Projects and Activities Thu Mar 28 00:45:20 HST 2024

Printing 150 of total 150 records.

Name	A Coupled Climate-Ecosystem Observatory Along Elevational Gradients on Windward and Leeward Hawaii Island
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development
ECV	- Surface (e.g., temp, precip, wind) - (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Seasonal (outlook)
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii
Description	A series of climate stations and permanent vegetation plots, used to examine conditions now, and to follow over the long-term, to be able to study how climate interacts with forest growth, mortality, and species composition; contains two elevation gradients, one in windward side and one in leeward side.
Objectives/Outcomes	This research is part of the Environmental Dynamics and Ecosystem Responses (ENDER) Climate Agenda of the Experimental Program to Stimulate Competitive Research (EPSCoR) Hawaii.
Lead Agencies	USFS, UCLA, DLNR
Contacts	Becky Ostertag, ostertag@hawaii.edu
Partnering Agencies	PICCC
Projected Timelines	2009-2014

Name	A Framework to Support Climate Change Adaptation Measures and Investments for Agriculture, Tourism, Water Resources and Infrastructure in Palau
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach

Sectors	- Energy - Transportation/Communication and Commerce - Agriculture and Fisheries - Recreation and Tourism
Status	- Proposed
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Western North Pacific - Palau
Description	Development of a framework to support climate change adaptation measures and investments for agriculture, tourism, water resources and infrastructure in Palau.
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	Proposed to the SCCF = $6,000,000 Proposed co-fin = $23,500,000

Name	ADAPT Asia-Pacific
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation - Assessment and Evaluation
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Ongoing

Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Western North Pacific - FSM - Palau - RMI - South Pacific - Cook Islands - Fiji - Kiribati - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific
Description	The principal objective of ADAPT Asia-Pacific is to establish a fully functional and self-sustaining adaptation project preparation facility that will not only support preparation of specific projects, but also build the capacity of the region's governments to independently access climate adaptation funds. ADAPT Asia-Pacific works in 27 target countries in the Asia and Pacific region. Eligible nations in the Pacific include: Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.
Objectives/Outcomes	ADAPT Asia-Pacific works closely with funding organizations and government agencies from countries across the region in focused activities in four key areas: 1) Knowledge Sharing Platform - In close coordination with the Asia-Pacific Adaptation Network (APAN) as the regional knowledge sharing platform to disseminate information on adaptation-related topics; 2) Annual Forum - Held in a different country each year, the Forum brings adaptation funds and project proponents together to establish the forum as a key mechanism in Asia and the Pacific for facilitating access to funding opportunities; 3) Capacity Building Program – Provides the training necessary to develop in-country skills to prepare sound adaptation projects for financing; and 4) Project Preparation and Finance – Identifies potential project proponents and mobilizes teams of highly-skilled project preparation and technical specialists on an as-needed basis to help create bankable projects.
Lead Agencies	USAID, APAN, UNDP
Contacts	info@asiapacificadapt.net
Partnering Agencies	National governments in the Pacific SIDS
Url	http://www.adaptasiapacific.org/

Name	Adaptation to Climate Change in the Coastal Zone in Vanuatu
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Observing Systems, Data Stewardship, Data Services - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Public Health and Safety - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism
Status	- Planned
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Vanuatu
Description	This Vanuatu NAPA-2 program will improve the resilience of the coastal zone to the impacts of climate change in order to sustain livelihood, food production and preserve and improve the quality of life in targeted vulnerable areas. Main components: (1) Integrated community approaches to climate change adaptation; (2) Information and early warning systems on coastal hazards; (3) Climate change governance; and (4) Knowledge management.
Lead Agencies	UNDP Fiji MCO
Contacts	Asenaca Ravuvu, asenaca.ravuvu@undp.org

Name	Adapting to Climate Change in the Coral Triangle (ACT)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Agriculture and Fisheries - Ecosystems
Status	- Proposed
Focus Area	- Marine and Terrestrial Ecosystems

Regions	- South Pacific - PNG - Solomon Islands - Other South Pacific
Description	Adapting to climate change in the Coral Triangle. This is a sub-project of the GEF Coral Triangle Initiative, a multi-agency partnership led by the ADB.
Lead Agencies	ADB, UNDP
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	Proposed to the SCCF = US$20 million; Proposed co-fin = US$290 million

Name	Advancing Best Practices for the Formulation of Localized Sea Level Rise/Coastal Inundation Extremes Scenarios for Military Installations in the Pacific Islands
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Operational Products and Services - Research/Development - Best Practices/Guidance - Decision Support Tools
ECV	- Surface (e.g., SST, SSH, salinity, ocean color)
Timeframe	- Multi-decadal (scenarios)
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Western North Pacific - Guam - RMI

Description	Guidance will be developed, through an iterative process of analysis and assessment complimented by periodic expert input that outlines best practices and methodologies that can be used to formulate probabilistic estimates of extreme events under a changing climate for specific locations in the Pacific Islands. This will include the creation of innovative proof-of-concept products that can be used directly to support decision-making ranging from area-wide vulnerability assessment related to climate adaptation planning and disaster risk reduction to site-specific analysis related to design and maintenance of facilities and infrastructure at select DoD sites. Attention will also be given to incorporating the results of the work into IT-based decision-support and visualization tools.
Lead Agencies	NOAA/NESDIS/NCDC
Contacts	John Marra, Regional Climate Services Director - Pacific Region, john.marra@noaa.gov
Partnering Agencies	NOAA/NOS/CO-OPS, UH/JIMAR
Required Resources	DoD/SERDP
Projected Timelines	April 2012-April 2014

Name	Agricultural Food Crops Development in Kiribati
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Community Planning and Development
Status	- Proposed
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Kiribati
Description	This project aims to maintain main existing gene banks: to increase and diversify food crop production throughout Kiribati; to make more people attracted to, see economic opportunities in, and engaged in varieties of agricultural systems; and to increase efforts at planning out and meeting support requirements for agricultural activities throughout the islands.
Lead Agencies	MELA

Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	Indicative costs: AUD 450,000; Local annual budget: AUD 1,105,230; Total NAPA costs over 3 years: AUD 1,555,230
Projected Timelines	3 years

Name	Application of Latest IPCC Climate Models to Forecast Possible Marine Ecosystem Changes in the North Pacific Over the 21st Century (1 of 2)
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Operational Products and Services - Research/Development - Historical Observations (hindcasts/climatologies) - Projections (modeling and downscaling) - Training and Capacity Building, Education, Outreach
ECV	- Sub-surface (e.g., temp, salinity, nutrients, carbon, phytoplankton)
Timeframe	- Intra-annual to Decadal
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Historical Observations (hindcasts/climatologies)
Sectors	- Ecosystems
Status	- Proposed
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - Western North Pacific - South Pacific

Description	Coral reef ecosystem health is highly impacted by ocean temperature variability. The NOAA Pacific Islands Fisheries Science Center (PIFSC) Coral Reef Ecosystem Division (CRED) has been recording subsurface temperature data from various habitats (forereef, backreef, and lagoon) and depth ranges (1 – 35 m) in coral reef environments from around the Pacific in disparate oceanographic regimes for 10 years. To better understand subsurface temperature variability across various habitat, depth, and regional oceanographic conditions, these data need to be analyzed in the context of seasonal to interannual variability, for correlations of regional to basin scale forcing mechanisms, and compared to remotely sensed products, which is currently the scientific standard for assessing thermal conditions on coral reefs.
Objectives/Outcomes	Advance our understanding of subsurface thermal variability on coral reefs in the context of seasonal changes and interannual forcing across each of the US Pacific jurisdictions. Develop subsurface temperature climatologies for general habitat/depth ranges. Compare subsurface temperate data with remotely sensed data products (e.g. Coral Reef Watch [CRW] and the Coral Thermal Anomaly Database [CoRTAD]) to develop an algorithm which focuses on specific habitat/depth temperature variations and coral bleaching indices. Develop a predictive model for future temperature changes based on IPCC output for resource managers.
Lead Agencies	NOAA Pacific Islands Fisheries Science Center (PIFSC)
Contacts	Jamie Gove, jamison.grove@noaa.gov Russell Brainard, rusty.brainard@noaa.gov
Partnering Agencies	NOAA PIFSC Coral Reef Ecosystem Division (CRED) and University of Hawaii Joint Institute for Marine and Atmospheric Research (JIMAR) provides data access and availability to archived and on-going datasets. Concomitant biological data from the monitoring site may also be available. Scripps Institution of Oceanography (SIO) will provide collaborative support including statistical expertise. Remotely sensed data products will be provided by NOAA NODC and NOAA CRW.
Required Resources	Postdoc or funds for a postdoc.
Projected Timelines	2-3 years
Feedback/Evaluation	Presentations at scientific meetings and publications in peer reviewed journals. Outreach and dissemination of high-resolution temperature data and region specific thermal metrics for resource managers and stake-holders.

Name	Application of Latest IPCC Climate Models to Forecast Possible Marine Ecosystem Changes in the North Pacific Over the 21st Century (2 of 2)
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development - Projections (modeling and downscaling) - Training and Capacity Building, Education, Outreach
ECV	- Surface (e.g., SST, SSH, salinity, ocean color)
Timeframe	- Multi-decadal (scenarios)

Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Projections (modeling and downscaling)
Sectors	- Agriculture and Fisheries - Ecosystems
Status	- Proposed
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - Western North Pacific
Description	Take output from the latest IPCC climate models that include a phytoplankton component and use various approaches to project possible high trophic level impacts. The approaches include: i) a biome approach; ii) driving ecosystem/fisheries models with phytoplankton output from the climate model; and iii) a size spectrum model approach.
Objectives/Outcomes	Identifying possible future ecosystem changes for resource managers.
Lead Agencies	NOAA Pacific Islands Fisheries Science Center (PIFSC)
Contacts	Jeffrey Polovina, jeffery.polovina@noaa.gov Phoebe Woodworth, phoebe.woodworth@noaa.gov
Required Resources	Postdoc or funds for a postdoc.
Projected Timelines	2-3 years
Feedback/Evaluation	Presentations and publications

Name	Asia Pacific Climate Change Adaptation Project Preparation Facility (ADAPT)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Policies and Legislation
Sectors	- Community Planning and Development
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Western North Pacific - FSM - Palau - South Pacific - Fiji - Solomon Islands

Description	Increase access to financial resources for climate change adaptation investment projects; strengthen national human and institutional capacity in preparation of financing proposals; and strengthen regional knowledge platform to share information and processes on climate change projects, funds and best practices to promote replication and scaling up.
Lead Agencies	WWF, Conservation International, The Nature Conservancy, ARD Inc., NOAA
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	USAID, Budget: US$18.0 million
Projected Timelines	2011-2016

Name	Asia Pacific Mangrove Monitoring
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development
ECV	- Surface (e.g., SST, SSH, salinity, ocean color) - (e.g., surface water, glaciers and ice caps, land cover, biomass)
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Western North Pacific - South Pacific
Description	We are working with various Pacific Island nations to identify the ecological attributes of mangroves that may be more resilient to sea level rise. This involves a Pacific-wide rod surface accretion table (RSET) network that quantifies the rate at which mangroves are rising or falling in relation to sea level rise. This information is also being used to help secure C credits, which can be used to restore of conserve these valuable ecosystems. We are also quantifying accretion rates using naturally occurring 210Pb and 137Cs. RSETs have already been installed in Kosrae, Pohnpei, and Palau.
Lead Agencies	USDA/FS/PSW
Contacts	Rich MacKenzie, rmackenzie@fs.fed.us

Partnering Agencies	PICCC
Projected Timelines	2009-2012

Name	Assessing Climate Change Effects on Forest Bird Populations in the Alakai, Kauai
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development
ECV	- Surface (e.g., temp, precip, wind) - (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Intra-annual to Decadal
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii
Description	Uses population counts since the mid-1980s, blood samples, some mosquito counts, and changes in temperature and streamflow to assess the effect of climate change on forest birds in the Alakai, Kauai.
Lead Agencies	USGS/PIERC, UH
Contacts	Gordon Tribble, gtribble@usgs.gov
Partnering Agencies	PICCC
Projected Timelines	2011-2013

Name	Assessment and Rapid Reef Response Plan
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Observing Systems, Data Stewardship, Data Services - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance
Sectors	- Community Planning and Development - Ecosystems
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- South Pacific - American Samoa

Description	This plan is designed to monitor for multiple threats to coral reefs, including, but not limited to: bleaching events, Crown of Thorns outbreaks, disease outbreaks and hurricanes. This plan will be put into effect to determine if key sites have experience coral loss, what the cause of the coral loss is, quantify the amount of loss at sites, document the progression of the loss episode, and monitor survival rate at those sites. A workshop was held in June 2012 to train local natural resource managers about coral bleaching signs and impacts on coral reefs.
Objectives/Outcomes	Increased knowledge of coral bleaching and other threats. Improved community and coral ecosystem resilience, and ability to detect impacts and assess response.
Lead Agencies	Department of Marine and Wildlife Resources
Contacts	Doug Fenner, douglasfennertassi@gmail.com
Partnering Agencies	Coral Reef Advisory Group, American Samoa Community College, Fagatele Bay National Marine Sanctuary
Required Resources	Funding required for education and outreach to public.
Projected Timelines	Assessment and Rapid Reef Response Plan completed in June 2012. Workshop and training held in June 2012. Implementation of Plan expected soon.
Feedback/Evaluation	Feedback and evaluation provided by various government agencies, continued feedback expected from public.

Name	Bleaching Response Plan for American Samoa
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Observing Systems, Data Stewardship, Data Services - Research/Development
Timeframe	- Intra-annual to Decadal
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Observing Systems, Data Stewardship, Data Services - Research/Development
Sectors	- Ecosystems
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- South Pacific - American Samoa
Description	The development of a bleaching response plan for American Samoa will guide the monitoring of mass coral bleaching events, but also other major disturbances like hurricanes, coral disease outbreaks, and crown-of-thorn starfish outbreaks.
Objectives/Outcomes	A bleaching response plan. A draft plan has been produced, and work will continue to complete the plan.

Lead Agencies	Climate Change Local Action Strategy group of the Coral Reef Advisory Group of American Samoa, which includes AS Dept. Commerce, AS Dept. Marine & Wildlife Resources, AS EPA, Fagatele Bay National Marine Sanctuary, National Park of American Samoa, and AS Community College
Contacts	Douglas Fenner, douglasfennertassi@gmail.com
Partnering Agencies	NOAA/CRCP (coral reef management grant)
Projected Timelines	Ongoing

Name	Changes in Distribution and Abundance of Native Forest Birds in High Elevation Habitat on Hawaii Island
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development
ECV	- (e.g., surface water, glaciers and ice caps, land cover, biomass)
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii
Description	Recent research has shown that high elevation forests critical to the persistence of native Hawaii forest birds may be disproportionately susceptible to climate change. Begin long-term quarterly sampling of birds from Hakalau Forest NWR to document the response of this important bird community to a changing climate.
Lead Agencies	USGS/BRD/PIERC
Contacts	Patrick Hart, Patrick_J_Hart@usgs.gov
Partnering Agencies	PICCC
Projected Timelines	2012-?

Name	Cities and Climate Change Initiative Asia Pacific
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Community Planning and Development
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience

Regions	- South Pacific - Fiji - PNG - Samoa - Vanuatu
Description	This initiative aims to strengthen the climate change response of cities and local governments.
Objectives/Outcomes	The main objectives are to: promote active climate change collaboration between local governments and associations; to enhance policy dialogue on climate change; to support local governments in preparing climate action plans; and to foster awareness, education and capacity building.
Lead Agencies	Local governments, universities
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	UN-Habitat, Budget: US$10 million
Projected Timelines	2010-?

Name	Climate Change and Pacific Island Water Resources
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Projections (modeling and downscaling)
ECV	- Surface (e.g., temp, precip, wind) - (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Intra-annual to Decadal
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii

Description	We are taking a three-tiered approach to examine how changes in precipitation will impact stream flow and habitat. The first tier is a space for time substitution, where are sampling various parameters in streams located along a naturally occurring steep precipitation gradient (2500-6000 mm/yr). The second tier involves remeasuring those parameters over to document inter and intra annual variation. The third tier incorporates all of the above data into a model (DHSVM) to forecast the impacts of climate change on stream ecosystems.
Objectives/Outcomes	To date, we have published two Forest Service GTR brochures.
Lead Agencies	USFS/PSW, State of Hawaii DAR, UH Manoa, UH Hilo, Kamehameha Schools, Michigan State University
Contacts	Rich MacKenzie, rmackenzie@fs.fed.us
Partnering Agencies	PICCC
Projected Timelines	2010-2014

Name	Climate Change Education Kits
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Community Planning and Development - Social and Cultural Resources
Status	- Planned
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - American Samoa
Description	Climate change lesson guides for teachers, designed to provide a basic understanding of climate change and provide a solid link between local ecosystem services provided by coral reefs and how those will change with climate change. These include lesson plans, experiments and classroom activities, and a 36-page Climate Change Activity Book.
Objectives/Outcomes	Create a populace that is informed about climate change and is taking steps to reduce climate change causes and impacts. Establish and foster adaptation and resilience of human communities and economic systems to respond to climate change impacts; prior to being able to take appropriate actions to foster human community resilience, communities require an understanding of climate change and its potential impacts.
Lead Agencies	Coral Reef Advisory Group
Contacts	Whitney Peterson, whitney.peterson@doc.as
Required Resources	Financial resources required for education kits.
Projected Timelines	Expected to be implemented during the 2012-2013 school year.

Feedback/Evaluation	Feedback expected from Department of Education and local teachers to improve use and implementation of climate education kits.

Name	Climate Variability Influences on Trends in Streamflow and Precipitation Records at Selected Sites in the Pacific Islands Region
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Historical Observations (hindcasts/climatologies)
ECV	- Surface (e.g., temp, precip, wind) - (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Seasonal (outlook) - Intra-annual to Decadal
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought
Regions	- Central North Pacific - State Of Hawaii - Western North Pacific - South Pacific - American Samoa
Description	Analysis of streamflow and precipitation trends during different phases of ENSO and PDO at selected sites in Hawaii, American Samoa, and Western Pacific islands. Trends will be analyzed using non-parametric statistical tests and spectral analysis.
Objectives/Outcomes	Results will be published in scientific journal article.
Lead Agencies	USGS/PIWSC, USGS/PIERC, Pacific RISA
Contacts	Delwyn Oki, dsoki@usgs.gov Lisa Miller, ldmiller@usgs.gov Victoria Keener, KeenerV@EastWestCenter.org
Partnering Agencies	PICCC
Projected Timelines	2011-2013

Name	Cloud Nasara Pacific Climate Animation Project
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Training and Capacity Building, Education, Outreach - Best Practices/Guidance

ECV	- Surface (e.g., temp, precip, wind) - Surface (e.g., SST, SSH, salinity, ocean color) - Sub-surface (e.g., temp, salinity, nutrients, carbon, phytoplankton) - (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Intra-annual to Decadal - Multi-decadal (scenarios)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Pacific Basin
Description	The Cloud Nasara (meaning meeting place) Pacific Climate Animation Project is an innovative new collaboration between Red Cross, the Pacific-Australia Climate Change Science and Adaptation Planning Program, the Vanuatu Meteorology and Geo-hazards Department, and the SPC-GIZ Climate Change Program. Cloud Nasara aims to increase awareness of the science and impacts of climate variability in the Pacific, and to provoke discussion around how communities can access forecast information and take low regrets actions to prepare for future El Nino and La Nina events and adapt to climate change.

Objectives/Outcomes	Two short comical animation films are currently being developed as communication tools. One film will give an overview of climate processes and impacts in the Pacific region as a whole. The other film will be specifically focused on Vanuatu as a pilot country. The films are due to be launched in mid-2013. Climate change communications research and guidance: In recognizing a large gap in practitioner guidance on the how to communicate climate change with Pacific communities, the Red Cross, in collaboration with a La Trobe University intern and an independent consultant, has been conducting research on how various organisations in the Pacific are tackling the topic. This research will then be used to create simple guidance for practitioners on the ground.
Lead Agencies	Red Cross Red Crescent Climate Centre, Pacific-Australia Climate Change Science and Adaptation Planning Program, Vanuatu Meteorology and Geo-hazards Department, SPC-GIZ Climate Change Program
Contacts	Rebecca McNaught, Senior Climate Advisor, mcnaught@climatecentre.org
Url	http://www.climatecentre.org/site/news/407/cloud-nasara-animations-will-communicate-climate-in-the-pacific

Name	Coastal and Marine Resources Management in the Coral Triangle of the Pacific
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Ecosystems
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Western North Pacific - FSM - Palau - South Pacific - Fiji - PNG - Solomon Islands - Vanuatu
Description	To promote the conservation and sustainable use of globally significant coastal and marine resources in the Coral Triangle region through the introduction of integrated and ecosystem-based coastal and marine resources management in five Pacific countries.
Objectives/Outcomes	Includes the implementation of pilot adaptation measures to enhance resilience and increase capacity to respond to the adverse impacts of climate change on coastal and marine ecosystems.
Lead Agencies	ADB

Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	GEF-SPA; Japan; Australia; United States; Budget: US$27,568,183
Projected Timelines	2008-2013

Name	Coastal Community Adaptation Project (C-CAP)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Policies and Legislation
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems

Regions	- Western North Pacific - FSM - Palau - RMI - South Pacific - Kiribati - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific
Description	The Pacific Island countries comprise the most vulnerable region in the world to climate change. The nature-based livelihoods and diverse cultures that have risen from these island nations—some of which stand only meters above sea level—are being challenged, and in some cases overwhelmed, by sea level rise, changing ocean temperatures and acidity, increasing air temperatures, shifting rainfall and storm patterns, and other impacts of climate change that are projected to increase over the next 100 years. National adaptation strategies and policies are in place, but implementation lags at the community level. Climate-smart decision making to improve coastal zone and water resource management and strengthen disaster management must be applied in communities across the Pacific for the region to successfully adapt to climate change. This project is for the countries of Fiji, Kiribati, Nauru, Palau, Papua New Guinea, Republic of Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu, and the Federated States of Micronesia. We will build the resilience of vulnerable coastal communities to withstand more intense and frequent weather events and ecosystem degradation in the short term, and sea level rise in the long term.
Objectives/Outcomes	Sample activities: 1) Build local knowledge through community-based trainings and participatory risk mapping and analysis; 2) Cultivate adaptive capacity by helping local leaders to factor climate change projections into traditional decision-making processes; 3) Strengthen resilience to disasters and climate change impacts through implementation of built and natural infrastructure, disaster prevention and preparedness training, and land-use planning; 4) Results will include improved coastal zone management and water resource management capacity and strengthened disaster management.
Lead Agencies	USAID, Development Alternatives Inc. (DAI)
Contacts	pinquiries@usaid.gov
Partnering Agencies	University of the South Pacific (USP)
Projected Timelines	FY12-FY15
Url	http://dai.com/our-work/projects/south-pacific-islands%E2%80%94coastal-community-adaptation-project-c-cap

Name	Combatting Coral Bleaching and Ocean Acidification
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development
ECV	- Sub-surface (e.g., temp, salinity, nutrients, carbon, phytoplankton)
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- South Pacific - American Samoa
Description	Management techniques that prevent bleaching of limited reef areas are the only direct interventions known that might reduce coral mortality due to climate change. This project explores methods to cool areas of coral reef and test bleaching recovery methods on coral reefs in American Samoa. This study will measure efficacy and scalability of this technology for potential future tests and use in a deployable or installed system. Additionally, it will monitor nearby bleaching levels and validate NOAA's predictive bleaching model.
Lead Agencies	The Climate Foundation, American Samoa DMWR
Contacts	Brian Von Herzen, brian@climatefoundation.org
Partnering Agencies	PICCC
Projected Timelines	2010-2013

Name	Community Resilience Guide
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance
Sectors	- Community Planning and Development - Social and Cultural Resources - Ecosystems
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - American Samoa

Description	As a counterpart to the Territorial Adaptation Framework, the Community Resilience Guide enables local communities to brainstorm their own prioritized adaptation activities of which they can take charge.
Objectives/Outcomes	Knowledge of specific impacts that communities can anticipate due to climate change, and activities that community members (including families, churches, and villages) can do to combat the impacts and increase resilience.
Lead Agencies	Coral Reef Advisory Group
Contacts	Whitney Peterson, whitney.peterson@doc.as
Required Resources	Financial need to enable outreach in local communities.
Projected Timelines	First draft of Community Resilience Guide anticipated to be completed by August 2012, outreach to communities expected throughout 2012 and 2013.
Feedback/Evaluation	It is expected that community members will be able to provide their own feedback and evaluation, as well as new ideas for how to face climate change in their own communities.

