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Name	21st Century High-Resolution Climate Projections for Guam and American Samoa
Capability Area	- Understanding Climate Variability and Change
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Western North Pacific - CNMI - Guam - South Pacific - American Samoa
Products/Physical	- Products - Physical - Outloooks (monthly to annual) - Impacts - Drought - Spatial Scale - Location/Site - Time Scale - Future - Methodology - Model/Dynamical - Projections (intrannual to multi-decadal) - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Sectors	- Fresh Water Resources - Community Planning and Development - Agriculture and Fisheries - Ecosystems

Description	A high-resolution atmospheric model will be used to dynamically downscale the results of CMIP5 global coupled models to project the anticipated 21st century changes in rainfall, surface temperature, surface wind and surface radiative fluxes over the Mariana Islands and American Samoa. Projections for mean changes and changes in extreme events will be produced at about 1 km horizontal resolution over the islands of Guam and Tutuila, and 3 km resolution over the archipelagos. This work will build on efforts at fine resolution modeling of Hawaii climate and climate change. Detailed high resolution climate modeling results used to drive hydrological or ecosystem models will be saved and made publicly available. FY 12 start. 3 year timeline.
Url	https://nccwsc.usgs.gov/display-project/5006f8a0e4b0abf7ce733fbd/50118ddce4b0d78fd4e59ba3
Lead Agencies	IPRC, PI-CSC
Contacts	Yuqing Wang, yuqing@hawaii.edu Kevin Hamilton, kph@hawaii.edu H. Annamalai, hanna@hawaii.edu

Name	21st Century Rainfall Projections for Hawaii
Capability Area	- Understanding Climate Variability and Change
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - State Of Hawaii
Products/Physical	- Products - Physical - Outloooks (monthly to annual) - Impacts - Drought - Spatial Scale - Location/Site - Time Scale - Future - Methodology - Obs/In-situ - Model/Dynamical - Projections (intrannual to multi-decadal) - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Sectors	- Fresh Water Resources - Community Planning and Development - Agriculture and Fisheries - Ecosystems

Description	This project uses climate diagnostics to analyze past and recent variability and trends in regional climate over the Hawaiian Islands. Priority is given to the analysis past and future changes in the rainfall pattern including seasonal mean changes, low and high rainfall anomalies and frequency changes in heavy/extreme rainfall events. Station observations are used to derive empirical statistical relationships between the large-scale Pacific climate modes and regional changes. Building upon these diagnostic studies, statistical downscaling methods are deployed to estimate future climate changes over the main Hawaiian Islands for the mid and late 21st century. Seasonal rainfall, daily variability, frequency of dry/wet spells, and the frequency of extreme storm events are estimated from recent CMIP5 climate change scenarios. This project compliments dynamical modeling research in Hawaii. The statistical methods are developed to address Hawaii's unique geographic and climatic features. It makes use of the updated Rainfall Atlas of Hawaii data products, the HaleNet high-resolution climate monitoring array, and next-generation climate data sets currently under development in other research projects. Products from the statistical downscaling contain high-resolution seasonal mean rainfall scenarios for the mid and late 21st century which can be implemented within GIS applications and standard statistical software tools.
Lead Agencies	UH/SOEST, IPRC, PICCC
Contacts	Oliver Elison Timm, timm@hawaii.edu

Name	Adaptation Partnership Review of Current and Planned Adaptation Action
Capability Area	- Understanding Climate Impacts and Informing Adaptation
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 - South Pacific - Cook Islands - Fiji - Kiribati - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific

Non Physical	- Data, Products, and Tools - Non-physical - Biological - Socio-economic - Cultural
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
Description	The Adaptation Partnership initiated a Review of Current and Planned Adaptation Action in the Fall of 2010. Its purpose is to provide a baseline understanding of who is doing what on adaptation in three developing regions - Africa, Asia-Pacific, and Latin America and the Caribbean - and in priority adaptation sectors. Based on available resources, it seeks to provide a rapid assessment of: priority interests and adaptation needs; efforts by governments to support adaptation though policy and planning; the scope of international support for adaptation efforts in different countries and sectors; and potential gaps in adaptation efforts at the country and regional levels. The Pacific chapter includes current and planned adaptation action in the Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.
Url	http://www.adaptationpartnership.org/images/stories/documents/asia - pacific regional and country profiles.pdf
Lead Agencies	Adaptation Partnership
Contacts	Byron Ruby, RubyBH@state.gov

