progress. For details of 2013progress contact christopher.bartlett@giz.de</p>	<p>Climate change and DRM mainstreamed into national, provincial, sectoral, community plans and policies</p>

<p>and implementation plan, and a national climate change and DRM communication strategy</p> <ul style="list-style-type: none"> • Mainstream climate change adaptation into the DRM cluster system being established for disaster-related steering • Develop a proposal/concept paper for undertaking a nationwide climate change vulnerability assessment • Enhance institutional ability for land-use planning via enhanced skills development with land-use planning officers, including compliance and enforcement • Support the National Advisory Board in efforts to coordinate and monitor national climate change developments • Support the Vanuatu delegation and preparation for UNFCCC negotiation, meetings and activities • Support a stakeholder mapping exercise to capture the DRM and climate change adaptation activities in Vanuatu • Develop an in-service training course on climate change adaptation for government civil servants through the annual public service commission training calendar • Provide government officers with tertiary training on climate change adaptation and DRM and developing mechanisms for them to apply knowledge in their daily work and mainstream climate change adaptation and DRM in their community engagement activities, presentations 						
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Land and climate change <ul style="list-style-type: none"> • Develop a Vanuatu national land-use planning and zoning policy, and amend the national environmental and physical planning legislation • Develop two pilot adaptation sites in Vanuatu (Pele Island, Efate Island), focusing on sustainable land management, sustainable agricultural practices and traditional farming systems as climate change adaptation measures • Trial climate tolerant varieties of yams and island cabbage • Conduct remote sensing mapping using GIS to map forest cover, agriculture, pasture, mangroves, plantations, coral reefs and water bodies, and biodiversity • Compare maps with historical data to identify forest cover and food production changes over time and the impacts of climate change • Field application of vegetation map data for community and farmer engagement activities and identifying climate change adaptation needs 	SPC/GIZ Christopher Bartlett christopher.bartlett@giz.de Karl P. Kirsch karl-peter.kirsch-jung@giz.de		SPC-GIZ CCCPPIR	2012–2015		
Meteorology <ul style="list-style-type: none"> • Enhance the capabilities of Vanuatu Meteorology and Geo-Hazards Department rain collectors in outer islands to provide climate change impacts monitoring support and to guide potential adaptation responses • Support the development of agrometeorology tools, products and services 	SPC-GIZ Christopher Bartlett christopher.bartlett@giz.de		SPC-GIZ CCCPPIR	2012–2015		
Water <ul style="list-style-type: none"> • Improve water resource and waste-water management through policy and legislative reform and encourage implementation of effective IWRM and WUE plans through a demonstration project • Risk management approaches mainstreamed in integrated water resource management • National water, sanitation, and climate outlooks consulted and developed 	SPC-SOPAC Rhonda Robinson rhondar@spc.int	Rossette Kalmet National IWRM Project Manager, Department of Geology, Mines and Water Resources (DGMWR), Vanuatu Chris Ioan IWRM Focal Point, Director, DGMWR.	GEF IWRM/EU	2009–2013	Vanuatu IWRM demonstration project progress: All key substantive activities outlined in project logical framework matrix delivered. Provided input towards the development process of the Pacific Framework for Water, Sanitation and Climate, as well as the development of a national water, sanitation and climate outlook for Vanuatu.	Strengthened adaptive capacity through provision and management of water and sanitation.