Name	Community-based Adaptation Programme (CBA)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Policies and Legislation
Sectors	- Public Health and Safety - Community Planning and Development - Ecosystems
Status	- Completed
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- South Pacific - Samoa - Global
Description	The objective of the program is to enhance the capacity of communities in the pilot countries to adapt to climate change including variability. Planned outcomes are: 1) Enhanced adaptive capacity allows communities to reduce their vulnerability to adverse impacts of future climate hazards; 2) National policies and programs include community-based adaptation priorities to promote replication, up-scaling and integration of best practices derived from community-based adaptation projects; and 3) Cooperation among member countries promotes global innovation in adaptation to climate change including variability.

Objectives/Outcomes	In Samoa: The projects completed as part of the CBA program focus on coastal ecosystems and the maintenance of their goods and services. Projects underway as part of this initiative are: 1) Satoalepai Coastal Resources Adaptation Project (co-funded by AusAID); 2) Reducing impacts of climate change-driven erosion through protection and conservation of mangroves, eco-systems, and coral reefs; 3) Community-Based Adaptation against flooding and sea level rise in the communities of Fagamolo, Avao, Vaipouli, Salei'a and Safai; and 4) Community-Based Adaptation for Lelepa Village.
Lead Agencies	UNDP
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	GEF (Strategic Priority on Adaptation); co-financing, Budget: US$4.5 million
Projected Timelines	2009-2011

Name	Cook Islands Infrastructure Development Project - Increasing Climate Resilience of Island Infrastructure
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Fresh Water Resources - Energy - Transportation/Communication and Commerce
Status	- Proposed
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Cook Islands
Description	This project aims to promote environmentally sound development of infrastructure for power, water supply, sanitation, solid waste, and transport in support of the Government’s pro-poor objectives.

Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	Proposed to the SCCF = $5,000,000; Proposed co-fin = $16,100,000 (ADB agency)

Name	Coping with Climate Change in the Pacific Island Region (CCCPIR)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation - Assessment and Evaluation
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems

Regions	- Western North Pacific - FSM - Palau - RMI - South Pacific - Fiji - Kiribati - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific
Description	Six main components: 1) Strengthening regional advisory and management capacity - support SPC in technical deliveries; support development of Regional CC Portal; 2) Mainstreaming climate considerations and adaptations strategies - support mainstreaming CC in national forest policies, land use policies and plans, and sector legislations, development of national CCA strategies land-based sectors, development of national CC policies; 3) Implementing adaptation and mitigation measures - establishment of pilot sites for food security and land use planning, innovative community approaches, promote reef-to-ridge approach, REDD+; 4) Sustainable tourism and climate change - assessment of interventions currently underway; 5) Sustainable energy management - support development of National Energy Policies and Strategies, renewable readiness/potential assessments, energy audits; 6) Climate Change Education - New learning outcomes on climate change introduced in school curricula across various subjects and levels.
Objectives/Outcomes	Awareness and information materials (in various media) and trainings at all levels (community to policy). The capacities of regional organisations in the Pacific Island region and its member states to adapt to climate change and mitigate its causes are strengthened.
Lead Agencies	GIZ, SPC
Contacts	Dr. Wulf Killmann, wulf.killmann@giz.de
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	German Federal Ministry for Economic Cooperation and Development

Projected Timelines	January 2009-December 2015

Name	Coral Reef Restoration, Monitoring, and Stock Enhancement in Kiribati
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development - Training and Capacity Building, Education, Outreach
ECV	- Surface (e.g., SST, SSH, salinity, ocean color) - Sub-surface (e.g., temp, salinity, nutrients, carbon, phytoplankton)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Research/Development - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation - Assessment and Evaluation
Sectors	- Agriculture and Fisheries - Ecosystems
Status	- Proposed
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- South Pacific - Kiribati
Description	This project aims to gain more detailed information on observed coral bleaching, including factors causing health problems to the corals and ciguatera fish poisoning; to establish, implement a sustainable monitoring program to cover two atolls; to pilot a restoration scheme for coral species in areas of low growth; and to establish marine protected areas. To establish a project where stock enhancement contributes in maintaining a vigorous coral reef.
Lead Agencies	MFMRD, MHM
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	Indicative costs: AUD 499,000; Local annual budget: AUD 87,750; Total NAPA costs over 3 years: AUD 586,750

Projected Timelines	3 years

Name	Coral Reef Temperature Anomaly Database (CoRTAD)
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Observing Systems, Data Stewardship, Data Services - Research/Development - Historical Observations (hindcasts/climatologies)
ECV	- Surface (e.g., SST, SSH, salinity, ocean color)
Timeframe	- Intra-annual to Decadal
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Observing Systems, Data Stewardship, Data Services - Research/Development - Historical Observations (hindcasts/climatologies)
Sectors	- Ecosystems
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin - Global
Description	The CoRTAD contains a collection of sea surface temperature (SST) and related thermal stress metrics, developed specifically for coral reef ecosystem applications but relevant to other ecosystems as well. The CoRTAD contains global, approximately 4 km resolution SST data on a weekly time scale from 1981 through 2010.
Lead Agencies	NOAA National Oceanographic Data Center
Contacts	Kenneth Casey, Kenneth.Casey@noaa.gov
Partnering Agencies	University of North Carolina Chapel Hill – supported initial development and scientific application of the CoRTAD. Conservation International – provides ongoing scientific guidance for the CoRTAD.
Projected Timelines	Maintained and updated every one to two years, as more satellite data, which form the basis of the CoRTAD, become available.
Feedback/Evaluation	Feedback on the performance of the CoRTAD, questions or issues on how to access and use it, and comments about the quality of the dataset may be made to NODC.Services@noaa.gov
Url	http://www.nodc.noaa.gov/sog/Cortad/

Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development
ECV	- Sub-surface (e.g., temp, salinity, nutrients, carbon, phytoplankton)
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin
Description	Mechanisms of coral calcification and the synergistic impacts of temperature, carbonate chemistry and feeding on coral growth and survival.
Lead Agencies	NOAA, NPS
Contacts	Rob Toonen, toonen@hawaii.edu
Partnering Agencies	PICCC
Projected Timelines	2011-2014

Name	Developing a DST for Understanding Impacts of Climate Change and Invasive Species on Watershed Function and Aquatic Habitat Quality
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Decision Support Tools - Policies and Legislation
Sectors	- Fresh Water Resources - Ecosystems
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii
Description	We are working with to develop a user-friendly decision support tool that will identify what, where and when specific management actions are needed to increase the resilience of Pacific Island landscapes. We have fully parameterized and calibrated a Distributed Hydrology, Soils, Vegetation Model (DHSVM), which we have used to model how various climate and invasive species scenarios will impact water yield.
Lead Agencies	USFS, University of Hawaii at Manoa, Hawaii State Division of Aquatic Resources, Kamehameha Schools

Contacts	Rich MacKenzie, rmackenzie@fs.fed.us
Partnering Agencies	PICCC
Projected Timelines	2011-2013

Name	Developing a Method for Adaptive Management and Protection from Climate Change in Mangrove and Coral Reef Ecosystems
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Assessment and Evaluation
Sectors	- Ecosystems
Status	- Completed
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- South Pacific - Fiji
Description	This project sought to develop a generalizable approach for assessing vulnerability and adaptation of mangroves and associated ecosystems in high biodiversity tropical mangrove areas and associated coral reed, sea-grass and upland ecosystems.
Lead Agencies	WWF, Wetlands International, Institute of Applied Sciences, Wildlife Conservation Society, communities
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	GEF/UNEP, WWF, Partner organizations
Projected Timelines	2007-2011

Name	Developing the Capacity to Better Predict the Composition of Reef Communities in a Future of Intensifying Climate Change Based on the Analysis of Symbodinium Communities
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development

ECV	- Sub-surface (e.g., temp, salinity, nutrients, carbon, phytoplankton)
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- South Pacific - American Samoa
Description	Examine the impact of climate change on coral reef communities in the National Park of American Samoa.
Objectives/Outcomes	Products: publication(s); project report; webpage.
Lead Agencies	UH/HIMB, NPS
Contacts	Ruth Gates, rgates@hawaii.edu
Partnering Agencies	PICCC
Projected Timelines	2011-2013

Name	Development of Adaptation Strategies and Community-based Risk Management Tools for Four Vulnerable Communities in the Cook Islands
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Decision Support Tools
Sectors	- Energy - Transportation/Communication and Commerce - Community Planning and Development
Status	- Completed
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Cook Islands
Description	The project will incorporate community-based impact and adaptation strategies within four vulnerable communities on Aitutaki and Rarotonga in the Cook Islands.
Objectives/Outcomes	The project will develop replicable community-based adaptation risk management tools to minimize risks on critical infrastructure and service sectors, and help climate-proof vulnerable community investments.
Lead Agencies	WWF-Cook Islands

Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	ADB Small Grants activity
Projected Timelines	?-2010

Name	District-Level Ecosystem-Based Management Planning for Adaptation to Climate Change
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Policies and Legislation - Assessment and Evaluation
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- South Pacific - Fiji

Description	WCS has developed a model for district-level ecosystem-based management planning that includes considerations for adapting to future environmental and climate change. We are currently rolling out the model for all of the districts of Bua Province, Fiji, which involves: biological assessments to design resilient MPA networks; socioeconomic assessments to assess resource pressure and use; surveys of traditional knowledge to inform adaptation strategies; management rule and action plan development; and monitoring and evaluation. A portion of the work involves trialing new scientific tools to best be able to measure and monitor socio-ecological resilience, while the remainder involves capacity building with local communities and partners to increase ability for adaptive management of natural resources for sustainable use.
Objectives/Outcomes	Examples of management plans developed can be found at (http://www.wcsfiji.org/Resources/ManagementPlans.aspx) and a guide has been developed to allow for the principles to be used more broadly across the Tropical Western Pacific (http://www.wcsfiji.org/Portals/82/EBMguide0510_low.pdf).
Lead Agencies	Wildlife Conservation Society
Contacts	Stacy Jupiter, Program Director, sjupiter@wcs.org
Url	http://www.wcsfiji.org/Resources/ManagementPlans.aspx

Name	Early Warning/Early Action Across the Pacific
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Operational Products and Services - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Decision Support Tools
ECV	- Surface (e.g., temp, precip, wind) - Surface (e.g., SST, SSH, salinity, ocean color)
Timeframe	- Seasonal (outlook)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Decision Support Tools
Sectors	- Public Health and Safety - Community Planning and Development - Social and Cultural Resources
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Pacific Basin

Description	Early Warning Early Action is about making decisions and taking preparedness actions using scientific information before disaster strikes. In tackling the humanitarian implications of climate change, we can utilise not only long-term climate predictions, but also weather and seasonal forecasts to enhance our decision-making and take action to save lives, reduce injury and impacts of disasters. Red Cross in the Pacific has been working with national and regional weather and climate information providers to bridge the gap between information and action.
Objectives/Outcomes	The regional office of International Federation of Red Cross and Red Crescent Societies in Suva, Fiji, uses regional seasonal climate updates and keeps a close eye on the status of El Nino and La Nina events as they develop. They link the potential low or high rainfall periods to specific actions that Red Cross National Societies can take at a national and community level. The Red Cross is also currently working with the Australian Bureau of Meteorology CosPACC team on linking seasonal forecast information that already exists with pre-determined Red Cross preparedness actions, triggered by various levels of risk. In particular this will involve ABoM team producing an automated table that will use yellow, orange and red stages of alert determined by the Regional Red Cross office. The regional Red Cross office will also have pre-determined actions that it will take to advise National Red Cross Societies on low cost, no-regrets actions that they can take based on elevated levels of risk. The Red Cross Red Crescent Climate Centre is also providing NIWA with feedback on additions to the Pacific Islands Climate Update from an end user perspective. The hope is that additions to the ICU will assist regional stakeholders understand risks that ENSO events can bring and in turn help them consider preparations that can be made when there are risks of lower or higher rainfall.
Lead Agencies	Red Cross Red Crescent Climate Centre
Contacts	Rebecca McNaught, Senior Climate Advisor, mcnaught@climatecentre.org
Url	http://www.climatecentre.org/downloads/Image/Posters/RedCrossPacificPoster.pdf

Name	Economics of Adaptation to Climate Change
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation - Assessment and Evaluation
Sectors	- Public Health and Safety - Energy - Transportation/Communication and Commerce - Community Planning and Development - Agriculture and Fisheries
Status	- Completed

Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Samoa - Global
Description	The two specific objectives of the study were: (1) to develop a global estimate of adaptation costs to inform the international community's efforts to tailor support and provide new and additional resources to help vulnerable developing countries meet adaptation costs; and (2) to support decision makers in developing countries to better evaluate and assess the risks posed by climate change and to better design strategies to adapt to climate change.
Objectives/Outcomes	In Samoa: Research project to understand the effects of two climate change scenarios on Samoa's infrastructure, human health (malaria) and forestry sectors.
Lead Agencies	World Bank
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	Netherlands, Switzerland, United Kingdom
Projected Timelines	2008-2010

Name	Effect of Groundwater Pumping and Climate Change on Ancialine Ponds in West Hawaii
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development
ECV	- Surface (e.g., temp, precip, wind) - (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Multi-decadal (scenarios)
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems

Regions	- Central North Pacific - State Of Hawaii
Description	Experimental tests of tolerances native Hawaiian damselflies and shrimp to a range of salinity. As sea level rises and/or precipitation and groundwater flows decrease in West Hawaii, the ability of native pool fauna to survive in anchialine pools will depend partly on salinity tolerance. Use experimental data on the sensitivity of aquatic invertebrates in anchialine ponds to assess how climate change will affect their habitat.
Lead Agencies	USGS/PIERC, NPS, UC Berkeley
Contacts	David Foote, DFoote@usgs.gov
Partnering Agencies	PICCC
Projected Timelines	1994-2014

Name	Effects of Landscape Change on Island Birds
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Projections (modeling and downscaling) - Decision Support Tools
ECV	- (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Multi-decadal (scenarios)
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Western North Pacific - FSM
Description	This project models bird species' responses to long-term and large-scale landscape change on Pohnpei Island, Federated States of Micronesia. Data from bird surveys spanning back to 1983 combined with 30 years of vegetation mapping will be used to create a predictive model of species change to guide reforestation and assess climate change model projections. This is the first effort of this kind in the Pacific Islands outside of Hawaii.
Lead Agencies	U of Missouri, College of Micronesia, Pacific Islands Conservation Research Association
Contacts	Dylan Kesler, KeslerD@Missouri.edu
Partnering Agencies	PICCC
Projected Timelines	2011-2013

Name	Enabling Kiribati Effective Participation at Regional and International Forums on Climate Change

Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Community Planning and Development
Status	- Proposed
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Kiribati
Description	To enhance the effectiveness of conveying climate change related information based on Kiribati national circumstances to regional and international meetings on climate change. To increase Kiribati capability to influence international efforts at mitigating climate change, and at addressing immediate and urgent, and longer term adaptation needs.
Lead Agencies	MFAI
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	Indicative costs: AUD 60,00o; Local annual budget: AUD 45,000; Total NAPA costs over 3 years: UAD 105,000
Projected Timelines	3 years

Name	Enhancing Adaptive Capacity of Communities to Climate Change-Related Floods in the North Coast and Islands Region of Papua New Guinea
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Public Health and Safety - Community Planning and Development
Status	- Proposed
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience

Regions	- South Pacific - PNG
Description	The overall objective is to strengthen the ability of communities in Papua New Guinea to make informed decisions about and adapt to climate change-driven hazards affecting both coastal and riverine communities. In particular, the program will focus on resilience towards occurrences of coastal and inland flooding events. Concept approved by Adaptation Fund Board in June 2011.
Objectives/Outcomes	The project concentrates on the following areas: 1) Adaptation measures in coastal and riverine communities; 2) Institutional strengthening; and 3) Awareness raising and knowledge management.
Lead Agencies	UNDP
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	US$5,227,530
Projected Timelines	2011-2015

Name	Enhancing Resilience of Communities in the Solomon Islands to the Adverse Effects of Climate Change in Agriculture and Food Security
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Community Planning and Development - Agriculture and Fisheries
Status	- Proposed
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Solomon Islands
Description	Enhancing resilience of communities in the Solomon Islands to the adverse effects of climate change in agriculture and food security. Concept submitted to the Adaptation Fund Board.
Lead Agencies	UNDP

Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf

Name	Enhancing Resilience of Communities of the Cook Islands through Integrated Climate Change Adaptation and Disaster Risk Management Measures
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation - Assessment and Evaluation
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Agriculture and Fisheries
Status	- Proposed
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Cook Islands
Description	Vulnerability assessment, development of community based adaptive management plans and institutional strengthening. Concept note approved by the Adaptation Fund Board on December 15, 2010.
Lead Agencies	UNDP
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf

Required Resources	Budget: US$4,991,000

Name	Enhancing Resilience of Rural Communities to Flood and Drought-Related Climate Change and Disaster Risks in the Ba Catchment Area of Fiji
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Public Health and Safety - Fresh Water Resources - Community Planning and Development
Status	- Proposed
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Fiji
Description	This project will integrate climate change into current flood/drought risk management through information generation, training and dissemination. Concept approved by Adaptation Fund Board in June 2011.
Objectives/Outcomes	This project will concentrate on four areas: Climate early warning and information systems; Community based adaptation to flood and drought related risk and hazards; Institutional strengthening to support climate-and disaster-resilient policy frameworks; and Awareness raising and knowledge management.
Lead Agencies	UNDP, Fiji Department of the Environment
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	US$5,728,800
Projected Timelines	2012-2015

Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Observing Systems, Data Stewardship, Data Services - Research/Development - Historical Observations (hindcasts/climatologies) - Projections (modeling and downscaling) - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Assessment and Evaluation
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Western North Pacific - FSM - Palau - RMI - South Pacific - Fiji - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific

Description	The National Oceanic and Atmospheric Administration (NOAA), working through the U.S. Agency for International Development (USAID), is undertaking a two-year program to support climate change adaptation in the Pacific Small Island Developing States (SIDS) by conducting a series of activities to enhance scientific and technical capacity. These activities are designed to strengthen end-to-end climate services and adaptation capabilities through the expansion of ongoing work of the U.S.-focused NOAA Pacific Climate Information System (PaCIS) into the broader Pacific.
Objectives/Outcomes	Engagement and consultation between service providers and users; 2) Packaging and dissemination of existing climate-related products and services focused on Pacific regional issues; 3) Development of new or enhanced products and services; and 4) Advancement of sub-regional and in-country training and core capacity-building.
Lead Agencies	NOAA, PaCIS, USAID
Contacts	John Marra, john.marra@noaa.gov
Partnering Agencies	Decision-makers at all levels in the Pacific SIDS
Required Resources	1.9 million USD
Projected Timelines	2 years

Name	Environmental Change and Coral Symbiosis
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development
ECV	- Sub-surface (e.g., temp, salinity, nutrients, carbon, phytoplankton)
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii - North Western Hawaiian Islands
Description	1) Genetic diversity of Symbiodinium communities across a gradient of thermal stress anomalies on Oahu and NWHI. 2) Metabolomics response of coral-symbiodinium associations under different environmental conditions.
Lead Agencies	UH/Hilo, NOAA
Contacts	Ruth Gates, rgates@hawaii.edu
Partnering Agencies	PICCC
Projected Timelines	2006-?