Name	Adapting to Climate Change: A Planning Guide for State Coastal Managers
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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
Non Physical	- Data, Products, and Tools - Non-physical - Socio-economic - Cultural
Sectors	- Public Health and Safety - Community Planning and Development
Description	This planning guide helps U.S. state and territorial coastal managers develop and implement adaptation plans to reduce the risks associated with climate change impacts affecting their coasts. The guide was written in response to a request from state coastal managers for guidance from NOAA on adaptation planning in the coastal zone and is intended as an aid, not as a prescriptive directive, and a state may choose to use individual steps or chapters or the entire guide, depending on where they are in their planning process.
Url	http://coastalmanagement.noaa.gov/climate/adaptation.html
Lead Agencies	NOAA/OCRM
Contacts	Josh Lott, josh.lott@noaa.gov

Name	APCC 6-Month Lead Coupled MME Outlooks
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin - Global

Products/Physical	- Products - Physical - Outloooks (monthly to annual) - Impacts - Drought - Flooding/Inundation - Eroison - Bleaching - Spatial Scale - Region/Nation - Time Scale - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Fresh Water Resources - Community Planning and Development - Agriculture and Fisheries - Ecosystems
Description	The APEC Climate Center (APCC) Climate Outlook is a coupled 6-month MME prediction outlook. The experimental forecast was performed with initial conditions of August 2011 with lead time of 1-6 months. It is based on the multi-model ensemble prediction technique using the model outputs from 5 institutions in the APEC region. The outlook includes the ENSO and IOD forecast outlook for the same period.
Url	http://www.apcc21.org/eng/service/mme/enso/japcc030401.jsp
Lead Agencies	APEC Climate Center (APCC)
Contacts	APCC, apcc@apcc21.net

Name	ARM Tropical Western Pacific (ARM-TWP)
Capability Area	- Understanding Climate Variability and Change
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience

Regions	- South Pacific - Australia - PNG - Other South Pacific
Data/Physical	- Data - Physical - In-situ Observations - Reanalysis Products - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Description	The Tropical Western Pacific (TWP) locale was established in 1996 as the second Atmospheric Radiation Measurement (ARM) Program climate research facility site. ARM focuses on obtaining continuous field measurements and providing data products that promote the advancement of climate models. The TWP site consists of three climate research facilities: Manus, Papua New Guinea; Nauru Island; and Darwin, Australia. Covering the area roughly between 10° N and 10° S of the equator and from 130° E to 167° E, the TWP locale includes a region that plays a large role in the interannual variability observed in the global climate system.
Url	http://www.arm.gov/sites/twp
Lead Agencies	U.S. DOE
Contacts	ARM, www@arm.gov

Name	Asia-Pacific Data Research Center (APDRC)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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
Data/Physical	- Data - Physical - In-situ Observations - Satellite-Remote Observations - Model Results - Bathymetry and Topography - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)

Products/Physical	- Products - Physical - Hindcasts (climatologies) - Outloooks (monthly to annual) - Impacts - Drought - Flooding/Inundation - Bleaching - Spatial Scale - Region/Nation - Time Scale - Past - Current - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Projections (intrannual to multi-decadal) - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Description	The APRDC of the International Pacific Research Center (IPRC) is building towards a vision of one-stop shopping of climate data and products for our users. Our mission is to increase understanding of climate variability in the Asia-Pacific region by developing the computational, data management, and networking infrastructure necessary to make data resources readily accessible and usable to researchers and general users; and by undertaking data-intensive research activities that will both advance knowledge and lead to improvements in data preparation and data products. This site provides access to an extensive range of climate-related data and products in multiple formats.
Url	http://apdrc.soest.hawaii.edu/