Wallis and Futuna

Climate change and related disaster risk management activity	Relevant SPC programme/ division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 01 August 2013)	Projected impact
Agriculture <ul style="list-style-type: none"> Technical assistance at national level to understand impacts of climate change on agriculture Distribution of climate-ready crops (banana, cassava, sweet potato) from CePaCT for climate change evaluation 	SPC-LRD Valerie Tuia valeriet@spc.int Dean Solofa deans@spc.int	Benjamin Gérard Head of Cabinet, Wallis and Futuna <i>Administration Supérieure</i>	AusAID ICCAI	2011–2013	Climate-ready collection of crops from CePaCT prepared and awaiting transfer in September 2013	Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts
Coastal zone management <ul style="list-style-type: none"> Defining activities for integrated ridge to reef approaches in pilot sites, working with different thematic sectors (e.g. agriculture, coastal fisheries, water) 	SPC-SEPPF Olivier Auguin oliviera@spc.int		EU INTEGRE project		Project manager being recruited	Enhancing integrated coastal zone management through ridge to reef approaches
Disaster risk management <ul style="list-style-type: none"> Supporting improvements in disaster response planning and implementation, including early warning capacity, community-based DRM, disaster signage, and population awareness. 	SPC SOPAC Frederique Lehoux frederiquel@spc.int		EDF 9C Envelope, Supporting DRR in Pacific OCTs	2009–2013	All response plans (ORSEC) updated (as of Dec 2012) Disaster awareness materials revamped including TV spots, brochures. Early warning capacity and disaster response equipment enhanced with new radio communication links for Wallis and Futuna New signage for particular emergencies Evacuation routes and shelters revised, based on identification of inundation zones (as part of recently-completed tsunami hazard study) Community training in evacuation and response.	Improved knowledge of zones at risk following tsunami hazard study Enhanced capacity of W&F authorities, including at community level to manage disaster response.
Health <ul style="list-style-type: none"> Strengthening the capacity of disease surveillance, and outbreak preparedness and response through technical input as part of the Wallis and Futuna mini-games mass gathering event 	SPC-PHD Yvan Souares yvans@spc.int		AusAID ICCAI	August–September 2013		Strengthened and sustained capacity of Wallis and Futuna Department of Health for disease surveillance, outbreak preparedness and response

Fisheries <ul style="list-style-type: none"> Funded representative to 'Vulnerability of Pacific Fisheries and Aquaculture to Climate Change' Workshop 5–8 June 2012, Noumea Territory summary of vulnerability of the fisheries sector to climate change 	SPC-FAME Johann Bell johannb@spc.int	Bruno Mugneret Service des Affaires Rurales et de la Pêche bruno.mugneret@agripeche.wf	AusAID ICCAI	2012	Regional workshop to identify priority adaptations to climate change for the fisheries and aquaculture sector, and a joint report with FAO on workshop outcomes. Raised awareness of climate change impacts on contributions of fisheries and aquaculture to national economies, food security and livelihoods, and the range of adaptations and supporting policies to minimise the risks and capitalise on opportunities Wallace and Futuna summary in French and English from the regional assessment of vulnerability of fisheries and aquaculture to climate change. SPC Note D'Orientation 15/2012 <i>Pêche hauturière et changement climatique</i> ; SPC Note D'Orientation 16/2012 <i>La pêche côtière face au changement climatique</i>	Resilience of fisheries and aquaculture sector to climate change impacts enhanced.
Water <ul style="list-style-type: none"> Supported the involvement in the development of a regional framework for Water, Sanitation and Climate and the development of National Water, Sanitation and Climate Outlooks 	SPC-SOPAC Rhonda Robinson rhondar@spc.int		French Pacific Funds/Australia	2012–2013	Wallis and Futuna has contributed to the development of the Regional Framework for Water, Sanitation and Climate and also the development of a national water, sanitation and climate outlook as part of this process.	Strengthened adaptive capacity through provision and management of water and sanitation

Climate change support activities in non-SPC members



Norfolk Islands

Climate change and related disaster risk management activity	Relevant SPC programme/ division and contact	National focal point	Project	Timeframe	Status report from previous update (as at 01 August 2013)	Projected impact
Agriculture <ul style="list-style-type: none"> Distribution of climate-ready crops (bananas, cassavas, sweet potato, taro, yam) from CePaCT for climate change evaluation 	SPC-LRD Valerie Tuia Valeriet@spc.int Dean Solofa deans@spc.int		AusAID ICCAI	2012	Climate-ready selection of crops under preparation at CePaCT for transfer to counterpart. Currently awaiting a planned date for transfer of crops.	Priority adaptation actions will enhance resilience of agricultural sector to climate change impacts



ED STATES OF MICRONESIA

Palikir

Majuro

NAURU

Yaren

Tarawa

KIRIBATI

Howland
(US) Baker
(US)

KIRIBATI

UA NEW GUINEA

KIRIBATI

SOLOMON ISLANDS

TUVALU

Funafuti

TOKELAU

Port Moresby

Honiara

WALLIS &
FUTUNA

Mata
Utu

SAMOA

Apia

COOK ISLANDS

Pago Pago
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