Name	Field Monitoring and Analysis of Climate Change Across a Wide Range of Ecosystems in Hawaii

Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Observing Systems, Data Stewardship, Data Services - Operational Products and Services - Historical Observations (hindcasts/climatologies)
ECV	- Surface (e.g., temp, precip, wind)
Timeframe	- Intra-annual to Decadal
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii
Description	The goal of this project is to ensure continued operation and maintenance of the HaleNet climate observation network, including field operations, equipment maintenance and replacement, sensor recalibration, data communication improvements, data screening and archival, data analysis, and dissemination of results. HaleNet consists of two transects of climate stations along the leeward and windward slopes of Haleakala volcano, Maui Island, Hawaii. All but two stations in the network are within Haleakala National Park.
Lead Agencies	University of Hawaii, NPS
Contacts	Tom Giambelluca, thomas@hawaii.edu
Partnering Agencies	FWS, PICCC
Projected Timelines	On-going
Url	http://climate.socialsciences.hawaii.edu/HaleNet/HaleNet.htm

Name	FINPAC - Reduced Vulnerability of the Pacific Island Country Villagers' Livelihoods to the Effects of Climate Change
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Observing Systems, Data Stewardship, Data Services - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Public Health and Safety - Community Planning and Development - Social and Cultural Resources
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience

Regions	- Western North Pacific - FSM - Palau - RMI - South Pacific - Cook Islands - Fiji - Kiribati - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific
Description	The FINPAC project is a regional project that aims to facilitate improved capacity of the Pacific Island Country National Meteorological and Hydrological Services to deliver weather, climate and early warning services in cooperation with and for the benefit of villagers in Pacific communities.
Objectives/Outcomes	Reducing vulnerability of the Pacific Island Countries' livelihoods to the effects of climate change.
Lead Agencies	SPREP, Finnish Meteorological Institute (FMI)
Contacts	Neville Koop, Meteorology and Climate Adviser SPREP, nevillek@sprep.org Jaakko Nuottokari, Head of International Projects FMI, jaakko.nuottokari@fmi.fi
Partnering Agencies	National Meteorological and Hydrological Services of the Pacific Island Countries
Required Resources	Project funding through MFA: 3 775 346,5 €, SPREP in-kind financing: 55 000 €
Projected Timelines	2012-2015
Url	http://www.sprep.org/attachments/Circulars/cir%2013-08%20finpac%20doc.pdf

Name	Future Distribution of Cloud Forests and Associated Species in Hawaii
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development - Projections (modeling and downscaling) - Decision Support Tools
ECV	- Surface (e.g., temp, precip, wind) - (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Multi-decadal (scenarios)

Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii
Description	This project will predict future distributions of cloud forests and species across high mountain ecosystems in Hawaii. Hawaii's cloud forests represent the last remaining intact habitat for many endangered forest bird species and are critical to watershed function on all islands. This project will provide future distribution models by integrating products from a climate-vegetation network on Haleakala with new regional downscaling of future climate projections.
Lead Agencies	U of Wisconsin, U of Hawaii, U of Colorado
Contacts	Sara Hotchkiss, sara@geology.wisc.edu
Partnering Agencies	PICCC
Projected Timelines	2011-2013

Name	Future Wind and Wave Projections for NPS and USFWS Managed Islands in the Pacific
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development - Historical Observations (hindcasts/climatologies) - Projections (modeling and downscaling)
ECV	- Surface (e.g., temp, precip, wind) - Surface (e.g., SST, SSH, salinity, ocean color)
Timeframe	- Seasonal (outlook) - Intra-annual to Decadal - Multi-decadal (scenarios)
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience

Regions	- Central North Pacific - State Of Hawaii - North Western Hawaiian Islands - Pacific Remote Islands - Western North Pacific - CNMI - FSM - Guam - South Pacific - American Samoa - Pacific Basin
Description	The goal of this proposed effort is to use GCM and coupled numerical wave model output to provide 3-hourly data and statistical measures (mean and top 5% values) of wave height, wave period, wave direction, wind speed, and wind direction for 15 DOI-managed coastal assets (parks and refuges) in the Pacific Ocean for the recent past (1996-2005) and future projections (2026-2045 and 2085-2100). These data are needed as baseline physical information for these DOI-managed assets, as winds and waves are the dominant spatially- and temporally-varying processes that influence coastal morphology and ecosystem structure, and can impact coastal infrastructure, natural and cultural resources, and coastal-related economic activities (e.g., fishing and tourism).
Objectives/Outcomes	This proposed effort would generate two general types of products: mean and extreme (top 5%) monthly statistics for wave height, wave period, wave direction, wind speed, and wind direction for each of the 15 study locations (Niihau, Hawaii, Midway Atoll, Guam, Saipan, American Samoa, Kwajalein, Rose Atoll, Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Palmyra Atoll, and Wake Atoll. These statistics would be generated for the recent past and the two future emission scenarios for each of the two future time periods, for a total of 5 combinations of time frames and emission scenarios (1996-2005, 2026-2045@RCP4.5, 2026-2045@RCP8.5, 2085-2100@RCP4.5, 2085-2100@RCP8.5). The final peer-reviewed USGS report will be available online and maintained by the USGS Publications Warehouse; this report will provide data statistics in text, tabular, and graphical formats. This report will be disseminated not only to PICCC and PICSC, but also NPS, USFWS, DOD, and other federal, state, and local resource managers for the 15 study areas. The 3-hourly time-series data for the study areas will be made available upon request.
Lead Agencies	U.S. Geological Survey, Pacific Coastal and Marine Science Center
Contacts	Curt D. Storlazzi, cstorlazzi@usgs.gov Li H. Erikson, lerikson@usgs.gov
Partnering Agencies	University of California at Santa Cruz - Ocean Sciences Department, PICCC, PI-CSC
Required Resources	1) Ph.D. student support (to help conduct analyses and do visualization); 2) Two 8-core PC computers to add to USGS-PCMSC numerical modeling cluster; 3) USGS Open-File Report EPN publication charges 4) Travel for briefing of results

Projected Timelines	See table embedded in full worksheet.

Name	Gene Expression Analyses of Temperature Adaptation and Stress in Native Animals
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Decision Support Tools
Sectors	- Ecosystems - Other
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii
Description	Identifying techniques for rapid assessment of stress due to temperature or other factors before population decline.
Lead Agencies	University of Hawaii/Hilo, USGS/BRD
Contacts	Donald Price, donaldp@hawaii.edu
Partnering Agencies	PICCC
Projected Timelines	2009-?

Name	Genetic Diversity of Corals and Resilience
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development
ECV	- Sub-surface (e.g., temp, salinity, nutrients, carbon, phytoplankton)
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii - North Western Hawaiian Islands
Description	Corals in patch reefs at Pearl & Hermes Atoll, French Frigate Shoals, and Kaneohe Bay genotyped with environmental sensors in situ (Temp, Ph, Salinity).
Lead Agencies	UH/HIMB, NOAA
Contacts	Steve Karl, skarl@hawaii.edu
Partnering Agencies	PICCC
Projected Timelines	2006-?

Name	Global Climate Change Alliance
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Community Planning and Development - Agriculture and Fisheries
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Solomon Islands - Vanuatu - Global
Description	The Global Climate Change Alliance seeks to deepen the policy dialogue between the European Union and developing countries on climate change and to increase support to target countries to implement priority adaptation and mitigation measures, and integration climate change into their development strategies. The program's five priority areas for funding are: improving the knowledge base of developing countries to the effects of climate change; promoting disaster risk reduction; mainstreaming climate change into poverty reduction development strategies; reducing emissions from deforestation and degradation; and enhancing participation in the Clean Development Mechanism.
Objectives/Outcomes	In Solomon Islands: The Solomon Islands Climate Change Assistance Programme's objective is to support the Government of the Solomon Islands by increasing its capacity for policy enhancement, coordination and implementation of its national Climate Change strategy in line with its NAPA and National Disaster Risk Management Plan.
Lead Agencies	National governments
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	European Commission, Czech Republic, Sweden, 10th European Development Fund, Budget: €140 million, In Solomon Islands: €2.8 million
Projected Timelines	2008-ongoing, In Solomon Islands: 2011-2013

Name	Groundwater Tracers to Evaluate Connection Between Inland and Coastal Groundwater Systems, Kona Area, Island of Hawaii
Timeframe	- Multi-decadal (scenarios)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Research/Development - Climate Adaptation - Assessment and Evaluation
Sectors	- Fresh Water Resources - Community Planning and Development
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought
Regions	- Central North Pacific - State Of Hawaii
Description	Since 1970, west Hawaii has experienced a population increase of about 83 percent and the fastest economic growth on Hawaii Island, although the effects of development on groundwater resources remain uncertain. At issue among stakeholders is whether urban development over, or withdrawals of freshwater from, the high-level groundwater system will adversely affect the coastal groundwater system, which itself is developed for municipal, agricultural, and industrial uses and which sustains aquatic resources. The results from this study will help water managers and other stakeholders to better understand potential risks to coastal water resources associated with groundwater withdrawals from, and development over, the inland high-level groundwater system. This study is consistent with the USGS mission to provide a clearer knowledge of the status of water resources; specifically, the likely changes in land use, land cover, and water use on water quality and ecosystem health.
Objectives/Outcomes	The objective of this study is to evaluate whether groundwater from the high-level system discharges into the coastal groundwater system, and whether there are characteristic chemical or isotopic signatures that aid in making this discrimination.
Lead Agencies	USGS/PIWSC
Contacts	Delwin Oki, dsoki@usgs.gov
Partnering Agencies	Hawaii State Commission on Water Resource Management
Projected Timelines	May 2012 through September 2014
Url	http://hi.water.usgs.gov/studies/isotopes/

Name	Hawaii Ocean Resources Management Plan (ORMP)

Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Policies and Legislation
Sectors	- Public Health and Safety - Energy - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Completed
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii - North Western Hawaiian Islands
Description	The Hawaii Ocean Resources Management Plan (ORMP) sets forth guiding principles and recommendations for the State of Hawaii to achieve comprehensive and integrated ocean and coastal resources management. Section 205A-62, Hawaii Revised Statutes, charges the Office of Planning, Coastal Zone Management (CZM) Program, with the review and periodic update of the ORMP, as well as coordination of overall implementation of the plan. The ORMP was recently updated in July of 2013, and continues a place-based approach to management of ocean resources in the islands, based on recognition of the ecological connections between the land and sea, the link between human activities and its impacts on the environment, and the need for improved collaboration and stewardship in natural resources governance.

Objectives/Outcomes	The CZM Program has obtained the support of the Governor, Executive Branch, and the Legislature for implementing the 2013 ORMP. Charged with coordinating the implementation of the ORMP, an Executive-level, multi-agency Policy Group was established in the summer of 2007 to oversee the implementation and further development of the plan. The Working Group consisting of the managers and staff of the departments represented by the Policy Group focuses on ORMP implementation and are tasked with coordinating their agency's implementation efforts. The Working Group will also develop legislative proposals to further support implementation efforts. The Working Group continues to meet monthly to streamline implementation and to further develop the ORMP. The Policy Group meets twice annually to recommit staff time and support for ORMP implementation, to guide the work of the Working Group, and to approve their work tasks and recommendations for next steps.
Lead Agencies	State of Hawaii Office of Planning/Coastal Zone Management (CZM) Program
Contacts	http://planning.hawaii.gov/czm/
Partnering Agencies	Hawaii State agencies with responsibilities related to marine and coastal zone management, NOAA/PSC, NOAA/PIRO, NOAA/OCRM, USACE/Honolulu District, USN/Hawaii Region, USCG/14th District, EPA/Pacific Islands Office
Projected Timelines	Because change takes time, four phases of implementation were recognized. The ORMP maps incremental 5-year management priorities to embark on a new course of action and achieve the primary goal: to improve and sustain the ecological, cultural, economic, and social benefits we derive from ocean resources today and for future generations. The first phase, termed Demonstration, has started and begins to demonstrate how the guiding perspectives are being implemented through various partnerships throughout the state. Moving into the second phase, termed Adaptation, the perspectives would start being applied throughout all islands and in all areas. This leads to the third phase of Institutionalization that would come about ten years later in 2021. The final phase, Mainstreaming, is expected by twenty years, around 2030. The 2013 ORMP marks the beginning of the Adaptation Phase.
Url	http://files.hawaii.gov/dbedt/op/czm/ormp/ormp_update_reports/final_ormp_2013.pdf

Name	High Resolution Climate Model for Hawaii
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Projections (modeling and downscaling)
ECV	- Surface (e.g., temp, precip, wind)
Timeframe	- Multi-decadal (scenarios)
Status	- Ongoing

Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii
Description	This project is developing a regional dynamical model with high resolution over islands at a scale that is ecologically relevant to management of natural and cultural resources. This will enable direct estimation of future climate at conservation sites, inform species distribution modeling, and species and site management planning. The model will be useful for high islands in Mariana Islands, Samoa, and Micronesia as well as Hawaii.
Lead Agencies	IPRC, UH/SOEST, Pacific RISA
Contacts	Kevin Hamilton, kph@hawaii.edu
Partnering Agencies	PICCC
Projected Timelines	2010-2013

Name	ICAP Sea-Level Rise Policy Study
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development - Training and Capacity Building, Education, Outreach
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Public Health and Safety - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Recreation and Tourism
Status	- Completed
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - State Of Hawaii

Description	The goal of the Center for Island Climate Adaptation and Policy Sea-level Rise Policy Study project was to increase community resiliency to the climate impacts of sea-level rise. Building on the scientific research of Dr. Charles Fletcher, this project incorporated input from state decision-makers as it identified best practices and policy options for adaptation. The project was unique in its iterative methodology, specifically designed to engage decision-makers and incorporate their feedback at multiple points throughout the process of developing adaptation strategies and policy tools.
Objectives/Outcomes	Ultimately, the project's result was a set of recommendations responsive to stakeholders' specific concerns. The publication, "Sea-Level Rise and Coastal Land Use in Hawaii: A Policy Tool Kit for State and Local Governments," is available at http://icap.seagrant.soest.hawaii.edu/icap-publications or www.islandclimate.org. This approach also yielded solutions appropriate for Hawaii's political landscape that have traction in the law-making arena.
Lead Agencies	Center for Island Climate Adaptation and Policy (ICAP), NOAA Pacific Services Center
Contacts	ICAP, icap@hawaii.edu Leslie Ricketts, lricketts@hawaii.edu Adam Stein, adam.stein@noaa.gov
Partnering Agencies	The NOAA Pacific Services Center provided funding for this study and will help communicate the findings with other coastal and island communities who could benefit from policy guidance for adapting to sea-level rise. The NOAA Coastal Storms Program for the Pacific region aided in coordinating the integration of scientific assessments so that ICAP's legal and policy recommendations reflect the most advanced climate science and projections for Hawaii.
Required Resources	The project budget was $100,000. About half of which accounted for the salary for a senior attorney specializing in environmental and climate change law and a legal research assistant, who together analyze extant law, develop model policy language, and evaluate adaptation options. A project manager was essential to ensure project deadlines were met, organize outreach events and meetings, and assist in the production of documents. Outreach to stakeholders and decision-makers was conducted effectively with the help of Kem Lowry, an experienced facilitator and retired professor of urban and regional planning.
Projected Timelines	The project timeline included three phases (research, writing, and outreach), which overlap at various points throughout the project. The research phase, spanning March 2011 – May 2011 encompassed an initial literature review, interviews with local decision-makers, developing an outline for the written product, and drafting sections of the final report. The writing phase took place over the course of May 2011 – August 2011 and culminated in a final draft to be sent to reviewers in August. Outreach included workshops for stakeholders and legislators in October 2011 - November 2011 to release and publicize the findings and to develop action strategies for implementing the recommendations.

Feedback/Evaluation	The project is unique in its iterative methodology, specifically designed to engage decision-makers and incorporate their feedback at multiple points throughout the process of developing adaptation strategies and policy tools. Ultimately, the result will be a set of recommendations that are responsive to stakeholders' specific concerns regarding sea-level rise and the realities and projections of climate change in Hawaii. This approach will also yield solutions appropriate for Hawaii's political landscape that will have traction in the law-making arena.
Url	http://icap.seagrant.soest.hawaii.edu/icap-publications

Name	Impact of Climate Change and Variability on Water Resources in the Outer Islands of Kiribati
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Policies and Legislation - Assessment and Evaluation
Sectors	- Public Health and Safety - Fresh Water Resources - Community Planning and Development
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought
Regions	- South Pacific - Kiribati
Description	Together with SPREP, USAID seeks to improve the ability of communities in the outer islands of Kiribati to address the impact of climate change and variability on water resources, including through increasing the capacity for rainwater harvesting and storage and enhancing existing ground wells (e.g., through better surfacing, water quality monitoring to shut down pumps at certain levels of contamination, etc.). Kiribati is among the poorest and least developed countries in the world, with few natural resources. A ground water lens exists on the atolls and is the main source of potable water for the majority of people on the outer islands. Climate change will affect rainfall and width of the land through erosion and accretion, which will in turn affect the availability of the fresh water lens. The government of Kiribati identified in its 2007 National Adaptation Programme of Action water, and specifically well improvement, as one of nine key areas for adaptation implementation. The program will respond to this urgent and immediate need. It will also provide training and technical assistance to the Health Ministry, which has recognized the importance of adaptation and its own lack of capacity on this issue, to integrate adaptation into national health planning and policies.

Objectives/Outcomes	Main elements of the strategy include: 1) Training communities in Kiribati on vulnerability assessments, disaster risk reduction, and identification and prioritization of adaptation and risk reduction strategies and activities; 2) Identifying and assessing with communities cost-benefits of options for adaptation and risk reduction; 3) Working with communities, technicians, and service providers to implement adaptation and risk reduction measures, such as improving the capacity for rainwater harvesting and storage and enhancing underground water wells to increase their resilience to storm surges and run-off through better surfacing, water quality monitoring, etc.; and 4) Training environmental health officials at the Ministry of Health in Kiribati on climate variability and change.
Lead Agencies	USAID, SPREP
Partnering Agencies	Communities, technicians, and service providers in Kiribati, as well as health officials in the Ministry of Health
Required Resources	1.15 million USD
Projected Timelines	2 years

Name	Impacts of Rising Mean Annual Temperature on Terrestrial Carbon Cycling in Model Forests
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development - Training and Capacity Building, Education, Outreach
ECV	- Surface (e.g., temp, precip, wind) - (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Intra-annual to Decadal
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Research/Development - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation - Assessment and Evaluation
Sectors	- Agriculture and Fisheries - Ecosystems
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii - Global

Description	Carbon storage in the terrestrial biosphere exceeds that in the atmosphere by a factor of four, and represents a dynamic balance among carbon input, allocation, and loss. This balance is being altered by climate change, with important implications for terrestrial carbon storage and, hence, atmospheric CO2 levels and global climate. However, the response of terrestrial carbon cycling to warming remains poorly quantified, especially in the tropics. This is particularly important because tropical forests account for a ~40% of global terrestrial carbon storage and ~35% of global terrestrial productivity and, as such, tropical forests play a very important role in regulating global climate. This study is examining how rising mean annual temperature will impact carbon input, allocation, loss, and storage in native Hawaiian wet forests along a 5.2°C mean annual temperature gradient. Results from the research along this model ecological gradient will enhance capacity to predict how terrestrial ecosystems, in particular tropical forests, will respond to warming over the next century.
Objectives/Outcomes	We are estimating carbon input (net photosynthetic carbon gain, or 'gross primary production' (GPP)), carbon loss (soil respiration and aboveground plant respiration), carbon partitioning (fraction of GPP that goes towards production vs. respiration in foliage, aboveground wood, and belowground), and ecosystem carbon storage (live aboveground and belowground biomass, forest floor, coarse woody debris, and mineral soil organic matter to ~1 m depth). This research is being conducted in nine permanent tropical montane wet forest plots that are arrayed across a 5.2°C mean annual temperature gradient (13.0-18.2°C) in the Hawaii Experimental Tropical Forest (State of Hawaii, DLNR) and the Hakalau Forest National Wildlife Refuge (US Fish and Wildlife Service) on the windward slope of Mauna Kea Volcano, Island of Hawaii.
Lead Agencies	Department of Natural Resources and Environmental Management - University of Hawaii at Manoa, Institute of Pacific Islands Forestry - USDA Forest Service
Contacts	Creighton Litton, litton@hawaii.edu Christian Giardina, cgiardina@fs.fed.us
Partnering Agencies	USFWS, Hawaii DLNR, Department of Global Ecology - Carnegie Institution, Hawaii EPSCoR, Northern Arizona University, University of Hawaii at Hilo, Kupu – Hawaii Youth Conservation Corps, University of Washington, Gary Braasch Environmental Photography
Required Resources	Leverage of Existing Support The establishment of our model temperature gradient, measurement of C input, allocation, loss and storage over the past four years, and purchase and installation of climate stations, taken together, represent a significant investment (>$1,000,000) to support the research described here. All together, funding for this work has totaled ~$1,100,000, and this research has been supported by the National Science Foundation-Ecosystem Science Cluster ($161,800), the National Science Foundation-Experimental Program to Stimulate Competitive Research (EPSCoR REAP; $25,000), the USDA McIntyre-Stennis Program ($132,265), the USDA Hatch Program ($189,680), the USDA Forest Service, Pacific Southwest Research Station ($420,000), the USDA Forest Service, Northern Research Station ($120,000) and Northern Arizona University ($45,000).

Projected Timelines	08/01/2008 - Ongoing
Url	http://www.ctahr.hawaii.edu/littonc/research.html

Name	Implementation of the Strategic Program for Climate Resilience: Pacific Region (SPCR)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Decision Support Tools - Policies and Legislation
Sectors	- Public Health and Safety - Community Planning and Development - Social and Cultural Resources
Status	- Planned
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Western North Pacific - South Pacific
Description	The Pacific Regional Strategic Program for Climate Resilience (SPCR) aims to facilitate more effective integration of CCA and related DRR for Pacific island countries to become resilient to climate change and climate-related disasters. As approved by the Pilot Program for Climate Resilience (PPCR) Subcommittee, the Pacific Regional SPCR has three components, which will complement and reinforce each other and will be delivered through existing regional organizations (CROP agencies) and mechanisms. These are: 1) Mainstreaming Climate Change Adaptation and Disaster Risk Reduction; 2) Identifying and Implementing Practical Climate Change Adaptation and Disaster Risk Reduction Knowledge and Experiences; and 3) Building and Supporting Pacific Developing Member Countries' Capacity to Respond to Climate Change Risks. ADB will administer Components 1 and 3, while WB will manage Component 2. 2-3 countries will be identified for pilot activities; pilot countries will exclude PNG, Samoa and Tonga, which have approved country PPCRs. The forthcoming project will be implemented for 3 years.
Lead Agencies	Asian Development Bank (ADB), World Bank (WB)
Contacts	Maria Lourdes Drilon, Senior Natural Resources Economist, Pacific Department ADB, mldrilon@adb.org
Projected Timelines	3 years

Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Public Health and Safety - Community Planning and Development
Status	- Proposed
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Solomon Islands
Description	Improving the adaptive capacity of communities in the Solomon Islands to the impacts of climate change and climate variability in the health sector.
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	Proposed to the SCCF = US$25,000; Proposed co-financing = TBC

Name	Increasing Climate Resiliency of the Transport Sector in the Asia-Pacific
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Transportation/Communication and Commerce
Status	- Proposed
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Solomon Islands
Description	Increasing climate resiliency of the transport sector in the Asia-Pacific.

Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	Proposed to the SCCF = US$30 million; Proposed co-financing = US$1,089,500

Name	Increasing Resilience of Tuvalu Coastal Areas and Community Settlements to Climate Change
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Community Planning and Development
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Tuvalu
Description	To increase the protection of livelihoods in coastal areas in all inhabited islands of Tuvalu from dynamic risks related to climate change and climate variability.
Lead Agencies	UNDP
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	LDCF; co-financing, Budget: US$8.196 million
Projected Timelines	2009-2013

Name	Increasing Resilience to Climate Change and Natural Hazards in Vanuatu

Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Public Health and Safety - Community Planning and Development
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Vanuatu
Description	Climate resilience and disaster risk reduction strengthened in key sectors in Vanuatu by promoting a risk management approach to reduce vulnerabilities. The project includes implementation of climate resilience measures in targeted sectors.
Lead Agencies	World Bank; Vanuatu Meteorological Agency
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	LDCF; co-financing, Budget: US$6.21 million
Projected Timelines	2010-2014

Name	Integrated Management of Maui Water Resources under Future Climate Conditions
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Projections (modeling and downscaling)
ECV	- Surface (e.g., temp, precip, wind) - Upper-Air
Timeframe	- Intra-annual to Decadal - Multi-decadal (scenarios)

Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Policies and Legislation - Assessment and Evaluation
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought
Regions	- Central North Pacific - State Of Hawaii
Description	This project has three components: 1) Examine climate-sensitive decisions related to fresh water management in the Iao Watershed on Maui Island, and to support implementation of the Maui Water Budget with the Maui County Department of Water Supply. Specific questions being addressed include: a) What climate-sensitive decisions are stakeholders making about fresh water management? b)What climate information do/could they use to support their decision making? and c) What capabilities do they have to use climate information?; 2) Produce downscaled climate projections for the island of Maui using statistical and numerical modeling; 3) Use downscaled projections of local climatic conditions together with stochastic hydrologic models to assess the sustainability of ground water resources in the Iao Watershed.
Objectives/Outcomes	1) Downscaled climate projections for Maui Island. 2) Hydrologic model assessing the sustainability of ground water resources in the Iao Watershed. 3) Implementation of the Maui Water Budget with the Maui County Department of Water Supply. 4) Summary report of findings from stakeholder assessment. 5) Workshops to ground truth the findings.
Lead Agencies	East-West Center (EWC), International Pacific Research Center (IPRC), Water Resources Research Center (WRRC)
Contacts	Melissa Finucane, EWC, finucanm@eastwestcenter.org Victoria Keener, EWC, keener@eastwestcenter.org Aly El-Kadi, UH WRRC, elkadi@hawaii.edu Kevin Hamilton, IPRC, kph@hawaii.edu
Partnering Agencies	PICCC, USGS are providing input on methods, materials, and interpretation of results.
Required Resources	The project is funded by NOAA via the Pacific RISA program.
Projected Timelines	2012 – 2014
Feedback/Evaluation	The project provides an opportunity for stakeholders to comment on and make recommendations about findings. The Pacific RISA program is also developing evaluation metrics that will examine the extent to which this project is addressing stakeholder priorities related to climate adaptation.

Name	Integrating Climate Change Risks into the Agriculture and Health Sectors in Samoa
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Public Health and Safety - Community Planning and Development - Agriculture and Fisheries
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Samoa
Description	To increase the resilience and adaptive capacity of coastal communities in Samoa to the adverse impacts of on agricultural production and public health.
Lead Agencies	UNDP, Samoa Ministry of Natural Resources and Environment, Ministry of Health, National Health Services, Ministry of Agriculture and Fisheries
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	LDCF; co-financing, Budget: US$4.10 million
Projected Timelines	2009-2012

Name	Integration of Climate Change Risk and Resilience into Forestry Management in Samoa
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Community Planning and Development - Agriculture and Fisheries
Status	- Ongoing

Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- South Pacific - Samoa
Description	The objective of the project is to increase the resilience and adaptive capacity of Samoa's forest areas and the communities dependent on them for livelihoods to the threat of climate change through targeted adaptation interventions in (i) lowland agro-forestry and (ii) upland native forest sub-sectors.
Lead Agencies	UNDP, Samoa Ministry of Natural Resources and Environment, Ministry of Agriculture and Fisheries
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	LDCF; co-financing, Budget: US$ 4,850,000
Projected Timelines	2011-2014

Name	Kiribati - Enhancing National Food Security in the Context of Global Climate Change
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Public Health and Safety - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- South Pacific - Kiribati

Description	This Kiribati NAPA-2 program helps to ensure food security of small atoll island communities in a changing climate through: 1) Institutional capacity development to reduce the impacts of climate change-induced food shortages; and 2) Implementation of community based adaptation measures to increase human, natural and productive livelihood capital in affected communities.
Lead Agencies	UNDP Fiji MCO
Contacts	Asenaca Ravuvu, asenaca.ravuvu@undp.org

Name	Kiribati Adaptation Program Phase II - Pilot Implementation
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Completed
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- South Pacific - Kiribati
Description	The program aims to develop and demonstrate the systematic diagnosis of climate-related problems and the design of cost-effective adaptation measures, while continuing to integrate climate risk awareness and responsiveness into economic and operational planning.
Objectives/Outcomes	The project has 5 broad components: 1) policy, planning, and information; 2) reducing the vulnerability of the coastline including key public assets and ecosystems 3) the development and management of freshwater resources; 4) providing technical assistance to build capacity at island and community level; and 5) project management.
Lead Agencies	World Bank

Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	World Bank, GEF-SPA, AusAID, New Zealand, Budget: US$6.87 million
Projected Timelines	2006-2011

Name	Kiribati Adaptation Program Phase III - Increasing Resilience to Climate Variability and Hazards
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Kiribati
Description	The project aims to improve the climate resilience of Kiribati's government and communities by strengthening their capacity to manage climate change effects and improve the management and governance of water resources and infrastructure.
Objectives/Outcomes	Other objectives of the project include increasing the availability and quality of water at the community level and protecting targeted coastal areas from storm waves and flooding.
Lead Agencies	World Bank

Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	AusAID, LDCF, Japan Policy and Human Resources Development Fund, GFDRR, Government of Kiribati, Budget: US$10.8 million
Projected Timelines	2011-2016

Name	Kiribati Coastal Zone Management and Resilience Enhancement for Adaptation
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Community Planning and Development - Ecosystems
Status	- Proposed
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- South Pacific - Kiribati
Description	This project aims to improve public awareness of the coastal processes and climate change impacts in Kiribati. To develop and pilot community-based coastal management regime by establishing community groups (essentially villages). To encourage communities to participate in coastal-ecosystem enhancement projects and to develop their own small scale projects with similar purposes. To streamline regulatory controls and conditions so as to ensure the resilience of the coastal areas and to ensure the sustainable use of coastal resources is enhanced.
Lead Agencies	MELAD, MPWU, MFMRD

Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	Indicative costs: AUD 1,312,910; Local annual budget: AUD 624,370; Total NAPA costs over 3 years: AUD 1,937,280
Projected Timelines	3 years

Name	Kiribati Water Resource Adaptation Project
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Policies and Legislation
Sectors	- Fresh Water Resources - Community Planning and Development
Status	- Proposed
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Kiribati
Description	To maintain and conserve available good ground water lenses; to gain users confidence in the reliability of the distribution system and promote their willingness to pay, based on consumed quantity; to increase water storage and water resources to meet current demands and at times of serious droughts; to manage risks to water resources throughout the atolls; and to assess impacts of urban water supplies on other natural resources, systems and subsistence activities. This will be achieved through risk assessments and the design and implementation of responses, including sustainable community-based monitoring system.
Lead Agencies	MPWU

Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	Indicative costs: AUD 2,174,500; Local annual budget: AUD 993,900; Total NAPA costs over 3 years: AUD 3,168,405
Projected Timelines	3 years

Name	Land Management Unit/Crop Production and Extension
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Public Health and Safety - Fresh Water Resources - Agriculture and Fisheries - Ecosystems
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems

Regions	- Western North Pacific - FSM - Palau - RMI - South Pacific - American Samoa - Cook Islands - Fiji - French Polynesia - Kiribati - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific
Description	Objective is to mainstream climate change and climate variability into SPC/LRD programs on livestock, forestry, pests and diseases, etc.
Lead Agencies	SPC Land Resources Division
Contacts	Dean Solofa, deans@spc.int
Url	http://www.spc.int/lrd/index.php?option=com_content&view=article&id=583&Itemid=42

Name	Learning from Traditional Ecological Knowledge to Understand Climate Change Impacts and Preserve Key Cultural and Natural Resources in Kaupulehu, Hawaii
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Community Planning and Development - Social and Cultural Resources
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - State Of Hawaii
Description	Using biocultural and participatory approaches, we will carry out an in-depth study of traditional ecological knowledge (TEK) in Kaupulehu, Hawaii Island. We will identify: TEK-relevant to climate and environmental change; the biological and cultural resources most valued by community members; and coping mechanisms, adaptation strategies and resources that promote social-ecological resiliency.

Objectives/Outcomes	Products include a compilation of TEK that relates to adaptation to environmental change; maps of culturally important resources under current and predicted climate change scenarios and strategies for their conservation; the development of community-based monitoring plans for key cultural resource(s) and a TEK website.
Lead Agencies	UH Manoa
Contacts	Tamara Ticktin, ticktin@hawaii.edu
Partnering Agencies	PICCC, PI-CSC
Projected Timelines	FY 12 start, 2 year timeline

Name	Long Range Transport Planning by Hawaii DOT and OahuMPO to Address Long Term Asset Management of Coastal Infrastructure Vulnerabilities
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Assessment and Evaluation
Sectors	- Transportation/Communication and Commerce - Community Planning and Development - Recreation and Tourism
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - State Of Hawaii
Description	Long range transport planning (23 USC 134 & 135) by Hawaii DOT and OahuMPO to address long term asset management of coastal infrastructure vulnerabilities.
Objectives/Outcomes	Statutory requirement for federal transport funds.
Lead Agencies	Hawaii DOT, OahuMPO
Contacts	Ken Tatsuguchi, Ken.Tatsuguchi@hawaii.gov Dean Nakagawa, Dean.Nakagawa@hawaii.gov Brian Gibson, Brian.Gibson@oahumpo.org
Partnering Agencies	UHM/SOEST, NOAA
Required Resources	Federal transport planning funds.

Name	Low-Flow Regionalization of Streams in Hawaii - Phase 1
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Best Practices/Guidance - Assessment and Evaluation

Sectors	- Fresh Water Resources - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii
Description	In Hawaii, management of the surface-water resources for many streams is problematic because of a lack of information on the availability of water during low-flow conditions. Knowledge of low-flow characteristics is fundamental to establishing reasonable and defensible instream-flow standards. Furthermore, the use of stream water for agriculture and municipal purposes, protection of traditional and customary Hawaiian rights, maintenance of ecologic balance, aesthetic differences between dry and flowing streams, and recreational use of the streams are factors that play a role in planning and management decisions by many agencies.
Objectives/Outcomes	This study is the first phase of a larger two-phased 7-year study with the overall objective of applying regionalization techniques to estimate low-flow duration discharges for streams at sites where streamflow data are limited or unavailable on the islands of Kauai, Oahu, Molokai, Maui, and Hawaii. The results from this study are necessary for the proper management of the surface waters in the State and, thus, the study is consistent with the mission of the USGS Science Strategy to provide citizens, communities, natural-resource managers, and policymakers with a clearer knowledge of the status of their water. This study will also assist the Hawaii State Commission on Water Resource Management in determining equitable, reasonable, and beneficial instream and off-stream uses of the surface-water resources in Hawaii.
Lead Agencies	USGS/Pacific Islands Water Science Center
Contacts	Chui Ling Cheng, ccheng@usgs.gov
Partnering Agencies	Hawaii State Commission on Water Resource Management, Hawaii Department of Hawaiian Home Lands, Office of Hawaiian Affairs
Projected Timelines	Phase 1: June 2013 through September 2015
Url	http://hi.water.usgs.gov/studies/lowflow1/

Name	Mainstreaming Gender Aspects in Climate Change Adaptation and Low-Carbon Development

Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Social and Cultural Resources
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Western North Pacific - RMI - South Pacific - Kiribati - Other South Pacific
Description	This project contributes to mainstreaming gender into climate change adaptation and low-carbon development measures in climate policy.
Objectives/Outcomes	It produces training material and over the long term will improve the adaptive capacity of local communities in Bangladesh and the Pacific region.
Lead Agencies	GenerCC–Women for Climate Justice, Centre for Global Change, SPC
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety, Budget: €451,339
Projected Timelines	2010-2013

Name	Management of Critically Endangered Dry Forest Ecosystems: A Quantitative Modeling Approach Incorporating Landscape Ecology, Fire Fuels Information and Geospatial Products
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Projections (modeling and downscaling)
ECV	- Surface (e.g., temp, precip, wind) - (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Multi-decadal (scenarios)

Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii
Description	We will model plot-based information on fuel loading, restoration treatments, and plant communities to the landscape level. This will allow us to develop scenario modeling based on land management goals (i.e., restoration of threatened and endangered habitat, fire prevention, and/or combinations of any or all of the above) and threats (invasive species, climate change, land-use change). Allows us to estimate potential fire behavior under a variety of restoration and/or climate change scenarios.
Lead Agencies	USFS, UH Manoa, DoD, CEMML, Carnegie Institution
Contacts	Susan Cordell, scordell01@fs.fed.us
Partnering Agencies	PICCC
Projected Timelines	2010-2014

Name	Mangrove Ecosystems for Climate Change Adaptation and Livelihoods (MESCAL)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Ecosystems
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- South Pacific - Fiji - Samoa - Solomon Islands - Tonga - Vanuatu
Description	The project aims to assist the five countries to effectively manage their mangrove and related coastal ecosystems to build resilience to the effects of climate change. It seeks to achieve a more coordinated and holistic approach to managing mangroves in the region, which is a new approach to be implemented in the Pacific region. The project is multi-disciplined and involves multiple stakeholders, together delivering on national mangrove conservation priorities. It is also the first step of the broader Pacific Mangroves Initiative, jointly led by IUCN and SPREP.
Lead Agencies	ICUN Oceania Regional Office, SPREP
Contacts	Bernard O'Callaghan, Regional Program Coordinator - Oceania, bernard.ocallaghan@iucn.org

Url	http://cmsdata.iucn.org/downloads/mescal_brochure_030810_compressed.pdf

Name	Mangrove Rehabilitation for Sustainably-Managed Healthy Forests (MARSH)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance
Sectors	- Community Planning and Development - Agriculture and Fisheries - Ecosystems
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- South Pacific - PNG - Solomon Islands - Vanuatu
Description	MARSH is a 5-year project that forms part of the USAID strategy for development in the Pacific region, to support Pacific Island nations as they address the negative impacts of climate change. Through MARSH, USAID will support the development of a mangrove rehabilitation project in Papua New Guinea. The envisioned project will support USAID's strategy for the Pacific by decreasing deforestation and forest degradation and increasing the resilience of communities to the negative effects of climate change. USAID anticipates that the best practices developed during years one through three will be expanded to the Solomon Islands and Vanuatu from year four.
Lead Agencies	ICUN Oceania Regional Office, USAID
Contacts	Bernard O'Callaghan, Regional Program Coordinator - Oceania, bernard.ocallaghan@iucn.org
Required Resources	USAID
Projected Timelines	5-year project
Url	http://www.iucn.org/about/union/secretariat/offices/oceania/projects/?11590/Healthy-forests

Name	Marine Ecosystem Response to Environmental Changes
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development

ECV	- Surface (e.g., SST, SSH, salinity, ocean color) - Sub-surface (e.g., temp, salinity, nutrients, carbon, phytoplankton)
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii
Description	Long-term monitoring of physical and chemical water characteristics and benthic and pelagic community structure at two established marine plots in west Hawaii island.
Lead Agencies	UH Hilo
Contacts	Steven Colbert, colberts@hawaii.edu
Partnering Agencies	PICCC
Projected Timelines	2010-2015

Name	Micronesian Adapting to a Changing Climate Outreach Toolkit
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Decision Support Tools
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Completed
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems

Regions	- Western North Pacific - CNMI - FSM - Guam - Palau - RMI
Description	In 2010, the Micronesia Conservation Trust (MCT) supported the development of community based climate change adaptation tools for the jurisdictions involved in the Micronesia Challenge (Palau, FSM, RMI, Guam, and CNMI). MCT hired consultants who have worked extensively with MCT in the past on community based natural resource management issues to help carry out the development of these tools. Based on input from this workshop, particularly regional stakeholders, the proposed outputs of this project were revised to reflect their needs to effectively carry out community-based adaptation. As such, the following products were developed to support community based climate change adaptation in Micronesia: 1) Adapting to a Changing Climate Outreach Toolkit – designed to provide community members and stakeholders with an understanding of climate change concepts and promote adaptation planning and strategies among community leaders and members; 2) Revised PIMPAC management planning guidance – to incorporate climate change adaptation into the existing process they use to guide communities through natural resource management planning.
Lead Agencies	Micronesia Conservation Trust
Contacts	Liz Terk, Conservation Program Manager, Conservation@ourmicronesia.org
Url	http://www.ourmicronesia.org/index.php/about/our-programs/capacity-building/

Name	Modeling Climate-driven Changes to Dominant Vegetation in the Hawaiian Islands
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development - Projections (modeling and downscaling)
ECV	- Surface (e.g., temp, precip, wind) - (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Intra-annual to Decadal
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii

Description	This study will use quantitative vegetation plot data to model dominant vegetation composition. Rather than model probability of occurrence, we aim to generate species-specific models of abundance based on independent variables (rainfall, elevation, substrate age, slope, etc.) using multivariate methods. Species abundance models can then be applied to adjusted climate landscapes in concert with ongoing climate model downscaling efforts. Additional data on growth, reproductive, and dispersal rates of focal species will inform the rates of different species transitions. This will permit us to predict changes to individual dominant species such that the combined models will elucidate potential dominant vegetation even for non-analog climates.
Lead Agencies	UH Hilo, USGS/PIERC
Contacts	Jonathan Price, jpprice@hawaii.edu James D Jacobi, jjacobi@usgs.gov
Partnering Agencies	PI-CSC
Projected Timelines	FY 12 start, 2 year timeline
Url	https://nccwsc.usgs.gov/display-project/4f8c650ae4b0546c0c397b48/501190e1e4b0d78fd4e59ba8

Name	Monitoring Annual Summer Bleaching in Backreef Pools of Tutuila, American Samoa
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Observing Systems, Data Stewardship, Data Services - Research/Development
Timeframe	- Intra-annual to Decadal
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Observing Systems, Data Stewardship, Data Services - Research/Development
Sectors	- Ecosystems
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- South Pacific - American Samoa
Description	Annual coral bleaching is monitored in two backreef pools on Tutuila, at the airport and the village of Alofau. Bleaching typically happens each Austral summer. Bleaching prevalence is estimated every few weeks based on a one hour swim over a standard route.
Objectives/Outcomes	Plot of bleaching prevalence over each year. Eight years of data have been collected so far. One publication so far: Fenner, D., and S. Heron. 2009. Annual summer mass bleaching of a multi-species coral community in American Samoa. Proceedings of the 11th International Coral Reef Symposium, Ft. Lauderdale. 1289-1293.

Lead Agencies	Territorial Coral Reef Monitoring Program, Dept. Marine & Wildlife Resources, American Samoa Government
Contacts	Douglas Fenner, douglasfennertassi@gmail.com
Partnering Agencies	NOAA/CRCP (coral reef monitoring grant)
Required Resources	The entire monitoring budget is about $140,000 per year, but includes all reef monitoring activities.
Projected Timelines	Began late 2003, ongoing indefinite.
Feedback/Evaluation	Peer review of papers.

Name	Monitoring Marine Biodiversity in the Pacific Islands
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Observing Systems, Data Stewardship, Data Services - Research/Development
ECV	- Sub-surface (e.g., temp, salinity, nutrients, carbon, phytoplankton)
Status	- Proposed
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii - Western North Pacific - CNMI - FSM - Guam - Palau - RMI - South Pacific - American Samoa

Description	Changes in biodiversity and the impacts to marine calcifiers are biological responses to climatic trends in the Pacific. An established systematic and standardize tool currently used to monitor biodiversity in the Pacific is the Autonomous Reef Monitoring Structure (ARMS). ARMS were developed by the NOAA Pacific Islands Fisheries Science Center's Coral Reef Ecosystem Division (CRED) as part of the Census of Marine Life's Census of Coral Reefs project. ARMS are a long-term collecting device designed to mimic the structural complexity of a coral reef and attract colonizing invertebrates. Through taxonomic identification and mass sequencing technologies they provide a consistent and comparable method to measure and monitor the biodiversity of these understudied organisms over time. They enhance ecosystem-based management and increase the ability to monitor and predict ecological impacts in response to natural and anthropogenic stressors. In conjunction with measured climatic variables such as temperature and salinity, ARMS could help advance our understanding of the relationship between climate variables and biodiversity. Currently, over 500 ARMS units are placed strategically throughout the Pacific, Indian, and Atlantic Oceans with the majority at sites in the Pacific. To help facilitate the data produced from each ARMS unit, an ARMSbase web-enabled biodiversity information system has been proposed. The ARMSbase would house all information related to the ARMS which would include all metadata related to deployment, retrieval, and processing as well as the raw taxonomic and molecular sequence information. This information can then be applied and related to physical climate variables collected across the Pacific to investigate the relationships between biodiversity and Pacific climate trends.
Objectives/Outcomes	1) Construct ARMSbase web-enabled biodiversity information system; 2) Advance our understanding of biodiversity changes in relationship to climate variables.
Lead Agencies	NOAA/PIFSC/CRED, JIMAR
Contacts	Annette DesRochers, Annette.DesRochers@noaa.gov Russell Brainard, Rusty.Brainard@noaa.gov
Partnering Agencies	1) Scripps Institution of Oceanography, Australian Institute of Marine Science, and NOAA/PIFSC/Coral Reef Ecosystem Division will provide input to and feedback on the ARMSbase data model. Biological data models used for similar projects can also be provided; 2) NOAA/PIFSC/Coral Reef Ecosystem Division will provide standardized ARMS units for field studies by partners and also will provide deployment and recovery support for ARMS sites in the U.S. Pacific; 3) Hawaii Institute of Marine Biology will provide use of their molecular laboratory facilities.
Required Resources	Financial or in-kind support for database development specialist and administrator. Financial or in-kind support for web hosting services. Support for a post doctoral researcher (environmental information systems, data modeler, marine biodiversity, or marine invertebrates).
Projected Timelines	1-2 years
Feedback/Evaluation	Availability of raw, in-process, and summarized data products from ARMS deployed in the Pacific and beyond.
Url	http://www.pifsc.noaa.gov/cred/arms.php

Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Observing Systems, Data Stewardship, Data Services - Operational Products and Services - Research/Development - Historical Observations (hindcasts/climatologies)
ECV	- Surface (e.g., temp, precip, wind) - Surface (e.g., SST, SSH, salinity, ocean color)
Timeframe	- Seasonal (outlook)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Historical Observations (hindcasts/climatologies) - Climate Adaptation - Policies and Legislation
Sectors	- Public Health and Safety - Fresh Water Resources - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - State Of Hawaii - Western North Pacific - CNMI - FSM - Guam - Palau - RMI
Description	The PEAC Center conducts a monthly conference call that discusses monthly sea level, the ENSO state, the PEAC rainfall outlook, and island reports from around the South Pacific.
Objectives/Outcomes	1) Review impacts of ENSO and climatic events; 2) Learn from past climatological and weather events; 3) Improve effectiveness of communication between weather experts; 4) Plan for future events accordingly; 5) Empower local governments with weather and climate knowledge to make correct decisions; 6) Maintain a database of weather information and observations on the islands affiliated with PEAC.