Lead Agencies	University of Hawaii/SOEST, Japan Agency for Marine-Earth Science and Technology (JAMSTEC), NOAA, NASA
Contacts	Jim Potemra, jimp@hawaii.edu

Name	Asia-Pacific Network for Global Change Research (APN)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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 - South Pacific - Australia - Fiji - New Zealand - Other South Pacific - Global
Data/Physical	- Data - Physical - Model Results - Reanalysis Products - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)

Products/Physical	- Products - Physical - Hindcasts (climatologies) - Outloooks (monthly to annual) - Impacts - Drought - Flooding/Inundation - Eroison - Bleaching - Spatial Scale - Region/Nation - Time Scale - Past - Current - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Projections (intrannual to multi-decadal) - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
Non Physical	- Data, Products, and Tools - Non-physical - Biological - Socio-economic - Cultural
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

Description	APN is a network of member country governments that promotes global change research in the region, increases developing country involvement in that research, and strengthens interactions between the science community and policy-makers. The APN defines global change as the set of natural and human-induced processes in Earth physical, biological, and social systems that, when aggregated, are significant at a global scale and its implications for sustainable development in the Asia-Pacific region.
Url	http://www.apn-gcr.org/newAPN/indexe.htm
Lead Agencies	NSF, USGCRP, Ministry of the Environment - Japan, Ministry of Environment - Republic of Korea, Ministry for the Environment - New Zealand
Contacts	APN, info@apn-gcr.org

Name	Center for Operational Oceanographic Products and Services (CO-OPS)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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
Data/Physical	- Data - Physical - In-situ Observations - Model Results - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)

Products/Physical	- Products - Physical - Outloooks (monthly to annual) - Impacts - Flooding/Inundation - Bleaching - Spatial Scale - Region/Nation - Location/Site - Time Scale - Past - Current - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Projections (intrannual to multi-decadal) - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Transportation/Communication and Commerce - Community Planning and Development - Agriculture and Fisheries - Recreation and Tourism
Description	CO-OPS provides the national infrastructure, science, and technical expertise to monitor, assess, and distribute tide, current, water level, and other coastal oceanographic products and services that support the NOAA mission of environmental stewardship and environmental assessment and prediction. CO-OPS provides operationally sound observations and monitoring capabilities coupled with operational Nowcast Forecast modeling.
Url	http://tidesandcurrents.noaa.gov/
Lead Agencies	NOAA/NOS/CO-OPS
Contacts	CO-OPS, nos.info@noaa.gov

Name	Climate 1-Stop
Capability Area	- Understanding Climate Impacts and Informing Adaptation

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 - Global
Products/Physical	- Products - Physical - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Non Physical	- Data, Products, and Tools - Non-physical - Biological - Socio-economic - Cultural
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
Description	Climate 1-Stop is a climate portal launched at the 2009 United Nations Climate Change Conference which aims to provide a single location to access proven climate change tools, resources and information. With a primary focus on adaptation, with clear linkages to mitigation and finance, the Climate 1-Stop facilitates those working with the world's most vulnerable to achieve robust decision making.
Url	http://arcserver4.iagt.org/climate1stop/
Lead Agencies	NSF, NASA, USAID, IAGT
Contacts	Climate 1-Stop, info@climate1stop.org

Name	Climate Adaptation Knowledge Exchange (CAKE)

Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- 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 - Global
Non Physical	- Data, Products, and Tools - Non-physical - Biological
Sectors	- Public Health and Safety - Community Planning and Development - Ecosystems
Description	CAKE is aimed at building a shared knowledge base for managing natural systems in the face of rapid climate change. CAKE brings together the recognized leadership of EcoAdapt in developing the concepts and practices of climate adaptation with Island Press as the leading publisher of solutions-based environmental information to offer the most valuable, up-to-date, and authoritative materials on the subject. It helps users to get beyond the limitations of their time and the unwieldy thicket of books, papers and articles by vetting and clearly organizing the best information available, building a community via an interactive online platform, creating a directory of practitioners to share knowledge and strategies, and identifying and explaining data tools and information available from other sites.
Url	http://www.cakex.org/
Lead Agencies	Island Press, EcoAdapt
Contacts	CAKE, info@cakex.org

Name	Climate and Ocean Monitoring and Prediction project (COMP)
Capability Area	- Understanding Climate Variability and Change
Focus Area	- Fresh Water Resources and Drought

Regions	- South Pacific - Cook Islands - Fiji - Kiribati - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific
Products/Physical	- Outloooks (monthly to annual) - Impacts - Drought - Flooding/Inundation - Spatial Scale - Location/Site - Time Scale - Future - Methodology - Model/Statistical - Model/Dynamical - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Sectors	- Fresh Water Resources - Community Planning and Development - Agriculture and Fisheries - Ecosystems
Description	The major objective of the COMP project is the continued development of seasonal prediction capacity in Pacific Island National Meteorological Services (NMS). This includes the development of new ocean climate products and services. It's hoped that as the capacity to predict seasonal climate increases in Pacific countries, so too will the ability to implement strategies dealing with the management of climate variability and climate change. Pacific Islands' existing climate knowledge and capacities to deliver climate and ocean services are the foundations upon which we build; this is key to achieving the project objective. These foundations were, in turn, established by the Pacific Islands Climate Prediction Project (PI-CPP).
Url	http://www.bom.gov.au/cosppac/comp/index.shtml

Lead Agencies	BOM/COSPPac
Contacts	Amanda Amjadali, a.amjadali@bom.gov.au

Name	Climate Change Adaptation for Coral Triangle Communities: A Guide for Vulnerability Assessment and Local Early Action Planning
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- South Pacific - PNG - Solomon Islands - Other South Pacific
Products/Physical	- Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
Non Physical	- Data, Products, and Tools - Non-physical - Socio-economic - Cultural
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
Description	Climate Change Adaptation for Coral Triangle Communities: A Guide for Vulnerability Assessment and Local Early Action Planning is a comprehensive set of cutting-edge scientific and social instruments that local governments and communities can use to assess their vulnerability to climate change and develop their own local action plans to address these. The guide tackles one of the major threats to the Coral Triangle’s reefs.

Url	http://www.coraltriangleinitiative.org/library/guidebook-climate-change-adaptation-coral-triangle-communities-guide-vulnerability
Lead Agencies	CTI-CFF
Contacts	CTI-CFF Secretariat, secretariat@cti-secretariat.net

Name	Climate Change Research in Support of Hawaiian Ecosystem Management: An Integrated Approach
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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
Products/Physical	- Products - Physical - Outloooks (monthly to annual) - Impacts - Drought - Spatial Scale - Location/Site - Time Scale - Future - Methodology - Model/Statistical - Projections (intrannual to multi-decadal) - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Terrestrial (e.g., Groundwater, Soil Moisture)
Sectors	- Ecosystems
Description	The key goals of our proposed work are (a) to understand how changes in the future climate system base state of the Hawaiian Islands will affect the frequency and severity of extreme events, (b) to support studies of the ecological impacts of climate change on native Hawaiian flora and fauna and (c) to provide information needed by natural resource managers charged with preserving native biodiversity. We will extend our statistical downscaling methods from the previous PICCC project to the latest CMIP5 climate scenario simulations, focus on potential climate stressors such as recurrence and intensity of heat waves and droughts, and we will collaborate with partners from USGS and UH Hilo to integrate the climate stressors into ecosystem response models. FY 12 start. 2 year timeline.