Lead Agencies	National Weather Service, PEAC Center
Contacts	LTJG G. Carl Noblitt , peac@noaa.gov
Partnering Agencies	The PEAC Center Officer collects rainfall data, prepares several power points for the participants, constructs the rainfall seasonal outlook using several models, then conducts the call. Participants and contributors to the call include Weather Service Office Focal points form Majuro, Yap, Guam, American Samoa, Chuuk, Pohnpei, Kwajalein, and Palau. Other participants include representatives of IRI, CPC, WERI, USPaCOM (DoD), USDM, a Sea Level Research Scientist, a UH Meteorology graduate program student, and PacRISA.
Required Resources	The PEAC Center benefits from being continually staffed with a lead officer, a graduate student, and a research scientist. The relationship between individuals associated with the audio conference call is very important. Communication must remain open for optimal outcomes and objectives.
Projected Timelines	Ongoing
Feedback/Evaluation	Yearly questionnaires have been sent to participants of the discussion for feedback. Adjustments are made as suggested through these questionnaires.
Url	http://www.prh.noaa.gov/peac/discussion.php

Name	Ocean Acidification and Impacts on Living Marine Resources within the Rose Atoll, Marianas Trench and Pacific Remote Island Areas National Marine Monuments
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development
ECV	- Sub-surface (e.g., temp, salinity, nutrients, carbon, phytoplankton)
Timeframe	- Intra-annual to Decadal
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Research/Development
Sectors	- Agriculture and Fisheries - Ecosystems
Status	- Completed
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - Pacific Remote Islands - Western North Pacific - CNMI - South Pacific - American Samoa

Description	This is a NOAA Hollings scholar project hosted by the NMFS Pacific Island Fisheries Science Center in the June-July 2011 time frame. It is basically an undergraduate project on ocean acidification and impacts on living marine resources within the Rose Atoll, Marianas Trench and the Pacific Remote Island Areas National Marine Monuments. Impacts include: environmental degredation; change in species dynamics; effects of environmental degradation and changes in species dynamics; and effects on humans.
Objectives/Outcomes	Poster
Lead Agencies	NOAA/NMFS/Pacific Island Fisheries Science Center
Contacts	Eric Breuer, eric.breuer@noaa.gov
Partnering Agencies	FWS
Required Resources	NOAA Hollings scholar project sponsored by NOAA/OESD.
Projected Timelines	June-July 2011

Name	Opihi Partnership
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Social and Cultural Resources - Agriculture and Fisheries
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii
Description	Community-based effort to monitor intertidal communities through time and better manage cultural and natural resources.
Lead Agencies	TNC, CI, State of Hawaii, NPS, NOAA, local communities
Contacts	Rob Toonen, toonen@hawaii.edu
Partnering Agencies	PICCC
Projected Timelines	2008-?

Name	Options for Implementing the Hawaii State Planning Act Climate Change Adaptation Priority Guidelines - Draft Report
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Best Practices/Guidance - Policies and Legislation

Sectors	- Public Health and Safety - Energy - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - State Of Hawaii
Description	The purpose of this report is to present to the Ocean Resources Management Plan (ORMP) Integrated Planning Committee of the State of Hawaii Office of Planning (OP) and to Hawaii's four Counties, a preliminary discussion of potential options for implementing the Climate Change Adaptation (CCA) Priority Guidelines. Based in part on interviews with key State and County government agency personnel conducted in 2012, this report seeks to identify and assess a suite of management tools. These tools may aid not only in implementing the CCA Priority Guidelines, but may also serve as an effective first generation sea level rise adaptation strategy for Hawaii. The options presented in this report are not exhaustive and are intended to facilitate dialogue that will contribute to sea level rise adaptation guidance. The options must undergo further prioritization, refinement, and adjustment to the land use management process of each County prior to implementation. In addition, issues such as cost, resource allocation, and administrative feasibility must be more thoroughly identified and addressed.
Lead Agencies	NOAA Coastal Resilience Networks (CRest) Program, State of Hawaii Office of Planning, University of Hawaii William S. Richardson School of Law
Contacts	http://planning.hawaii.gov/hawaii-state-planning-act/
Required Resources	The project is funded by the NOAA Coastal Resilience Networks (CRest) Program, grant number NA11NOS4730130.

Feedback/Evaluation	This! draft!report!is!intended!for!distribution!to!and!review!by!the!State!of!Hawai‘i! Office!of!Planning ! Ocean!Resources!Management!Plan!(ORMP)!Working!Group,!Integrated! Planning!Committee ,!and!the! county!planning! departments . ! This draft report does not represent the official position of the State of Hawaii Office of Planning at this time. The report is a starting point for further developing and implementing climate change, and particularly sea level rise, adaptation guidance at the state and county levels.
Url	http://www.islandclimate.net/wp-content/uploads/2012/09/Climate-Change-Adaptation-Priority-Guidelines.pdf

Name	Pacific Adaptation to Climate Change (PACC)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Policies and Legislation
Sectors	- Public Health and Safety - Fresh Water Resources - Transportation/Communication and Commerce - Community Planning and Development - Agriculture and Fisheries
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience

Regions	- Western North Pacific - FSM - Palau - RMI - South Pacific - Cook Islands - Fiji - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific
Description	The Pacific Adaptation to Climate Change (PACC) Programme is the first major climate change adaptation initiative in the Pacific region. Since it began in 2009 the Programme has been laying the groundwork for more resilient Pacific communities that are better able to cope with climate variability today and climate change tomorrow. The Programme approaches this from two directions: it is working to enhance adaptive capacity on the ground, and it is driving the mainstreaming of climate risks into national development planning and activities. Working in 14 Pacific island countries, the Programme is demonstrating best-practice adaptation in three key climate-sensitive areas: coastal zone management, food security and food production, and water resources management. Each country is hosting a pilot project in one of these theme areas to demonstrate how climate change adaptation can work on the ground. The PACC country projects showcase best practice adaptation within the 14 countries. Five projects are focusing on coastal zone management, four on food production and food security, and five on water resources management. The projects are community oriented and gender sensitive. They are using the latest tools and processes to ensure that they combine the best science available with the realities faced by communities. Early in the process the project teams carried out vulnerability and adaptation (V&A) assessments to ensure the project addressed the priority needs of the communities in view of the climate risks they face. The projects were also assessed economically using cost–benefit analysis. As the projects progress, the project teams are producing technical guidelines to guide future adaptation work in coastal zone management, food production and food security, and water resources management.
Objectives/Outcomes	Project activities and outputs are diverse, but all projects are delivering real solutions that work for people and their environments, and help them to face an uncertain future.
Lead Agencies	SPREP
Contacts	PACC Project Manager, Peniamina Leavai, peniaminal@sprep.org
Partnering Agencies	GEF, UNDP, Australian Government

Url	http://www.sprep.org/pacc

Name	Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Observing Systems, Data Stewardship, Data Services - Research/Development - Projections (modeling and downscaling) - Climate Adaptation - Training and Capacity Building, Education, Outreach - Decision Support Tools - Assessment and Evaluation
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Western North Pacific - FSM - Palau - RMI - South Pacific - Cook Islands - Fiji - Kiribati - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific

Description	The Asian Development Bank (ADB), the Secretariat of the Pacific Community (SPC), and the World Bank jointly launched the Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI) in 2007 to increase the financial resilience of Pacific DMCs to natural disasters and to enable them to better cope with the aftermath of such events. The PCRAFI aims to: 1) develop a regional catastrophe risk insurance pool to enhance the capacity of Pacific DMCs to manage natural disasters; 2) provide immediate liquidity resources to restore essential services to countries affected by natural disasters; and 3) assist with recovery and reconstruction activities. The technical assistance aims to respond to this request by assisting Fiji, PNG, Samoa, Solomon Islands, Tonga, and Vanuatu, to build their capacity in mainstreaming climate change and natural disaster risks into urban and infrastructure planning using available data and risk models.
Lead Agencies	Asian Development Bank (ADB), Secretariat of the Pacific Community (SPC), World Bank (WB)
Contacts	Allison Woodruff, Urban Development Specialist, Pacific Department ADB, awoodruff@adb.org
Url	http://pcrafi.sopac.org/

Name	Pacific Islands Climate Change Cooperative (PICCC)
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development - Historical Observations (hindcasts/climatologies) - Projections (modeling and downscaling) - Training and Capacity Building, Education, Outreach
ECV	- Surface (e.g., temp, precip, wind) - Surface (e.g., SST, SSH, salinity, ocean color) - Sub-surface (e.g., temp, salinity, nutrients, carbon, phytoplankton) - (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Seasonal (outlook) - Intra-annual to Decadal - Multi-decadal (scenarios)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Research/Development - Historical Observations (hindcasts/climatologies) - Projections (modeling and downscaling) - Climate Adaptation - Training and Capacity Building, Education, Outreach - Assessment and Evaluation

Sectors	- Community Planning and Development - Social and Cultural Resources - Ecosystems
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii - Western North Pacific - CNMI - FSM - Guam - Palau - RMI - South Pacific - American Samoa
Description	The research program of the PICCC is focused on providing original science products and syntheses that will assist managers of natural and cultural resources in adapting to climate change and related large-scale threats. The PICCC seeks to coordinate its research program with other entities funding and disseminating basic and applied science in the Pacific Islands. The PICCC awards research grants through annual solicitations, directly funds specialized projects, and creates products in-house. The research results are then disseminated to our Members and external partners via workshops and trainings, presentations, and publications. In this way the PICCC fosters a dialogue across our membership and with key stakeholders, thus supporting a community of learning that can adapt to new knowledge and practices.
Objectives/Outcomes	Current projects include: climate model downscaling for Hawaii; observations of montane climate and related vegetation changes across and above the trade-wind inversion; development of rainfall and temperature proxies; future sea-level and wave impacts to wetlands and coastlines; basin- and archipelago-scale oceanographic climatologies; coral responses to changes in temperature, ocean chemistry and light in both laboratory and field conditions, and projections of such impacts for the Pacific Basin; effects of environmental change on forest birds and seabirds; a watershed model that integrates effects of invasive species and climate change; the role of Hawaiian traditional ecological knowledge in community resiliency to climate change; and a climate change vulnerability assessment for the native Hawaiian flora and forest birds using a new Bayesian network approach.
Lead Agencies	HCA, USFWS, USGS, NPS, NOAA, OIA
Contacts	Jeff Burgett, Science Manager, jeff.burgett@piccc.net Deanna Spooner, Coordinator, deanna.spooner@piccc.net

Url	http://piccc.net/

Name	Pacific Islands Climate Change Social Network Analysis
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Assessment and Evaluation
Sectors	- Social and Cultural Resources
Status	- Completed
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii - Western North Pacific - CNMI - FSM - Guam - Palau - RMI - South Pacific - American Samoa
Description	More than 1,000 climate change professionals in the Pacific Islands were invited to complete a network analysis survey on climate change connectedness between December 2012 and March 2013. The survey solicited information about professional and personal demographics, network connectedness, climate change risk perception and resiliency, and sense of community. Using network analysis methods, East-West Center and Pacific RISA researchers tracked information flows, key hubs, and isolated groups to map out the strengths and gaps in the flow of climate information in the region. The project is supported by NOAA and the DOI Pacific Islands Climate Science Center (PI-CSC).

Objectives/Outcomes	A network of 966 individuals was identified across the region from 340 completed surveys. The average distance across the network was three people, meaning that any single individual is only three connections away from all others. While Hawaii contained the majority of network members, even small networks still proved to be highly connected. The analysis identified strong country clusters, as well as many strong connections between clusters. High resolution network maps are published online and show broad trends of connection and centrality within the network. Users across the region can download these maps to locate particular individuals, colleagues, or friends and see their connections to others. When considering future collaborations, they can explore who knows who throughout the series of Pacific Islands, who are connected both spatially and by profession.
Lead Agencies	East-West Center (EWC), Pacific Regional Integrated Sciences and Assessments (Pacific RISA)
Contacts	Kati Corlew, corlewk@eastwestcenter.org
Partnering Agencies	NOAA, DOI Pacific Islands Climate Science Center (PI-CSC)
Projected Timelines	2012-2013
Url	http://www.pacificrisa.org/projects/social-network-analysis/

Name	Pacific Islands Climate Education Partnership (PCEP)
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Training and Capacity Building, Education, Outreach
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Decision Support Tools
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems

Regions	- Central North Pacific - State Of Hawaii - Western North Pacific - CNMI - FSM - Guam - Palau - RMI - South Pacific - American Samoa
Description	Funded by the National Science Foundation (NSF), the Pacific Islands Climate Education Partnership (PCEP) has developed a detailed strategic plan to collaboratively improve climate knowledge among the region's students and citizens in ways that exemplify modern science and indigenous environmental knowledge, address the urgency of climate change impacts, and honor indigenous cultures. Students and citizens within the region will have the knowledge and skills to advance understanding of climate change, and to adapt to its impacts. Core PCEP partners contribute expertise in climate science, the science of learning, the region's education infrastructure, and the region's cultures and indigenous knowledge and practices. PCEP's interactive web-based environment interlinks the region's locations, organizations and people with information about climate science and climate impacts. This system enables the region's diverse stakeholders to access and contribute to the same information pool. This web-based environment both supports the development of PCEP resources such as the CEF and their continuing evolution and dissemination.
Objectives/Outcomes	(i) A Climate Education Framework (CEF) that focuses on the content and skills necessary for understanding the science of global and Pacific island climates, as well as the adaptation to climate impacts in the USAPI region. The CEF is updated annually to reflect new scientific knowledge, and gathered indigenous knowledge and practices. The CEF also will have addenda in seven Pacific languages that assist educators in learning about and teaching concepts and practices in the CEF for each grade span. (ii) Protocols for gathering indigenous knowledge for use in teacher professional development, community-school partnerships and for integration into the CEF. Local indigenous knowledge and practices gathered using the protocols and validated in the region. (iii) A college-based Climate Education Certificate Program for credit to increase educators' science, technology, engineering and mathematics (STEM) pedagogical content knowledge and skills about climate science and adaptation. (iv) Professional learning programs provided by project partners that increase teachers' STEM pedagogical content knowledge and skills about climate science and adaptation. (v) Identification, modification and dissemination of curricular materials that focus on climate science content and adaptation skills that incorporate learning strategies relevant to USAPI communities. (vi) Community-school partnerships that support project-based learning activities that strongly connect community adaptation planning and implementation with teaching and learning about climate in K-14 schools.

Lead Agencies	Pacific Resources for Education and Learning, WestEd, University of Hawaii, College of the Marshall Islands
Contacts	Sharon Nelson-Barber, nelsons@prel.org Art Sussman, asussma@wested.org Chip Fletcher, fletcher@soest.hawaii.edu Don Hess, cmihess@grmail.com
Partnering Agencies	(i) The ministries or departments of education in each of the USAPI entities – inform and support the implementation of the PCEP strategic education plan. (ii) Universities and community colleges across the region – inform and support the implementation of the PCEP strategic education plan. (iii) Nonprofit organizations and networks throughout the region that have a focus related to climate, climate change impacts, and adaptation strategies – inform and support the implementation of the PCEP strategic education plan.
Required Resources	Funding from the National Science Foundation. Any supplemental funding to expand and sustain the work.
Projected Timelines	September 2012 through August 2017
Feedback/Evaluation	Project includes a variety of formative and summative evaluation instruments coordinated and implemented by the outside evaluator, Mekinak Consulting.
Url	http://pcep.dsp.wested.org

Name	Pacific Islands Climate Prediction Project
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Operational Products and Services - Research/Development - Training and Capacity Building, Education, Outreach
ECV	- Surface (e.g., temp, precip, wind)
Timeframe	- Seasonal (outlook)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Decision Support Tools
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Agriculture and Fisheries - Recreation and Tourism
Status	- Completed
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience

Regions	- South Pacific - Cook Islands - Fiji - Kiribati - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific
Description	The project aimed to expand understanding of how seasonal climate prediction services can be applied to support climate-sensitive decision making and the use of climate predictions by National Meteorological Services and industries/agencies which use climate information (e.g., farmers, tourism, water resource managers and health authorities).
Objectives/Outcomes	Along with the provision of software tailored to local circumstances and training in the effective use of climate predictions in a risk management context, the project undertook specific pilot activities.
Lead Agencies	Australia Bureau of Meteorology
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	AusAID, Budget: AU$3.0 million
Projected Timelines	Phase I: 2004–2006, Phase II: 2007–2009

Name	Pacific Mangroves Initiative
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Ecosystems
Status	- Ongoing

Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- South Pacific - Fiji - Samoa - Solomon Islands - Tonga - Vanuatu
Description	In this project, data will be collected and analyzed to identify climate risks and assist participating countries to create policies for management and restorations of mangroves and associated ecosystems. Public awareness will also be part of the project.
Lead Agencies	IUCN, University of the South Pacific, SPREP
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	German Federal Environment Ministry, Budget: €2,297,249
Projected Timelines	2009-2013

Name	Pacific Regional Integrated Sciences and Assessments (Pacific RISA)
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development - Projections (modeling and downscaling)
ECV	- Surface (e.g., temp, precip, wind) - Upper-Air
Timeframe	- Intra-annual to Decadal - Multi-decadal (scenarios)

Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Research/Development - Projections (modeling and downscaling) - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Decision Support Tools - Policies and Legislation - Assessment and Evaluation
Sectors	- Public Health and Safety - Fresh Water Resources - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Ecosystems
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - State Of Hawaii - Western North Pacific - CNMI - FSM - Guam - Palau - RMI - South Pacific - American Samoa
Description	The major goal of Pacific RISA is to integrate flexible processes for building adaptive capacity to climate variability and change in diverse island settings. Our region includes Hawaii and the U.S.-Affiliated Pacific Islands (American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Federated States of Micronesia, Republic of the Marshall Islands, Republic of Palau).
Objectives/Outcomes	Pacific RISA has three interrelated research, assessment, and outreach objectives, with projects planned to address each objective: 1) Conduct place-based assessment of adaptation strategies and community needs; 2) Support the implementation of adaptation strategies for Pacific Island communities; and 3) Evaluate adaptation plans and policy making in the Pacific Region.
Lead Agencies	East-West Center (EWC)

Contacts	Victoria Keener, EWC, Lead Investigator, KeenerV@EastWestCenter.org
Partnering Agencies	UH IPRC, UH WRRC, PEAC, NWS, NOAA NCDC, Hawaii Drought Council, Hawaii Climate Change Task Force, USGS, PICCC, Office of Environmental and Emergency Management, Office of the President, Federated States of Micronesia, and Office of Environmental Response and Coordination, Office of the President, Palau
Required Resources	Pacific RISA received new funding from the NOAA Climate Programs Office, beginning 9/1/10, for five years. We are also leveraging resources from partner institutions and will apply for new funds to expand our activities as opportunities arise.
Projected Timelines	Most projects and activities focus on Hawaiian locations in Yrs 1-2 and in Year 3 were expanded to include Guam and American Samoa. Other locations in the region will be added in later years.
Feedback/Evaluation	Pacific RISA has an Advisory Board (meets twice a year). We also have internal performance metrics and a consultant to conduct an external evaluation. We will also solicit stakeholder feedback informally and modify our activities as needed in an iterative fashion.
Url	http://www.pacificrisa.org/

Name	Pacific RISA Climate Adaptation Law and Policy Analysis
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Decision Support Tools - Policies and Legislation
Sectors	- Public Health and Safety - Fresh Water Resources - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought
Regions	- Central North Pacific - State Of Hawaii - South Pacific - American Samoa

Description	As of December 2013, the law and policy research team is analyzing water issues and policies in American Samoa, with the goal to evaluate adaptive tools in a U.S. Pacific Island context beyond Hawaii. As new scientific information about water resources becomes available, researchers will need to know how that information can be utilized in a policy and management context. A better understanding of the law and policy framework, cultural context, and local knowledge and information gaps can help the WRRC set priorities for research and monitoring and also can inform the design and delivery of products and tools for water managers. Mr. Wallsgrove and Mr. McIntosh are investigating American Samoa's water resource issues and policies. Steps to date include: (1) gathering and reading relevant literature (e.g., existing water resource work, climate adaptation plans, and peer-reviewed literature on existing legal structures, climate science, and water science); and (2) holding informational meetings and conference calls with resource managers and other on-the-ground experts. After reviewing themes that emerge during this early scoping phase, researchers will compile a report identifying information needs and several options for potential next steps. This report will serve as the foundation for making decisions, in consultation with the Pacific RISA team, about the best research direction to pursue in response to stakeholder needs.
Objectives/Outcomes	1) Analyze the application of Hawaii's current regulations and policies, including the 1987 Hawaii State Water Code and resulting water plans, that control the allocation, supply, infrastructure, maintenance and monitoring of water use in Hawaii, with the goals to understand and measure the ways in which the current framework addresses—or fails to address—the need to implement water resource management strategies with the ability to adapt to climate-driven vulnerabilities in Hawaii's water system. 2) Present the legal analysis and adaptive tools developed in Year 1 and gather feedback through a series of workshops to ground truth the findings with focused groups of stakeholders. 3) Assist stakeholders in implementing select adaptive tools and overcome perceived legal and technical hurdles to allow the tools to be used effectively. 4) Refine the stakeholder-driven research methods and apply similar methods to develop case studies for other island locations, such as a neighbor island in Hawaii and a location in Guam, American Samoa or another USAPI. 5) Make the findings of the white paper, Water Resources and Climate Change Adaptation in Hawaii: Adaptive Tools in the Current Law and Policy Framework, available to Hawaii community members, other Pacific Island and U.S. jurisdictions, as well as the climate change and policy research communities.
Lead Agencies	Center for Island Climate Adaptation and Policy (ICAP)
Contacts	Richard Wallsgrove, richard.wallsgrove@gmail.com R. Duncan McIntosh, mcintosr@eastwestcenter.org Melissa Finucane, FinucanM@EastWestCenter.org