Url	https://nccwsc.usgs.gov/display-project/4f8c650ae4b0546c0c397b48/50118bd1e4b0d78fd4e59ba1
Lead Agencies	IPRC, U of Hawaii, CIRES, USGS, PI-CSC
Contacts	Oliver Elison Timm, timm@hawaii.edu Thomas Giambelluca, thomas@hawaii.edu Henry Diaz, henry.f.diaz@noaa.gov

Name	Climate Information Retrieval for Hawaii
Capability Area	- Understanding Climate Variability and Change
Focus Area	- Fresh Water Resources and Drought
Regions	- Central North Pacific - State Of Hawaii
Data/Physical	- Data - Physical - In-situ Observations - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Products/Physical	- Products - Physical - Hindcasts (climatologies) - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Sectors	- Fresh Water Resources - Community Planning and Development - Agriculture and Fisheries - Ecosystems
Description	Documentation and analysis for Temperature and Precipitation Summary (TAPS), Wetlands Determination (WETS), Frost Free Days (FROST), and Growth Season (GROWTH).
Url	http://www.wcc.nrcs.usda.gov/cgibin/state.pl?state=hi
Lead Agencies	USDA/NRCS/NWCC
Contacts	NWCC, nwccwebmaster@por.usda.gov

Name	Climate Information Retrieval for Pacific Islands
Capability Area	- Understanding Climate Variability and Change
Focus Area	- Fresh Water Resources and Drought

Regions	- Central North Pacific - Pacific Remote Islands - Western North Pacific - CNMI - FSM - Guam - Palau - RMI - South Pacific - American Samoa
Data/Physical	- Data - Physical - In-situ Observations - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Products/Physical	- Products - Physical - Hindcasts (climatologies) - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Sectors	- Fresh Water Resources - Community Planning and Development - Agriculture and Fisheries - Ecosystems
Description	Documentation and analysis for Temperature and Precipitation Summary (TAPS), Wetlands Determination (WETS), Frost Free Days (FROST), and Growth Season (GROWTH).
Url	http://www.wcc.nrcs.usda.gov/cgibin/state.pl?state=pi
Lead Agencies	USDA/NRCS/NWCC
Contacts	NWCC, nwccwebmaster@por.usda.gov

Name	Climate Resilience Evaluation and Awareness Tool (CREAT)
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin - Global

Products/Physical	- Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Terrestrial (e.g., Groundwater, Soil Moisture)
Sectors	- Public Health and Safety - Fresh Water Resources - Community Planning and Development
Description	EPA has developed CREAT, a software tool to assist drinking water and wastewater utility owners and operators in understanding potential climate change threats and in assessing the related risks at their individual utilities. CREAT provides users with access to the most recent national assessment of climate change impacts for use in considering how these changes will impact utility operations and missions. CREAT allows users to evaluate potential impacts of climate change on their utility and to evaluate adaptation options to address these impacts using both traditional risk assessment and scenario-based decision making.
Url	http://water.epa.gov/infrastructure/watersecurity/climate/creat.cfm
Lead Agencies	EPA
Contacts	CREAT Contact, Baranowski.Curt@epa.gov

Name	Climate Vulnerability and Capacity Analysis Handbook (CVCA)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin - Global
Non Physical	- Data, Products, and Tools - Non-physical - Biological - Socio-economic - Cultural
Sectors	- Public Health and Safety - Community Planning and Development - Social and Cultural Resources

Description	The CVCA methodology, developed by CARE International, provides a framework for analyzing climate change vulnerability and adaptive capacity at the community level. Recognizing that local actors must have the opportunity to drive their own future, the CVCA places local knowledge on climate risks and adaptation strategies at the forefront of the data gathering and analysis process. The Handbook includes guiding questions to examine resilience factors at multiple levels (national, local government/community, and household/individual levels). Field guides are provided for conducting participatory analysis with different groups within communities. The CVCA Handbook is designed to be used in conjunction with other resources, tools, and analytical frameworks, and links to complementary resources are provided throughout the document.
Url	http://www.careclimatechange.org/tk/integration/en/quick_links/tools/climate_vulnerability.html
Lead Agencies	CARE International
Contacts	CARE International, info@careclimatechange.org

Name	Climate Witness Community Toolkit
Capability Area	- Understanding Climate Impacts and Informing Adaptation
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 - Global
Non Physical	- Data, Products, and Tools - Non-physical - Biological - Socio-economic - Cultural
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

Description	This Toolkit is the result of a process undertaken on Kabara, Fiji, (the first Climate Witness site in the Pacific) to document local impacts of climate change and to devise appropriate adaptation measures that local communities can implement themselves. The methodologies within the toolkit are an adaptation of participatory techniques WWF-South Pacific has used over the years in community resource conservation and development projects, and should give facilitators a clear sense of process when trying to illicit information specific to impacts of climate change and developing appropriate community response measures to them. While clearly set in a Fijian context, can be adapted to other places with a strong pre-existing community.
Url	http://wwf.panda.org/about_our_earth/all_publications/?uNewsID=162722
Lead Agencies	WWF
Contacts	WWF, questions@wwf.panda.org

Name	Community-based Risk Screening Tool – Adaptation and Livelihoods (CRiSTAL)
Capability Area	- Understanding Climate Impacts and Informing Adaptation
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 - Global
Non Physical	- Data, Products, and Tools - Non-physical - Biological - Cultural
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

Description	CRiSTAL is a screening tool designed to help project designers and managers integrate risk reduction and climate change adaptation into community-level projects. CRiSTAL uses a series of worksheets to guide users systematically through the climate change context of their project, the resources at risk, existing coping strategies, and possible project modifications to reduce project vulnerability to climate change. It is designed as an Excel Workbook, but may be used in hard copy as well.
Url	http://www.iisd.org/cristaltool/
Lead Agencies	International Institute for Sustainable Development (IISD), HELVETAS Swiss Intercooperation, Stockholm Environment Institute (SEI)
Contacts	Anne Hammill, ahammill@iisd.ca

Name	Comprehensive Pacific Rainfall Data Base (PACRAIN)
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Fresh Water Resources and Drought
Regions	- Western North Pacific - CNMI - FSM - Guam - Palau - RMI - South Pacific - American Samoa - Cook Islands - Fiji - French Polynesia - Kiribati - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific
Data/Physical	- Data - Physical - In-situ Observations - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Sectors	- Public Health and Safety - Fresh Water Resources - Community Planning and Development - Agriculture and Fisheries

Description	PACRAIN consists of daily and monthly rainfall records from many sites located on atolls and islands. The database is updated monthly. An extensive set of metadata corresponding to measurement sites has been developed and data is available in an easy-to-use format which allows a client to tailor data formats to particular research needs. Data comes from NIWA, NCDC and Meteo-France Polynesia. The project has been supplemented by an extensive collection of rainfall data from schools across the Pacific participating in the Schools of the Pacific Rainfall Climate Experiment (SPaRCE).
Url	http://pacrain.evac.ou.edu/
Lead Agencies	University of Oklahoma/EVAC
Contacts	Mark Morrissey, mmorriss@ou.edu

Name	Coral Reef Ecosystem Integrated Observing System (CREIOS)
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin - Global
Data/Physical	- Data - Physical - In-situ Observations - Satellite-Remote Observations - Model Results - Bathymetry and Topography - Imagery - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)

Products/Physical	- Products - Physical - Hindcasts (climatologies) - Outloooks (monthly to annual) - Impacts - Bleaching - Spatial Scale - Location/Site - Time Scale - Past - Current - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Ecosystems
Description	The NOAA Coral Reef Conservation Program (CRCP) has combined its mapping and monitoring projects into CREIOS. CREIOS provides a diverse suite of long-term ecological and environmental observations and information products over a broad range of spatial and temporal scales to understand coral reef ecosystem condition and processes and to inform stakeholders and assist managers in making improved and timely ecosystem-based management decisions to conserve coral reefs.
Url	http://coralreefwatch.noaa.gov/satellite/index.html
Lead Agencies	NOAA/NOS/CRCP
Contacts	NOAA Coral Reef Watch, http://coralreefwatch.noaa.gov/creios.html

Name	Coral Reef Temperature Anomaly Database (CoRTAD)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin - Global