Partnering Agencies	The East West Center is the lead institution for Pacific RISA, Phase II. ICAP collaborates on decision-maker outreach with Dr. Melissa Finucane, Senior Fellow at the East West Center, and Pacific RISA project staff. Other Pacific RISA partners include the International Pacific Research Center (IPRC) and the Water Resources Research Center (WRRC). A number of federal programs and agencies also provide scientific information and advise on stakeholder outreach. They include the NOAA IDEA Center, USGS, Pacific Islands Climate Change Cooperative (PICCC), and NOAA National Weather Service.
Required Resources	This work is supported by funding from the National Oceanic and Atmospheric Administration for the Pacific RISA Program, under grant number NA10OAR4310216. The ICAP team comprises an affiliate attorney who conducts the legal research and analysis, with assistance from a legal research assistant. A project manager is essential to ensure project deadlines are met, organize outreach events and meetings, and assist in the production of documents. Assistance from the East-West Center, particularly from Senior Fellow Dr. Melissa Finucane and Fellow Dr. Victoria Keener, has been essential to stakeholder engagement efforts (interviews, survey, and workshop planning).
Projected Timelines	In project years 1-2, October 2010 - August 2012, the timeline included three phases (research, writing, and outreach), which overlap at various points throughout the project. The research phase, spanning March 2011 – May 2011 encompassed an initial literature review, interviews and surveys with local decision-makers, and development of an outline for the written product. In the writing phase, May 2011 – November 2011, a draft was completed and sent to stakeholder reviewers. The document was refined and published November 2011 – February 2012. Outreach to decision-makers continued in March 2012 – August 2012 with workshops, presentations, and media outreach. In 2013, Project Assistant R. Duncan McIntosh joined the law and policy research team to analyze water issues and policies in American Samoa, with the goal to evaluate adaptive tools in a U.S. Pacific Island context beyond Hawaii.
Feedback/Evaluation	Evaluation is a core activity of the Pacific RISA program. Lead by Susi Moser, an independent consultant and scientist, the team's evaluation activities will assess the process, outputs, and outcomes of the Pacific RISA program. We plan a two-pronged but not sequential evaluation effort. The first prong will comprise an external evaluation of the role of Pacific RISA in progressing adaptation planning in Hawaii and constitute a discrete project. We will focus on Hawaii in part for logistical and cost reasons but also because Hawaii is where much of our initial work on integrating biophysical and social science and indigenous/local knowledge will take place. In addition, we will develop self-evaluation criteria to be administered in each year of the program and use the findings to refine our goals and methods region-wide.
Url	http://seagrant.soest.hawaii.edu/sites/seagrant.soest.hawaii.edu/files/publications/sm_climatechangelawandpolicy.pdf

Name	Pacific Storms Climatology Products (PSCP)

Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Observing Systems, Data Stewardship, Data Services - Operational Products and Services - Research/Development - Historical Observations (hindcasts/climatologies)
ECV	- Surface (e.g., temp, precip, wind) - Surface (e.g., SST, SSH, salinity, ocean color)
Timeframe	- Intra-annual to Decadal - Multi-decadal (scenarios)
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin
Description	Pacific Storms is focused on improving our understanding of patterns and trends of storm frequency and intensity - storminess - within the Pacific region. It is exploring how the climate-related processes that govern extreme storm events are expressed within and between three thematic areas: heavy rains, strong winds, and high seas. It is developing a suite of extremes climatology-related data and information products that can be used by emergency managers, mitigation planners, government agencies and decision-makers in key sectors including water and natural resource management, agriculture and fisheries, transportation and communication, and recreation and tourism. In-situ station products include the delineation of rates of sea level rise and high water return periods, as well as changes in the frequency of both short-lived intense rainfall events and extended periods of heavy rains and the linkages of these patterns and trends to climate indices. Observational data used to support product development are taken from standard holdings. In addition to the basic product set, special attention is being given to climate indices-related products that describe the relationship between extremes and climate, primarily through the correlation of extremes indicators and climate indices known to have relevance to the Pacific region (e.g., the Multivariate ENSO Index (MEI); the Pacific Decadal Oscillation Pacific Decadal Oscillation (PDO); the North Pacific Index (NPI); etc.) as well as the formulation of new integrated and/or regional indices.

Objectives/Outcomes	Users are able to explore how extreme events have been expressed historically and may be expected to be expressed in a changing climate. Such information is critical to risk assessment scenario development in support of coastal land-use planning and resource management. It also forms the basis for establishing infrastructure (e.g., roads, water, sewer) design criteria, among other things. The ultimate outcome of this effort will be a reduction in the vulnerability to the economic, social, and environmental risks associated with coastal storms, as decision-makers in the Pacific Islands are provided with high quality science-based information that enables them to understand, anticipate, and adapt to risks associated with coastal storm-related extreme events in the context of a changing climate: 1) A broad suite of in-situ station and remotely-sensed derived-data products for much of the Pacific Basin; and 2) The formulation of new integrated and/or regional climate indices.
Lead Agencies	NOAA/NCDC/Regional Climate Services
Contacts	John Marra, john.marra@noaa.gov
Partnering Agencies	Pacific Storms is a collaborate effort involving a group of recognized agency and university-based experts in the area of climate-related processes that govern storminess. Strong winds, heavy rains, and high seas theme-specific teams have been formed to create derived data products. These teams include representatives from the NOAA National Climatic Data Center (NCDC), Center for Operational Oceanographic Products and Services (CO-OPS), and Coastal Services Center (CSC) through the Coastal Storms Program and UH SeaGrant, as well as the University of Hawaii Sea Level Center, University of British Columbia, University of Guam, and Oregon State University.
Required Resources	Funding is provided by the NOAA National Climatic Data Center (NCDC) and Coastal Services Center (CSC) through the Coastal Storms Program and UH SeaGrant and distributed to a range of agencies, institutions, and organizations in both the public and private sector in with a corresponding range of technical expertise in order to support data analysis and product development. The collaborative nature of this effort ensures that this project is leveraging NOAA and/or non-NOAA resources.
Projected Timelines	1) A broad suite of in-situ station and remotely-sensed derived-data products for much of the Pacific Basin. Most recent update Winter 2011. 2) The formulation of new integrated and/or regional climate indices. On-going.
Feedback/Evaluation	•Informal and formal requests for review and comment from users at various stages in the process. 1) Presentations and publications. 2) Regular project planning meetings with the project team. 3) Observed user response, including website hits and requests for information. 4) Number, type, geographic extent of stations/products.
Url	http://www.pacificstormsclimatology.org/

Name	Papua New Guinea Disaster Risk Management and Climate Adaptation Program

Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Assessment and Evaluation
Sectors	- Transportation/Communication and Commerce - Agriculture and Fisheries
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - PNG
Description	This project will concentrate on disaster risk management in the agriculture and transport sectors.
Objectives/Outcomes	The following activities will take place: 1) Agriculture: assessment of climate change and disaster risks; feasibility study for agriculture risk insurance for smallholder farmers; emergency response plan; crop selection; and strengthening rural agriculture networks; 2) Transport sector: integrated hazard risk information and mapping; capacity building; research; risk assessment; pilot mitigation measures.
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	GFDRR, Budget: US$1,873,200
Projected Timelines	2011-2014

Name	Pilot Program for Climate Resilience (PPCR)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Policies and Legislation
Sectors	- Community Planning and Development
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience

Regions	- South Pacific - PNG - Samoa - Tonga - Global
Description	PPCR aims to pilot and demonstrate ways in which climate risk and resilience may be integrated into core development planning and implementation in a way that is consistent with poverty reduction and sustainable development goals. In this way, the PPCR provides incentives for scaled-up action and initiates transformational change. The pilot programs and projects implemented under the PPCR are country-led, build on NAPAs and other relevant country studies and strategies. Pacific participation includes Papua New Guinea, Samoa, Tonga. In Tonga: Investment plan in development.
Lead Agencies	World Bank
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	World Bank Strategic Climate Fund, Budget: US$971.75 million pledged as of February 2011
Projected Timelines	2008-?

Name	Piloting Climate Change Adaptation to Protect Human Health (PCCAPHH)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation - Assessment and Evaluation
Sectors	- Public Health and Safety - Community Planning and Development
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Fiji

Description	The Piloting Climate Change Adaptation to Protect Human Health project is underway in Fiji (one of seven countries participating in this global pilot project). This project has been designed to increase the Ministry of Health's capacity to monitor, assess and respond to hydro-meteorological disasters and climate sensitive diseases and thus reduce health risks associated with climate change and variability. In order to be able to achieve this goal, several specific needs have been identified: mainstreaming and planning; evaluation; assessments; and response.
Objectives/Outcomes	1) An early warning system providing reliable information on likely incidence of climate sensitive health risks. 2) Capacity of health sector institutions to respond to climate sensitive health risks based on early warning systems improved. 3) Disease prevention measures piloted in areas of heightened health risk due to climate change.
Lead Agencies	WHO/Division of Pacific Technical Support/South Pacific Office
Contacts	Jyotishma Naicker, Project Coordinator, naickerj@wpro.who.int
Partnering Agencies	GEF/Special Climate Change Fund
Required Resources	550,000 USD
Projected Timelines	2010-2014
Url	http://www.who.int/globalchange/projects/adaptation/en/index4.html

Name	PIMPAC Climate Change Adaptation Tool Kit Training
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Training and Capacity Building, Education, Outreach
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Community Planning and Development - Agriculture and Fisheries - Ecosystems
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Western North Pacific - FSM - Guam - Palau

Description	PIMPAC aims to address CC challenges by facilitating Pacific island communities and managers who support them through a process that assesses their most pressing needs, provides a suite of tools to address those needs, and prioritizes actions that can be taken at the community level. Currently, trainings are being conducted in each Micronesian jurisdiction on how to deliver these materials and how to use the revised PIMPAC management planning and adaptation guidebook to carry out a management and adaptation planning process including a vulnerability assessment. The first training took place in the Republic of the Marshall Islands from August 22-26 2011. Similar trainings were also conducted in Republic of Palau and all the Federated Stated of Micronesia. Follow up work is being planned by Core Teams in each location.
Objectives/Outcomes	Please see individual reports on PIMPAC website for this information.
Lead Agencies	PIMPAC, Micronesia Conservation Trust
Contacts	Mike Lameier, Michael.lameier@noaa.gov
Partnering Agencies	Local NGO's and community members. Participant's lists are available in the reports.
Url	http://pimpac.org/

Name	Predicting Impacts of Sea Level Rise for Cultural and Natural Resources in Five Hawaii Parks
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Projections (modeling and downscaling)
Sectors	- Social and Cultural Resources - Agriculture and Fisheries - Ecosystems
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii
Description	Fine scale digital elevation models and models of sea level rise; GIS products for various sea level rise scenarios for 2100 along the Ala Kahakai NHT corridor in relation to important, mapped features (plant communities, anchialine pools, cultural sites, wetlands, fishponds); GIS products that highlight important nearshore habitats such as anchialine pools and fishponds, and show the likely location of these habitats in 2100 based on sea level rise and surrounding physical and biological parameters.
Lead Agencies	UC Berkeley, NPS
Contacts	Lisa Marrack, lmarrack@berkeley.edu
Partnering Agencies	PICCC

Projected Timelines	2010-2013

Name	Predicting Risks of Island Extinctions Due to SLR: Model-based Tools to Mitigate Terrestrial Habitat Losses in the NW Hawaiian Islands
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Projections (modeling and downscaling)
ECV	- Surface (e.g., SST, SSH, salinity, ocean color) - (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Multi-decadal (scenarios)
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii - North Western Hawaiian Islands
Description	Collection of topographic data for selected islands and development of DEM models. Map current and future habitat for seabirds based on static (bathtub) SLR on most islands and dynamic (inundation) SLR on Laysan and Midway.
Lead Agencies	USGS-PIERC
Contacts	Michelle Reynolds, MReynolds@usgs.gov
Partnering Agencies	PICCC
Projected Timelines	2012-2013

Name	Predicting the Impact of Storm Waves and Sea-Level Rise within the Papahanaumokuakea Marine National Monument
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development - Projections (modeling and downscaling)
ECV	- Surface (e.g., temp, precip, wind) - Surface (e.g., SST, SSH, salinity, ocean color)
Timeframe	- Seasonal (outlook) - Intra-annual to Decadal - Multi-decadal (scenarios)

Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Research/Development - Projections (modeling and downscaling)
Sectors	- Public Health and Safety - Community Planning and Development - Social and Cultural Resources - Ecosystems
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - North Western Hawaiian Islands
Description	The goal of this study is to provide maps of wave impact and storm-induced inundation levels for islands of high conservation value. Vulnerability will be assessed for Midway Atoll and Laysan Island using historical data and new high resolution Digital Elevation Models (DEMs) for a variety of sea-level rise scenarios. Research to date forecasts sea-level rise with only passive flooding scenarios, and until now, was limited by a lack of topography data for Hawaii's remote atolls. Predicting impacts of flooding and storm-induced waves is needed to develop climate-change adaptation plans for the biological communities and resident endangered species. This information is also needed for managers to understand risks and determine emergency responses for the range of parameters where natural, historical, and cultural resources and remotely stationed personnel may be threatened from sea-level rise and storm-induced waves.

Objectives/Outcomes	The following products will be produced for both Midway Atoll and Laysan Island: 1) Wave climatology (long-term characterization of wave patterns) delineating the different end-member wave conditions that impact the islands; 2) GIS maps of wave parameters (significant wave height, wave period, wavelength) for the different wave climatologies at present sea level; 3) GIS maps of wave parameters (significant wave height, wave period, wavelength) for the different wave climatologies at potential future sea levels; 4) GIS maps showing the limit of inundation for the different wave climatologies at present sea level relative to the locations of natural resources and infrastructure; 5) GIS maps showing the limit of inundation for the different wave climatologies at potential future sea levels relative to the locations of natural resources and infrastructure; and 6) Plots showing percentage of natural resources potentially inundated for the different wave climatologies at potential future sea levels. Products generated will also utilize historic monitoring data collect by project cooperators were appropriate (NOAA, USFWS). This project will also provide the essential baseline and understanding for potential future efforts to predict the potential effects of: a) tsunamis on natural and cultural resources; b) wave-induced forces on structures and predictions of coastal erosion and accretion; and c) sea-level rise's influence on waves to better define impacts to Federally-managed marine resources (e.g., coral reefs).
Lead Agencies	U.S. Geological Survey, Pacific Coastal and Marine Science Center
Contacts	Curt D. Storlazzi, cstorlazzi@usgs.gov
Partnering Agencies	U.S. Geological Survey, Pacific Islands Ecological Research Center - Help conduct analyses, do visualization, and add terrestrial ecology to impact map products.
Required Resources	1) MSc. student support 2) USGS Open-File Report EPN publication charges
Projected Timelines	See table embedded in full worksheet.

Name	Preparedness for Climate Change
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation - Assessment and Evaluation
Sectors	- Public Health and Safety - Community Planning and Development
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience

Regions	- South Pacific - Cook Islands - Kiribati - Solomon Islands - Tonga - Global
Description	The aim of this program was for the Red Cross and Red Crescent National Societies in countries particularly vulnerable to climate change to gain a better understanding of climate change and its impacts to identify country-specific adaptation measures in line with risks. The project was Global including 39 countries. The Pacific participants in Phase 1 were the Cook Islands, Kiribati, Solomon Islands, and Tonga.
Objectives/Outcomes	Activities could include organizing a workshop on risks, assessment of risks through preparation of a background document, capacity building programs, and developing climate change resilient plans.
Lead Agencies	National Red Cross/Red Crescent Societies
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	Red Cross/Red Crescent Climate Centre
Projected Timelines	Phase 1: 2006–2009, Phase 2: ongoing

Name	Projecting Ecosystem Impacts from Climate Change in the North Pacific with the GFDL Climate Model
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Projections (modeling and downscaling)
ECV	- Surface (e.g., temp, precip, wind) - Upper-Air - Composition - Surface (e.g., SST, SSH, salinity, ocean color)
Timeframe	- Intra-annual to Decadal
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems

Regions	- Central North Pacific - State Of Hawaii - North Western Hawaiian Islands
Description	GFDL model output covering physics, chemistry, and lower trophic level biology.
Lead Agencies	NOAA/PIFSC
Contacts	Jeff Polovina, Jeffrey.Polovina@noaa.gov
Partnering Agencies	PICCC
Projected Timelines	2010-2012

Name	Promotion of Healthy Ecosystems in the Solomon Islands
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Policies and Legislation - Assessment and Evaluation
Sectors	- Community Planning and Development - Ecosystems
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- South Pacific - Solomon Islands
Description	Together with SPREP, USAID seeks to promote healthy ecosystems in the Solomon Islands. Healthy ecosystems, such as mangroves, coral reefs, and wetlands, can form natural barriers against extreme weather events, such as storm surges, and reduce vulnerability to rising sea levels and changing rainfall patterns. As natural buffers, ecosystems can be less expensive to maintain than man-made infrastructure, such as dykes, levees, and concrete walls. Healthy ecosystems can also provide important livelihood benefits to local populations, including firewood, clean water, and food. The program will contribute to a broader effort in the region to implement ecosystem-based adaptation.
Objectives/Outcomes	Main elements of the strategy include: 1) Developing resources and tools that integrate ecosystem-based adaptation into existing guidelines for community-based adaptation; 2) Training government officials, community leaders and stakeholder groups, on ecosystem-based adaptation and the identification and prioritization of strategies and activities; 3) Gathering information, via surveys, rapid participatory appraisal techniques, and focus group discussions, on vulnerability to climate change impacts; and 4) Identifying and assessing potential ecosystem-based adaptation measures.
Lead Agencies	USAID, SPREP

Partnering Agencies	Government agencies and community organizations in the Solomon Islands
Required Resources	1.15 million USD
Projected Timelines	2 years

Name	Reducing Climate Risks to Food Security in Niue through Integrated Community-based Adaptation Measures and Related Institutional Strengthening
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Agriculture and Fisheries
Status	- Proposed
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- South Pacific - Other South Pacific
Description	The project will strengthen ability of communities and government officers in Niue to make informed decisions and manage likely climate change driven pressures in food-security related sectors, such as agriculture, fisheries and forestry, in an integrated way. Reviewed at the Adaptation Fund Board in November 2010 but not endorsed.
Lead Agencies	Proposed Implementing Agency: USAID
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	Budget: US$3,465,000

Name	Regional Partnerships for Climate Change Adaptation and Disaster Preparedness
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Decision Support Tools - Assessment and Evaluation

Sectors	- Public Health and Safety - Community Planning and Development - Social and Cultural Resources
Status	- Completed
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Cook Islands - Fiji - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu
Description	This work is linked to the World Bank's work on the development of a Caribbean Catastrophe Insurance Facility for the Pacific. In the first phase of the project, data will be gathered for catastrophe risk models in each country, and country-specific loss risk profiles will be created in order to assess the feasibility of catastrophic risk financing and insurance options.
Objectives/Outcomes	The outcome is expected to be a strengthened information system that will support informed decision-making aimed at minimizing the negative social and environmental impacts of catastrophic events. It will also mitigate the financial risk of participating Pacific developing member countries to the effects of natural disasters, including those exacerbated by human-induced climate change.
Lead Agencies	World Bank
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	ADB, Budget: US$1.0 million
Projected Timelines	Phase 1: 2007–2011

Name	Relating the Psychological Recovery from Recent Disasters to Climate Change Risk Perception and Preparedness in Hawaii and American Samoa

Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Assessment and Evaluation
Sectors	- Social and Cultural Resources
Status	- Planned
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - State Of Hawaii - South Pacific - American Samoa
Description	This research will address long-term psychological needs in the aftermath of disaster by exploring the interconnections of climate change risk perception and long-term psychological recovery from natural disasters. The proposed research will include two unique cultural communities in Hawaii and American Samoa who are recovering from different types of natural disasters. Each site is a context of increasing risk from climate change. Utilizing quantitative surveys, qualitative interviews, and culturally-responsive focus group methodologies, this research will explore psychological recovery from disaster in terms that “fit” within psychological science, climate change research/preparedness, and the unique cultural contexts of the focal communities. This research will position psychological recovery from disaster as a critical element of research on the human dimensions of climate change.
Objectives/Outcomes	(1) Explore the influence of context on psychological disaster recovery within contexts of increasing risk of future disasters due to climate change in Hawaii and American Samoa. (2) Explore the benefits to psychological disaster recovery of addressing agency and capacity within the person relationship to a context of increasing risk. (3) Pilot a model for culturally and community responsive climate service development in two unique settings, and evaluate the model for future use in large-scale implementation across the Pacific Islands region.
Lead Agencies	East-West Center (EWC), Pacific Regional Integrated Sciences and Assessments (Pacific RISA)
Contacts	Laura K. Corlew, corlewk@eastwestcenter.org
Projected Timelines	2014-2015

Name	Responses of Hawaiian Albatrosses to Environmental Change
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation

Sectors	- Ecosystems - Other
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii - North Western Hawaiian Islands
Description	Climate variability will likely have important effects on the future of marine ecosystems and may present a significant challenge for marine top predators. This project will investigate how current patterns of natural climate variability (e.g., El Niño Southern Oscillation events) impact Laysan and black-footed albatrosses that breed in the Northwestern Hawaiian Islands, and then model possible responses of the birds to long-term climate driven changes in oceanographic conditions.
Lead Agencies	UC Santa Cruz, NOAA/SWFSC, NOAA/PFEL
Contacts	Scott Shaffer, Scott.Shaffer@sjsu.edu
Partnering Agencies	PICCC
Projected Timelines	2011-2013

Name	Samoa National Adaptation Programme of Action
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Proposed
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems

Regions	- South Pacific - Samoa
Description	National Adaptation Programmes of Action (NAPAs) provide a process for Least Developed Countries (LDCs) to identify priority activities that respond to their urgent and immediate needs to adapt to climate change - those for which further delay would increase vulnerability and/or costs at a later stage.
Objectives/Outcomes	Proposed projects in the Samoa NAPA are: 1) Securing Community Water Resources; 2) Reforestation, Rehabilitation and Community Forestry Fire Prevention ; 3) Climate Health Cooperation Program; 4) Climate Early Warning System; 5) Agriculture and Food Security Sustainability; 6) Zoning and Strategic Management Planning; 7) Implementation of Coastal Infrastructure Management Plans for Highly Vulnerable Districts; 8) Establishing Conservation Programs in Highly Vulnerable Marine and Terrestrial Areas of Communities; and 10) Sustainable Tourism Adaptation.
Lead Agencies	UNDP, Samoa Ministry of Natural Resources, Environment and Meteorology, Ministry of Water, Transportation and Infrastructure, Ministry of Health, Ministry of Agriculture, Ministry of Agriculture, Fire Services, Samoa Water Authority, Samoa Tourism
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	GEF-LDCF

Name	Samoa-Australia Partnership for Development: Climate Change
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Policies and Legislation
Sectors	- Public Health and Safety - Fresh Water Resources - Agriculture and Fisheries - Recreation and Tourism
Status	- Ongoing

Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- South Pacific - Samoa
Description	Australia is supporting the Government of Samoa to implement activities under Samoa's NAPA, primarily in the water, forest and tourism sectors. This includes a national tourism adaptation strategy setting out adaptation standards for tourism services (e.g., to manage surface floods in the capital Apia) and a national strategy for forest fire prevention.
Lead Agencies	Government of Samoa
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	AusAID, Budget: US$4 million
Projected Timelines	2009-2013

Name	Samoans Turn to Traditional Housing as Sanctuary from Climate Risks
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Community Planning and Development - Social and Cultural Resources
Status	- Completed
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Samoa

Description	To recover indigenous cultural knowledge held by Samoan elders about housing and climate, and to apply this to the design and construction practices of Samoan indigenous housing in order to inform the development of safer, accessible, resilient, and sustainable housing. To put indigenous knowledge into practice through the construction of three model Samoan houses (Fale) in three coastal sites. To reinvigorate village-based teaching and practice of growing materials, crafting, and constructing indigenous Samoan housing. To engage three village communities in a public education program about climate risk and developing risk management plans for the hazards that they will face.
Lead Agencies	Afeafe o Vaetoefaga Pacific Academy of Cultural Restoration, Research and Development
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	World Bank, Budget: US$199,000
Projected Timelines	2010

Name	Scenario Planning for Climate Change in Hawaii National Parks
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance
Sectors	- Community Planning and Development - Social and Cultural Resources
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - State Of Hawaii

Description	The NPS Climate Change Response Program will sponsor a Scenario Planning training workshop for NPS staff and stakeholders in Hawaii in CY 2012. This cooperative project will support and compliment the NPS training by providing SP expertise and experience, particularly with respect to relevant cultural and community concerns. One of the primary goals is to provide an example of SP that addresses cultural and natural resources, and also draws in a diverse compliment of park stakeholders to focus on climate change. A longer-term goal to begin building a network of parties that will continue to interact with each other, permitting larger-scale, more comprehensive approaches to climate change adaptation and mitigation.
Objectives/Outcomes	Products: final workshop report; debriefing report; and presentations.
Lead Agencies	NPS, UH/SSRI
Contacts	Cheryl Anderson, canderso@hawaii.edu
Partnering Agencies	PICCC
Projected Timelines	2011-2012

Name	Sea Level Rise and Changes in Storminess on U.S. High-Island Fringing Reefs
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development - Historical Observations (hindcasts/climatologies) - Projections (modeling and downscaling)
ECV	- Surface (e.g., temp, precip, wind) - Surface (e.g., SST, SSH, salinity, ocean color) - Sub-surface (e.g., temp, salinity, nutrients, carbon, phytoplankton)
Timeframe	- Seasonal (outlook) - Intra-annual to Decadal - Multi-decadal (scenarios)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Historical Observations (hindcasts/climatologies) - Projections (modeling and downscaling)
Sectors	- Energy - Transportation/Communication and Commerce - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Ongoing

Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii - North Western Hawaiian Islands - Western North Pacific - CNMI - FSM - Guam - South Pacific - American Samoa
Description	We are actively conducting USGS-funded research on sea-level rise and changes in storminess on US high-island fringing reefs in the US and US-territories, primarily in US National Parks. Tasks include in situ data acquisition and development of coupled wave-current-sediment transport numerical models to investigate potential future climate change impacts on coral reef ecosystems. We have proposals into the USGS, USFWS, and DOD investigating sea-level rise and changes in storminess on US atolls in the US and US-territories. Proposed tasks include in situ data acquisition and development of coupled wave-current-sediment transport numerical models and hydrologic models to investigate potential future climate change impacts on natural resources, freshwater availability, and infrastructure.
Objectives/Outcomes	USGS peer-reviewed reports describing data and results, peer-reviewed journal articles documenting new scientific findings, and maps describing infrastructure and natural resources potentially impacted by sea-level rise and changes in storminess.
Lead Agencies	USGS
Contacts	Curt Storlazzi, cstorlazzi@usgs.gov
Partnering Agencies	University of Hawaii (marine resources), USGS Biology Program (terrestrial and marine resources), USGS Water Program (freshwater), NOAA-CCFHR (marine resources), USACE-WIS (climatological hindcasts)
Required Resources	Primary: Operational funds for fieldwork, climatological information. Secondary: Field instrumentation, funding for numerical modeling support.
Projected Timelines	US high-island fringing reef studies: Ongoing through 2015. US atoll studies: Proposed.

Name	Sea Level Rise Impacts to Coastal Wetlands and Other Habitats
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Projections (modeling and downscaling) - Training and Capacity Building, Education, Outreach
ECV	- Surface (e.g., SST, SSH, salinity, ocean color)

Timeframe	- Multi-decadal (scenarios)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Decision Support Tools - Policies and Legislation - Assessment and Evaluation
Sectors	- Community Planning and Development - Social and Cultural Resources - Ecosystems
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii
Description	This project models the projected sea-level rise at coastal sites on Oahu and Maui, developing methods that can be applied to other Pacific islands. Stakeholder workshops will be used to assess needs and identify final products, including map visualizations. These results will help inform management responses for vulnerable coastal wetlands and beach areas that host endangered species and cultural sites.
Lead Agencies	UH/SOEST, NOAA/CRCP, State of Hawaii
Contacts	Chip Fletcher, fletcher@soest.hawaii.edu
Partnering Agencies	PICCC
Projected Timelines	2010-2012

Name	Seeds for Needs
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Best Practices/Guidance
Sectors	- Community Planning and Development - Agriculture and Fisheries
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - PNG
Description	Project to pre-select crops and varieties that will likely perform well under future conditions. Pacific participation includes Papua New Guinea.

Lead Agencies	Biodiversity International
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	World Bank
Projected Timelines	2009-?

Name	Severe Weather Forecasting and Disaster Risk Reduction Demonstration Project (SWFDDP)
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Observing Systems, Data Stewardship, Data Services - Operational Products and Services - Research/Development - Training and Capacity Building, Education, Outreach
ECV	- Surface (e.g., temp, precip, wind) - Upper-Air
Timeframe	- Seasonal (outlook)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Historical Observations (hindcasts/climatologies) - Projections (modeling and downscaling) - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Policies and Legislation - Assessment and Evaluation
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems

Regions	- South Pacific - American Samoa - Fiji - French Polynesia - New Zealand - Samoa - Solomon Islands - Tonga - Vanuatu
Description	As Numerical Weather Prediction (NWP) and Ensemble Prediction Systems (EPS) improve, many NMHSs, especially those of developing countries, seek similar benefits to meteorological services. In particular, for the provision of advisories and warnings of severe weather events with increased lead-times, already being realized by other (mainly developed) countries. The Severe Weather Forecasting Demonstration Project (SWFDP) was set up under the WMO Commission of Basic Systems (CBS) to facilitate improved access to, training in the interpretation of, and use of existing NWP/EPS products by forecasters in developing countries. The SWFDDP in the Southwest Pacific contributes directly to day-to-day public weather forecasting and the forecasting of severe and high-impact weather phenomena, over a five day period.
Objectives/Outcomes	The main objectives of the Severe Weather Forecasting and Disaster risk reduction Demonstration Project “SWFDDP” in South Pacific Islands (also known as the SWFDDP – WMO Regional Association V) are: (1) to improve weather forecasting and warning services for eight Pacific Islands National Meteorological Services (NMS) (the Cook Islands, Kiribati, Fiji, Niue, Samoa, Solomon Islands and Vanuatu), with support from Australia (RSMC Darwin) and New Zealand (RSMC Wellington); and (2) the effective communication and use of severe weather forecasts and warnings to the public, in particular Disaster Management Offices, in order to fully realize the full value of the investment in improving the forecasting process. Key outcomes: (1) Protection of life and property; (2) Contribute to the monitoring and understanding of extreme weather events under a warming world in the tropical South West Pacific; and (3) Validation of Global Producing Centers (GPCs) prediction models.
Lead Agencies	RMSC Wellington (MetService NZ Ltd)
Contacts	Steve Ready, steve.ready@metservice.com Pene Lefale, pene.lefale@metservice.com James Lunny, james.lunny@metservice.com
Partnering Agencies	NMS's of the eight Pacific Islands participating countries, World Meteorological Organization (WMO)
Projected Timelines	Ongoing

Feedback/Evaluation	A Project Steering Committee (RSC) made up of representatives from each of the participating countries/organizations was set up prior to the start of the project. A pilot phase, involving only four Pacific Island NMSs (Samoa, Fiji, Vanuatu and Solomons), began in November 2009 prior to moving the project to a full phase (started in November 2010). A project implementation plan was developed and endorsed by the RSC. The RSC has met twice during the course of the project to review progress and evaluate its success.

Name	Simple Well Improvement in Kiribati
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Public Health and Safety - Fresh Water Resources
Status	- Proposed
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Kiribati
Description	This project aims to reduce the burden of diarrhea and other water related diseases and problems particularly among very young and old people in Kiribati. This will be achieved by improving over the period of three years, 500 ground water wells that are used by the communities for their drinking and cooking.
Lead Agencies	MHMS
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	Indicative costs: AUD 146,000; Local annual budget: AUD 190,470; Total NAPA costs over 3 years: AUD 336,470
Projected Timelines	3 years

Name	Solomon Islands National Adaptation Programme of Action

Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism
Status	- Proposed
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Solomon Islands
Description	National Adaptation Programmes of Action (NAPAs) provide a process for Least Developed Countries (LDCs) to identify priority activities that respond to their urgent and immediate needs to adapt to climate change - those for which further delay would increase vulnerability and/or costs at a later stage.
Objectives/Outcomes	Proposed projects in the Solomon Islands NAPA are: 1) Managing the Impact of and Enhancing Resilience to Climate Change and Sea-Level Rise on Agriculture, Food Security, Water Supply and Sanitation, Human Settlements, Human Health and Education, Awareness and Information; 2) Climate Change Adaptation on Low-lying and Artificially Built Up Islands in Malaita and Temotu Provinces; 3) Waste Management; 4) Coastal Protection; 5) Fisheries and Marine Resources; 6) Infrastructure Development; and 7) Tourism.
Lead Agencies	UNDP, Solomon Islands Meteorological Service, Department of Communication, Aviation and Meteorology, Ministry of Culture, Tourism and Aviation
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	GEF-LDCF

Name	SPC Climate Change Support Activities in Pacific Island Countries and Territories
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Observing Systems, Data Stewardship, Data Services - Operational Products and Services - Research/Development - Projections (modeling and downscaling) - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Decision Support Tools
ECV	- Surface (e.g., temp, precip, wind) - Surface (e.g., SST, SSH, salinity, ocean color) - Sub-surface (e.g., temp, salinity, nutrients, carbon, phytoplankton) - (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Multi-decadal (scenarios)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Observing Systems, Data Stewardship, Data Services - Research/Development - Projections (modeling and downscaling) - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Decision Support Tools - Policies and Legislation - Assessment and Evaluation
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems

Status	- Completed - Ongoing - Planned
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Western North Pacific - CNMI - FSM - Guam - Palau - RMI - South Pacific - American Samoa - Australia - Cook Islands - Fiji - French Polynesia - Kiribati - New Zealand - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific

Description	The purpose of this document is to provide a summary overview of SPC climate change and disaster risk management (DRM) support to member Pacific Island countries and territories (PICTs). It is divided into two sections. The first section includes those activities that provide benefits to all PICTs and lists activities that have been implemented since 2011, or are currently in the process of being implemented. It also lists activities that SPC plans to commence during 2013. The regional matrix of activities will be updated annually. Activities have been categorised by sector or theme, although in some cases activities cover multiple sectors. The second section contains a national matrix summarising activities that are being implemented in individual countries and territories. The national matrix uses the same timeframe and sector classifications as the regional matrix of activities. The national matrix will also be updated regularly to ensure that countries have a clear indication of what climate change and DRM services are being provided. For both the regional and national activity summaries the key SPC contact person is listed, as are the development partners that are supporting that activity and the approximate timeframe over which the support is being provided.
Lead Agencies	SPC
Contacts	spc@spc.int
Url	http://www.spc.int/crga/sites/default/files/documents_uploads/Climate%20change%20support%20activities.pdf

Name	Strengthening Environmental, Climate Change Information and Monitoring in Kiribati
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Operational Products and Services - Research/Development
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Community Planning and Development
Status	- Proposed
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Kiribati
Description	This project aims to strengthen the capability of the government to be able to keep abreast of, understand and interpret international scientific information relevant to Kiribati. To establish a central office to access and share information on climate change issues from reliable regional and international sources. To develop endogenous scientific capability for analyzing and reviewing information, and undertaking research related to climate change. To enhance Kiribati capacity to implement its obligations under climate change international agreements.

Lead Agencies	MELAD
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	Indicative costs: AUD 227,000; Local annual budget: AUD 90,410; Total NAPA costs over 3 years: AUD 317,410
Projected Timelines	3 years

Name	Strengthening Food Security Among Farming Communities in the Pacific Small Island Developing States
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Decision Support Tools - Assessment and Evaluation
Sectors	- Agriculture and Fisheries
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- South Pacific - Fiji - Kiribati - Samoa - Solomon Islands - Tonga - Vanuatu

Description	Together with SPC, USAID will strengthen food security among farming communities in Fiji, Kiribati, Samoa, Solomon Islands, Tonga, and Vanuatu. The program will build scientific and technical capacity to apply Geographic Information System (GIS) land-use, forestry and soil mapping techniques in order to make decisions specifically to improve the climate resilience of terrestrial food production systems. It will also implement innovative techniques and management approaches to increase the climate change resilience of terrestrial food production systems. The six countries, which range from large volcanic island countries to medium scale and atoll countries, were selected because they represent a good cross section of the different agricultural production systems across the Pacific and because of the availability of bio-climatic data and the type of institutional structures that exist in each country.
Objectives/Outcomes	Main elements of the strategy include: 1) Developing customized GIS systems, operated at the national level and hosted by the ministry responsible for agriculture, or another ministry nominated by the government; 2) Establishing a regional technical support network to ensure that GIS systems can be supported and updated on an ongoing basis after the completion of the project; 3) Using GIS data on land use to generate maps, which will allow for the identification of the volume and location of specific agricultural products that are critical for Pacific Island food security (e.g., bread fruit, pandanus) and form baseline information for the development and implementation of adaptation measures; and 4) Providing in-country training and technical assistance to government officials and technical specialists to utilize analytical tools, such as data collection and management, GIS, cost-benefit analysis, and socioeconomic impact assessments, to inform adaptation decision-making.
Lead Agencies	USAID, SPC
Partnering Agencies	Ministries of Agriculture, Forestry, Water and Environment, Farmers Associations, Community Colleges
Required Resources	4.45 million USD
Projected Timelines	FY12-FY15
Url	http://pacificislands.usaid.gov/program/environment

Name	Strengthening the Capacity of Pacific Developing Member Countries to Respond to Climate Change (Phase 1)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation

Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Agriculture and Fisheries
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Western North Pacific - FSM - Palau - RMI - South Pacific - Cook Islands - Fiji - Kiribati - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific
Description	Incorporation of climate risk management, adaptation practices, and greenhouse gas mitigation measures into infrastructure and key sector investment plans and project designs.
Objectives/Outcomes	Adaptation related actions include: 1) Pacific Climate Change Program - Will assist participating countries to improve their resilience to climate change impacts through mainstreaming of the adaptation in their policies, plans programs, and projects and strengthening their systems and capabilities to foster the adaptation process; and 2) Adaptation preparation - Up to five countries will be supported in preparing the implementation of climate change adaptation plans, including further capacity building.
Lead Agencies	ADB

Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	ADB Canada, Budget: US$4.965 million
Projected Timelines	2009-?

Name	Surveying Reefs for Resilience
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Observing Systems, Data Stewardship, Data Services
ECV	- Surface (e.g., SST, SSH, salinity, ocean color)
Timeframe	- Seasonal (outlook)
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- South Pacific - American Samoa
Description	Using various data collection tools, examining the impacts of various factors affecting the resistance and resilience of coral reefs to mass bleaching.
Objectives/Outcomes	The goals of this project are to: 1) Measure shading of reefs by nearby cliffs; 2) Record reef slope depth profiles for a sample of reefs; 3) Measure currents in backreef pools, on reef flats, and in avas where safe; 4) Examine the effect of solar heating on shallow water and the implication on coral bleaching; and 5) Understand the correlations and effect of temperature on coral reef bleaching. The information will be provided to the DMWR no-take MPA program, and will be included in their process of determining which areas are to be chosen as highest priorities for new no-take MPAs.
Lead Agencies	Department of Marine and Wildlife Resources
Contacts	Doug Fenner, douglasfennertassi@gmail.com
Partnering Agencies	Coral Reef Advisory Group (project coordination and interns), American Samoa Community College (coordination and interns), Fagatele Bay National Marine Sanctuary (research coordination and mentorship)
Required Resources	Technical and logistical: measuring supplies, transportation, and time to perform project.
Projected Timelines	First round of measurements performed in summer of 2012, project expected to continue in summer of 2013.

Name	Synergistic Impacts of Global Warming and Ocean Acidification on Coral Reefs
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development - Projections (modeling and downscaling)
ECV	- Surface (e.g., SST, SSH, salinity, ocean color) - Sub-surface (e.g., temp, salinity, nutrients, carbon, phytoplankton)
Timeframe	- Multi-decadal (scenarios)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Projections (modeling and downscaling) - Climate Adaptation - Policies and Legislation
Sectors	- Ecosystems
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin
Description	This project develops equations describing changes in coral growth rates in response to increased temperature and ocean acidification. These data are necessary for developing and refining models evaluating the future impact of climate change on Pacific coral reef communities. Results will help define appropriate management responses and prioritize interventions at the most vulnerable sites.
Lead Agencies	UH/HIMB
Contacts	Paul Jokiel, jokiel@hawaii.edu
Partnering Agencies	PICCC
Projected Timelines	2011-2013

Name	Technical Support Project for Pacific Islands GUAN (TSP)
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Observing Systems, Data Stewardship, Data Services - Operational Products and Services - Historical Observations (hindcasts/climatologies)
ECV	- Upper-Air

Timeframe	- Intra-annual to Decadal
Sectors	- Fresh Water Resources
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought
Regions	- Western North Pacific - FSM - Guam - Palau - RMI - South Pacific - American Samoa - Cook Islands - Fiji - French Polynesia - Kiribati - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific - Pacific Basin
Description	The GCOS (Global Climate Observing System) Upper-Air Network (GUAN) consists of stations selected from the Global Observing System of the World Weather Watch. TSP is a joint partnership between MetService and U.S. GCOS established in 2004. The goal of the program is to provide a technical support and program management solution to ensure that upper air programs that are part of the GUAN and operated in the Pacific Island States are effective.
Objectives/Outcomes	The goal of the program is to provide a technical support and program management solution to ensure that upper air programs that are part of the GUAN and operated in the Pacific Island States are effective.
Lead Agencies	MetService, U.S. GCOS
Contacts	Pene Lefale, pene.lefale@metservice.com
Partnering Agencies	Pacific Island Meteorological Service Offices
Required Resources	Technical support, program management and funding provided by MetService and U.S. GCOS.
Projected Timelines	On-going
Url	http://gosic.org/gcos/GUAN-prog-overview.htm

Name	Territorial Climate Change Adaptation Framework

Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Policies and Legislation
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- South Pacific - American Samoa
Description	Prioritized adaptation projects decided upon by committees containing members of government agencies throughout the Territory. The projects are prioritized in seven different sectors, including: 1) Coral Reefs and Mangroves; 2) Human Health; 3) Forestry, Water and Agriculture; 4) Education and Outreach; 5) Coastal Hazards; 6) Development; and 7) Energy.
Objectives/Outcomes	Guidance for the entire Territory as to adaptation projects to pursue and for which to provide funding.
Lead Agencies	Coral Reef Advisory Group
Contacts	Whitney Peterson, whitney.peterson@doc.as
Partnering Agencies	Department of Commerce, Department of Education, Department of Health, Department of Agriculture, DHS, NPS, USCG, NOAA-PIRO. Members from all agencies supplying information and ideas to prioritize adaptation projects.
Required Resources	Funding will be required to assist with various prioritized adaptation projects.
Projected Timelines	Territorial Adaptation Framework expected to be completed by August 2012.
Feedback/Evaluation	Feedback and evaluation provided by various government agencies, including a Steering Committee.