Products/Physical	- Products - Physical - Hindcasts (climatologies) - Applications, including Visualization and Decision Support Tools - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Ecosystems
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.
Url	http://www.nodc.noaa.gov/sog/Cortad/
Lead Agencies	NOAA/NODC, University of North Carolina - Chapel Hill
Contacts	Kenneth Casey, Kenneth.Casey@noaa.gov

Name	Coral Reef Watch
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin - Global
Data/Physical	- Data - Physical - In-situ Observations - Satellite-Remote Observations - Model Results - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)

Products/Physical	- Products - Physical - Outloooks (monthly to annual) - Impacts - Bleaching - Spatial Scale - Region/Nation - Time Scale - Future - Methodology - Obs/Remote - Model/Dynamical - Guidance, including “Best Practices” Manuals, Toolkits, and Guides
Sectors	- Ecosystems
Description	The NOAA Coral Reef Watch mission is to utilize remote sensing and in situ tools for near-real-time and long term monitoring, modeling and reporting of physical environmental conditions of coral reef ecosystems. Satellite data provide current reef environmental conditions to quickly identify areas at risk for coral bleaching. Continuous monitoring of sea surface temperature at global scales provides researchers and stakeholders with tools to understand and better manage the complex interactions leading to coral bleaching. When bleaching conditions occur, these tools can be used to trigger bleaching response plans and support appropriate management decisions.
Url	http://coralreefwatch.noaa.gov/satellite/index.html
Lead Agencies	NOAA/NESDIS/STAR, NOAA/CRCP
Contacts	NOAA Coral Reef Watch, coralreefwatch@noaa.gov

Name	Coral Triangle Atlas (CT Atlas)
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- South Pacific - PNG - Solomon Islands - Other South Pacific
Products/Physical	- Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)

Non Physical	- Data, Products, and Tools - Non-physical - Biological - Socio-economic - Cultural
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
Description	The Coral Triangle Atlas is an online Geographical Information System (GIS) database, providing scientists and NGOs with a view of spatial data at the regional scale. Biophysical and socioeconomic information has been collected for decades by scientists and managers for different parts of the Coral Triangle. However, to date, little of this information little of this information has been centralized to form region wide layers that provide an overall view and enable management plans at a regional level. This project will improve the efficiency of conservation planning in the region by giving researchers and manager's access to spatial information while encouraging them to share their data to complete the gaps, therefore reducing duplicate data collection efforts and providing the most complete and most current data available.
Url	http://ctatlas.reefbase.org/
Lead Agencies	ReefBase, The Nature Conservancy
Contacts	CTA, reefbase@cgiar.org

Name	Data Basin Climate Center
Capability Area	- Understanding Climate Impacts and Informing Adaptation
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 - Global

Products/Physical	- Products - Physical - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
Non Physical	- Data, Products, and Tools - Non-physical - Biological - Socio-economic - Cultural
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
Description	The Climate Center is one of the gateways into Data Basin, the on-line database with data manipulation tools created by the Conservation Biology Institute. It focuses on datasets, tools, and social networks related to climate and its impacts. The Climate Center makes it easy to find documented climate and impacts datasets, manipulate and combine them to create visualization results that can be used for reports, proposals, workshops etc. Anyone using the Climate Center can explore how the natural, physical, and cultural worlds may be impacted by past and future climate change.
Url	http://databasin.org/climate-center
Lead Agencies	The Kresge Foundation, ESRI, USDA Forest Service
Contacts	Data Basin, databasin@consbio.org

Name	Educational Global Climate Modeling (EdGCM)
Capability Area	- Understanding Climate Variability and Change
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 - Global
Data/Physical	- Data - Physical - Model Results - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Products/Physical	- Products - Physical - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Community Planning and Development - Ecosystems
Description	EdGCM is a suite of software that allows users to run a fully functional 3D global climate model on laptops or desktop computers. Teachers, students and others can learn by doing to design climate experiments, run computer simulations, post-process data, analyze output using scientific visualization tools, and report on their results. All of this is done in the same manner and with the same tools used by climate scientists. The software package includes a full copy of 4th Dimension database software and the NASA/Goddard Institute for Space Studies Global Climate Model II.
Url	http://edgcm.columbia.edu/
Lead Agencies	Columbia University
Contacts	EdGCM, http://forums.edgcm.columbia.edu/