Name	The Impact of Sea-Level Rise and Climate Change on Department of Defense Installations on Atolls in the Pacific Ocean

Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development - Projections (modeling and downscaling)
ECV	- Surface (e.g., temp, precip, wind) - Surface (e.g., SST, SSH, salinity, ocean color)
Timeframe	- Multi-decadal (scenarios)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Research/Development - Projections (modeling and downscaling) - Climate Adaptation - Assessment and Evaluation
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Western North Pacific - RMI
Description	The goal of this effort is to (1) provide basic understanding and specific information on storm wave-induced inundation on Department of Defense installations on atolls in the Pacific Ocean, and (2) assess the resulting impact of sea-level rise and storm-wave inundation on infrastructure and freshwater availability under a variety of sea-level rise and climatic scenarios, based on historic information, sea-level rise predictions, and global climate model wind, wave, and precipitation output.
Lead Agencies	USGS/Pacific Coastal and Marine Science Center
Contacts	Curt Storlazzi, Research Oceanographer, cstorlazzi@usgs.gov
Required Resources	DoD/SERDP

Name	The Role of Submarine Groundwater Discharge in Coastal Ocean Acidification
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Research/Development

ECV	- Sub-surface (e.g., temp, salinity, nutrients, carbon, phytoplankton) - (e.g., surface water, glaciers and ice caps, land cover, biomass)
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii
Description	Carbonate saturation state of groundwater and a groundwater-fed freshwater plume will be examined in West Hawaii.
Lead Agencies	UH Hilo, NPS
Contacts	Steven Colbert, colberts@hawaii.edu Tracy Wiegner, wiegner@hawaii.edu
Partnering Agencies	PICCC
Projected Timelines	2012-2014

Name	Tonga Third National Communication to UNFCCC
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Assessment and Evaluation
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- South Pacific - Tonga

Description	This is an enabling activity to support Tonga to prepare and submit its third national communication, building on and strengthening the activities that have been carried out in preparing its second national communication. Main outputs: 1) National inventory of GHG emissions and removals; 2) Programmes containing measures to facilitate adequate adaptation to, and mitigation of climate change; and 3) Any other information considered relevant for the achievement of the objectives of the UNFCCC.
Lead Agencies	UNDP Fiji MCO
Contacts	Asenaca Ravuvu, asenaca.ravuvu@undp.org
Partnering Agencies	Tongan Government Ministries, Non-government Organisations, Private Sectors, Academia
Url	http://www.undp.org/content/dam/undp/documents/projects/TON/00060093/TONGA%20PRODOC.pdf

Name	Tonga's Strategic Program for Climate Resilience
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance - Decision Support Tools - Policies and Legislation
Sectors	- Public Health and Safety - Community Planning and Development - Social and Cultural Resources
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Tonga

Description	The purpose of this project is to implement the Strategic Program for Climate Resilience (SPCR) prepared by the Kingdom of Tonga within the design of the Climate Investment Fund. The SPCR aims to pilot and demonstrate ways to mainstream climate resilience in development planning and management. The Project will build upon the country's transformational change program that began with the development of the JNAP and will mainstream climate resilience into development planning and address country priorities focusing on the most vulnerable sectors and communities. It will provide the strategic human, technical, and financial inputs needed to implement JNAP activities. The Project will: 1) build capacity in climate change adaptation and disaster risk management at community, sector and national levels; 2) provide information, tools, and legislative frameworks needed to introduce climate change considerations into government and sector planning and budgeting processes; and 3) provide access to resources (technical, human, financial) to address the climate change risk priorities of the Government, as well as those of vulnerable communities through a combination of soft and hard measures.
Lead Agencies	Asian Development Bank (ADB)
Contacts	Maria Paniagua, Project Administration Unit, South Pacific Subregional Office ADB, mppaniagua@adb.org
Url	https://www.climateinvestmentfunds.org/cif/node/7294

Name	Trends and Shifts in Streamflow in Hawaii, 1913-2008
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Historical Observations (hindcasts/climatologies)
ECV	- (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Intra-annual to Decadal
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Historical Observations (hindcasts/climatologies)
Sectors	- Fresh Water Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Completed
Focus Area	- Fresh Water Resources and Drought
Regions	- Central North Pacific - State Of Hawaii
Description	This study addresses a need to document changes in streamflow and base flow in Hawaii during the past century. Hydrological Processes, 27: 1484 - 1500.

Objectives/Outcomes	Statistically significant long-term (1913-2008) downward trends were detected (using the nonparametric Mann-Kendall test) in low-streamflow and base-flow records. These long-term downward trends are likely related to a statistically significant downward shift around 1943 detected (using the nonparametric Pettitt test) in index records of streamflow and base flow. The downward shift corresponds to a decrease of 22% in median streamflow and a decrease of 23% in median base flow between the periods 1913-1943 and 1943-2008. The shift coincides with other local and regional factors, including a change from a positive to a negative phase in the Pacific Decadal Oscillation, shifts in the direction of the trade winds over Hawai'i, and a reforestation programme. The detected shift and long-term trends reflect region-wide changes in climatic and land-cover factors. A weak pattern of downward trends in base flows during the period 1943-2008 may indicate a continued decrease in base flows after the 1943 shift. Downward trends were detected more commonly in base-flow records than in high-streamflow, peak-flow, and rainfall records. The decrease in base flow is likely related to a decrease in groundwater storage and recharge and therefore is a valuable indicator of decreasing water availability and watershed vulnerability to hydrologic changes. Whether the downward trends will continue is largely uncertain given the uncertainty in climate-change projections and watershed responses to changes.
Lead Agencies	USGS/PIWSC
Contacts	Maoya Bassiouni, mbassiou@usgs.gov Delwyn Oki, dsoki@usgs.gov
Partnering Agencies	PICCC
Url	http://pubs.er.usgs.gov/publication/70040116

Name	Trends in Streamflow Characteristics at Long-Term Gaging Stations in Hawaii
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Historical Observations (hindcasts/climatologies)
ECV	- (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Intra-annual to Decadal
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Historical Observations (hindcasts/climatologies)
Sectors	- Fresh Water Resources - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Completed

Focus Area	- Fresh Water Resources and Drought
Regions	- Central North Pacific - State Of Hawaii
Description	DOI/USGS Scientific Investigations Report 2004-5080. The surface-water resources of Hawaii have significant cultural, aesthetic, ecologic, and economic importance. Proper management of the surface-water resources of the State requires an understanding of the long- and short-term variability in streamflow characteristics that may occur. The USGS maintains a network of stream-gaging stations in Hawaii, including a number of stations with long-term streamflow records that can be used to evaluate long-term trends and short-term variability in flow characteristics.
Objectives/Outcomes	The overall objective of this study is to obtain a better understanding of long-term trends and variations in streamflow on the islands of Hawaii, Maui, Molokai, Oahu, and Kauai, where long-term stream-gaging stations exist. This study includes: 1) an analysis of long-term trends in flows (both total flow and estimated base flow) at 16 stream-gaging stations; 2) a description of patterns in trends within the State; and 3) discussion of possible regional factors (including rainfall) that are related to the observed trends and variations.
Lead Agencies	USGS Pacific Islands Water Science Center
Contacts	Delwyn Oki, dsoki@usgs.gov
Partnering Agencies	Hawaii State Commission on Water Resource Management, Maui County Department of Water Supply, USGS Biological Resources Discipline, PICCC
Url	http://pubs.usgs.gov/sir/2004/5080/

Name	Tuvalu - Effective and Responsive Governance to Secure and Diversify Climate Resilient Marine-based Coastal Livelihoods and Enhance Climate Hazard Response Capacity
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Public Health and Safety - Community Planning and Development - Agriculture and Fisheries - Ecosystems
Status	- Planned
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- South Pacific - Tuvalu

Description	This Tuvalu NAPA-2 program will build on the NAPA-I/I+ in implementing its priorities. Main components: 1) Community-based adaptation of marine based livelihoods - includes activities to building resilience in livelihoods to climate impacts through an integrated package of measure that seek to enhance traditional fishing practices, through revitalisation of traditional practice and merging these with innovative new fisheries technologies; 2) Reducing disaster risk - improving access to disaster early warning systems for people on outer islands. This will include: improvements in regular weather forecasts; provision of a solar radio receiver at household level; introduction of a failsafe disaster warning system using a satellite-based SMS in the case that radio and satellite phones do not operate; an outreach programme; shelters; improved emergency plans; plus a range of other vital hardware and service improvements; and 3) Developing a mechanism that seeks to leverage international financing for community-based climate change adaptation on the outer islands through participatory development processes.
Lead Agencies	UNDP Fiji MCO
Contacts	Asenaca Ravuvu, asenaca.ravuvu@undp.org

Name	Tuvalu National Adaptation Programme of Action
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Public Health and Safety - Fresh Water Resources - Community Planning and Development - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Status	- Proposed
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- South Pacific - Tuvalu
Description	National Adaptation Programmes of Action (NAPAs) provide a process for Least Developed Countries (LDCs) to identify priority activities that respond to their urgent and immediate needs to adapt to climate change - those for which further delay would increase vulnerability and/or costs at a later stage.

Objectives/Outcomes	Proposed projects in the Tuvalu NAPA are: 1) Increasing Resilience of Coastal Areas and Community Settlement to Climate Change; 2) Increasing Subsistence of Pit Grown Pulaka Productivity through Introduction of a Salt-tolerant Pulaka Species; 3) Adaptation to Frequent Water Shortages through Increasing Household Water Capacity, Water Collection Accessories, and Water Conservation Techniques; 4) Protecting Community Health through Control of Vector Borne/Climate Sensitive Diseases and Promoting Access to Quality Potable Water; 5) Strengthening of Community Based Conservation Programmes on Highly Vulnerable Near-shore Marine Ecosystems; 6) Strengthening Community Disaster Preparedness and Response Potential; 7) Adaptation to Coastal Shellfish Fisheries Resources Productivity.
Lead Agencies	Tuvalu Public Works Department, Tuvalu Meteorological Services, Department of Environment, Department of Lands, Department of Rural Development, Department of Health, Department of Fisheries, National Disaster Management Office
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf

Name	U.S. Drought Portal
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Operational Products and Services - Historical Observations (hindcasts/climatologies) - Projections (modeling and downscaling)
ECV	- Surface (e.g., temp, precip, wind) - (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Seasonal (outlook)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Historical Observations (hindcasts/climatologies) - Projections (modeling and downscaling) - Climate Adaptation - Policies and Legislation - Assessment and Evaluation

Sectors	- Fresh Water Resources - Agriculture and Fisheries - Ecosystems
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought
Regions	- Central North Pacific - State Of Hawaii
Description	The U.S. Drought Portal is part of the interactive system to: 1) Provide early warning about emerging and anticipated droughts; 2) Assimilate and quality control data about droughts and models; 3) Provide information about risk and impact of droughts to different agencies and stakeholders; 4) Provide information about past droughts for comparison and to understand current conditions; 5) Explain how to plan for and manage the impacts of droughts; and 6) Provide a forum for different stakeholders to discuss drought-related issues.
Objectives/Outcomes	The National Integrated Drought Information System (NIDIS) Implementation Plan outlines how to: 1) Develop the leadership and networks to implement an integrated drought monitoring and forecasting system at federal, state, and local levels; 2) Foster and support a research environment focusing on risk assessment, forecasting, and management; 3) Create an "early warning system" for drought to provide accurate, timely, and integrated information; 4) Develop interactive systems, such as the Web Portal, as part of the early warning system; and 5) Provide a framework for public awareness and education about droughts.
Lead Agencies	NOAA
Contacts	Drought Portal, michael.j.brewer@noaa.gov NIDIS, roger.pulwarty@noaa.gov
Partnering Agencies	USDA, DoC, DoE, DHS, DoI, DoT
Projected Timelines	Ongoing
Feedback/Evaluation	http://www.drought.gov/portal/server.pt/community/drought.gov/202//contact_us
Url	http://www.drought.gov/

Name	U.S. Peace Corps Small Project Assistance for Adaptation
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance

Sectors	- Public Health and Safety - Fresh Water Resources - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Ecosystems
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Western North Pacific - FSM - South Pacific - Fiji - Samoa - Tonga - Vanuatu
Description	This project will extend USAID's reach to remote communities by supporting the following efforts of Peace Corps volunteers: 1) development of youth camps that promote environmental awareness, knowledge and skills among the youth to become responsible natural resource stewards; 2) trainings that support community adaptation to climate change and build capacity for disaster risk reduction (DRR); and 3) small-scale community projects that can demonstrate application of climate change and DRR principles.
Lead Agencies	U.S. Peace Corps, USAID
Projected Timelines	FY13-FY17
Url	http://pacificislands.usaid.gov/program/environment

Name	U.S. Support Program to the Coral Triangle Initiative
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Agriculture and Fisheries - Ecosystems
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- South Pacific - PNG - Solomon Islands - Other South Pacific

Description	To improve the management of biologically and economically important coastal and marine resources and associated ecosystems that support livelihoods and economies in the Coral Triangle and assist the six CTI countries in implementing the CTI Regional and National Plans of Action with activities that focus on instituting an ecosystem approach to fisheries management, creating marine protected areas, building climate change adaptive capacity and establishing regional platforms to promote cross-country learning and enhance sustainability.
Lead Agencies	WWF, Conservation International, the Nature Conservancy, ARD Inc., NOAA
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	USAID, Budget: US$41 million
Projected Timelines	2008-2013

Name	U.S.-Affiliated Pacific Islands Regional Gap Analysis for Hazard Planning Implementation
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Assessment and Evaluation
Sectors	- Public Health and Safety - Community Planning and Development
Status	- Ongoing
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - State Of Hawaii - Western North Pacific - CNMI - FSM - Guam - Palau - RMI - South Pacific - American Samoa

Description	1) To develop a multi-dimensional gap analyses to determine how to implement science into the community in order to improve hazard resiliency. 2) To develop an analysis that is flexible and can be used for different regions of the Pacific. 3) To test the analyses for two geographically diverse areas – Kauai, Hawaii and the U.S. Marshall Islands. 4) If successful, apply in later phases to the entire Pacific Region. The project begins with a briefing to the NOAA Regional Collaboration Team for the Pacific Region. Extensive interviews will also be conducted with scientists, planners, community members and leaders.
Objectives/Outcomes	1) Development of multi-dimensional gap analyses. 2) Application to two politically ad geographically diverse areas (Kauai and RMI). 3) Recommendations and if successful, apply to other portions of Hawaii and the Pacific Region.
Lead Agencies	University of Hawaii Sea Grant College Program, NOAA
Contacts	Dennis Hwang, djh@opglaw.com
Projected Timelines	10/1/2011 to 9/30/2012

Name	Understanding Past Rainfall Patterns in Hawaii
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Historical Observations (hindcasts/climatologies)
Sectors	- Ecosystems
Status	- Ongoing
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii
Description	This project will measure growth rings in mamane trees from the upper slopes of Mauna Kea on the Island of Hawaii, providing critical information on past rainfall and helping validate climate models predicting future rainfall.
Lead Agencies	University of Hawaii/SOEST, Lamont-Doherty Earth Observatory
Contacts	Brian Schubert, bschube@hawaii.edu
Partnering Agencies	PICCC
Projected Timelines	2011-2013

Name	Upgrading of Meteorological Service in Kiribati
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Operational Products and Services - Projections (modeling and downscaling) - Training and Capacity Building, Education, Outreach
ECV	- Surface (e.g., temp, precip, wind)

Timeframe	- Seasonal (outlook)
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Projections (modeling and downscaling) - Climate Adaptation - Training and Capacity Building, Education, Outreach - Best Practices/Guidance
Sectors	- Public Health and Safety
Status	- Proposed
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Kiribati
Description	This project aims to improve the reliability and scope of weather observation on outer islands, and reporting to the National Meteorological Services.
Objectives/Outcomes	Institutional strengthening of the National Meteorological Services. To foster greater appreciation and use of various meteorological products that are produced directly or indirectly from outputs of the National Meteorological Services. To increase the National Meteorological Service role in enabling the public and individuals to be able to manage risks from extreme weather events.
Lead Agencies	Kiribati Meteorological Service, MCTT
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	Indicative costs: AUD 150,000; Local annual budget: AUD 342,310; Total NAPA costs over 3 years: AUD 492,310
Projected Timelines	3 years

Name	Upgrading, Restoring, Enhancing Resilience of Coastal Defenses and Causeways in Kiribati
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach

Sectors	- Public Health and Safety - Transportation/Communication and Commerce - Community Planning and Development - Recreation and Tourism
Status	- Proposed
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - Kiribati
Description	This project aims to prevent encroaching coastal erosion from affecting public infrastructure such as roads, airfields and community public assets by upgrading existing seawalls; to improve accessibility within the atolls which has been facilitated by causeways. Accessibility is, in a few cases, threatened by the inadequacy of causeway designs and/or change in the environment; to minimize potential risks to assets from climate-related disasters.
Lead Agencies	MISA, MWP
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Required Resources	Indicative costs: AUD 5,102,870; Local annual budget: AUD 567,880; Total NAPA costs over 3 years: AUD 5,670,750
Projected Timelines	3 years

Name	Vanuatu National Adaptation Programme of Action
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach - Policies and Legislation
Sectors	- Fresh Water Resources - Agriculture and Fisheries - Recreation and Tourism
Status	- Proposed
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience

Regions	- South Pacific - Vanuatu
Description	National Adaptation Programmes of Action (NAPAs) provide a process for Least Developed Countries (LDCs) to identify priority activities that respond to their urgent and immediate needs to adapt to climate change - those for which further delay would increase vulnerability and/or costs at a later stage.
Objectives/Outcomes	Proposed projects in the Vanuatu NAPA are: 1) Agriculture and Food Security; 2) Sustainable Tourism Development; 3) Community Based Marine Resource Management Programs; 4) Sustainable Forestry Management; and 6) Integrated Water Resource Management.
Lead Agencies	Vanuatu Department of Agriculture and Rural Development, Department of Fisheries, Department of Forestry, Department of Geology, Mines and Water Resources, Department of Lands and Environment, National Tourism Development Office and Vanuatu Tourism Office
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf

Name	Vulnerability and Adaptation Initiative
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Adaptation - Training and Capacity Building, Education, Outreach
Sectors	- Public Health and Safety - Fresh Water Resources - Community Planning and Development - Agriculture and Fisheries - Ecosystems
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems

Regions	- South Pacific - Fiji - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu
Description	Through this initiative, six Pacific countries have implemented activities to reduce their vulnerability to climate change and achieve good environmental outcomes.
Objectives/Outcomes	The Initiative has funded activities such as the replanting of coastal mangroves to protect shorelines, the construction of rain water tanks in islands affected by seasonal drought, the trialing of versatile crop varieties and the recording of traditional knowledge about disaster preparation.
Lead Agencies	AusAID
Partnering Agencies	The information for this activity was provided by the Adaptation Partnership from their Pacific chapter review of planned and existing adaptation activities. These reviews provide an inventory of regional and country-level adaptation activities and a summary of key adaptation priorities, based on documents like the UN Framework Convention on Climate Change's National Adaptation Programs of Action and National Communications. They also identify gaps and opportunities for scaling up and enhancing collaboration. For more information see: http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Projected Timelines	2008-2012

Name	Vulnerability of Hawaiian Forest Birds to Climate Change - Using Models to Link Landscape, Climate, Disease, and Potential Adaptation
Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Research/Development
Sectors	- Ecosystems
Status	- Ongoing
Focus Area	- Fresh Water Resources and Drought - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii

Description	The introduction of mosquitos and avian malaria are considered to be primary factors contributing to population declines and changes in the distribution of many native Hawaiian forest birds. Mosquito and malaria dynamics (abundance, location etc.) are strongly influenced by climate, particularly rainfall and temperature. Successful conservation of Hawaiian forest birds requires an analysis of climate change and its impact on the future disease risk of native bird populations. Key objectives of this research will be to 1) predict changes in avian malaria across space and time as a result of anticipated climate change, 2) evaluate the potential for bird species extinctions, 3) research and consider birds' genetic adaptation to malaria, and 4) assess the costs and effectiveness of conservation strategies to mitigate impacts on bird populations. This project will provide the first quantitative assessment of the long-term impact of climate change on bird malaria distribution and on Hawaii's unique forest birds, and provide a crucial tool to adaptively manage recovery and promote disease resistance among avian populations.
Lead Agencies	USGS/PIERC, U of Wisconsin
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Partnering Agencies	PI-CSC, FWS, NPS, DLNR
Projected Timelines	FY 12 start, 3 years
Url	https://nccwsc.usgs.gov/display-project/5006f8a0e4b0abf7ce733fbd/50118f9fe4b0d78fd4e59ba6

Name	Water Resources on Guam: Potential Impacts and Adaptive Response to Climate Change for Department of Defense Installations
Capability Area: Variability/Changes	- Understanding Climate Variability and Change - Projections (modeling and downscaling)
ECV	- Surface (e.g., temp, precip, wind) - Upper-Air - Surface (e.g., SST, SSH, salinity, ocean color) - (e.g., surface water, glaciers and ice caps, land cover, biomass)
Timeframe	- Intra-annual to Decadal - Multi-decadal (scenarios)

Capability Area: Impacts/Adaptations	- Understanding Climate Impacts and Informing Adaptation - Climate Impacts - Research/Development - Projections (modeling and downscaling) - Climate Adaptation - Training and Capacity Building, Education, Outreach - Decision Support Tools - Assessment and Evaluation
Sectors	- Public Health and Safety - Fresh Water Resources - Transportation/Communication and Commerce - Agriculture and Fisheries
Status	- Planned
Focus Area	- Fresh Water Resources and Drought - Marine and Terrestrial Ecosystems
Regions	- Western North Pacific - Guam
Description	A grant from the Department of Defense (DoD) will support a four-year evaluation of potential adverse climate change impacts on DoD installations that rely on Guam's surface water and groundwater resources. A diverse team of investigators from the U.S. Geological Survey, the East-West Center Pacific RISA program, the University of Hawaii International Pacific Research Center, the University of Texas, and the University of Guam will be concerned with the following questions: 1) How will streamflow, sediment loads, and turbidity be modified and how will this affect surface water availability?; 2) How will groundwater recharge and salinity be modified?; 3) What are climate change impacts to DoD infrastructure supplying surface water and groundwater, and what are the adaptive strategies to maximize the water resources?; and 4) How will information about potential climate change impacts be communicated to water managers evaluating and implementing adaptive strategies?
Objectives/Outcomes	Following quantitative assessments of groundwater recharge and the evaluation of climate change-induced modifications, climate change information generated by this study will be linked to water resource managers in Guam, and support the development and evaluation of hydro-climatology information tailored to stakeholders. The range of possible future scenarios will also be considered so that an appropriate adaptive management strategy can be implemented as information on climate change is refined in the future. Information generated by this research will yield practical benefits to the DoD by characterizing the efficacy of different management strategies and adaptations to projected climate change on Guam. Furthermore, the approach used for this study can be transferred to other islands where water resources are critical for military operations.
Lead Agencies	USGS - Pacific Islands Water Science Center, East-West Center - Pacific RISA program, University of Hawaii - International Pacific Research Center, University of Texas, University of Guam

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Projected Timelines	2014-2018