Name	Geophysical Fluid Dynamics Laboratory (GFDL)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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 - Global
Data/Physical	- Data - Physical - Model Results - Reanalysis Products - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Products/Physical	- Products - Physical - Hindcasts (climatologies) - Outloooks (monthly to annual) - Impacts - Drought - Flooding/Inundation - Spatial Scale - Region/Nation - Time Scale - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Projections (intrannual to multi-decadal) - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Fresh Water Resources - Community Planning and Development - Agriculture and Fisheries - Ecosystems

Description	The GFDL develops and uses mathematical models and computer simulations to improve our understanding and prediction of the behavior of the atmosphere, the oceans, and climate. Since 1955 GFDL has set the agenda for much of the world research on the modeling of global climate change and has played a significant role in the World Meteorological Organization, the Intergovernmental Panel on Climate Change assessments, and the U.S. Climate Change Science Program. The CM2.x models have become the workhorse model for GFDL climate research. They are being applied to topics focusing on decadal to centennial time scale issues, as well as to seasonal to inter-annual problems, such as El Nino research and experimental forecasts. Public data sets from GFDL are made available through the GFDL Data Portal.
Url	http://www.gfdl.noaa.gov/
Lead Agencies	NOAA/OAR
Contacts	GFDL, gfdl.climate.model.info@noaa.gov

Name	Global Observing Systems Information Center (GOSIC)
Capability Area	- Understanding Climate Impacts and Informing Adaptation
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 - Global
Data/Physical	- Data - Physical - In-situ Observations - Satellite-Remote Observations - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)

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
Description	The GOSIC portal provides convenient, central, one-stop access to data and information identified by the Global Climate Observing System (GCOS), the Global Ocean Observing System (GOOS) and the Global Terrestrial Observing System (GTOS) and their partner programs, such as the Global Atmosphere Watch (GAW) and regional observing systems, such as the GOOS Regional Alliances (GRA).
Url	http://gosic.org/
Lead Agencies	NOAA/NCDC, U.S. GCOS Program
Contacts	GOSIC, gosic@noaa.gov

Name	Global Socioeconomic Monitoring Initiative for Coastal Management (SocMon)
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- 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 - Global
Non Physical	- Data, Products, and Tools - Non-physical - Biological - Socio-economic - Cultural
Sectors	- Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems

Description	SocMon works through regional and local partners to facilitate community-based socioeconomic monitoring. Household and community level data are collected to inform dependence on coral reef resources, perceptions of resource conditions, threats to marine and coastal resources, and support for marine management strategies such as marine protected areas. The Pacific Islands are one of six regions throughout the world that are successfully conducting socioeconomic monitoring through the SocMon initiative.
Url	http://www.socmon.org/regions.aspx?region=Pacific_Islands
Lead Agencies	Global Coral Reef Monitoring Network (GCRMN), ReefBase, NOAA
Contacts	Caroline Vieux, carolinev@sprep.org

Name	Group for High-Resolution Sea Surface Temperature (GHRSST)
Capability Area	- Understanding Climate Variability and Change
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Global
Data/Physical	- Data - Physical - Satellite-Remote Observations - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Products/Physical	- Products - Physical - Outloooks (monthly to annual) - Impacts - Bleaching - Spatial Scale - Region/Nation - Time Scale - Current - Methodology - Obs/Remote - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Description	The Group for High-Resolution Sea Surface Temperature (GHRSST) provides a new generation of global high-resolution (<10km) SST products to the operational oceanographic, meteorological, climate and general scientific community. GHRSST can supply SST data in satellite swath coordinates (L2P), gridded data (L3), and gap-free gridded products (L4).

Url	https://www.ghrsst.org/
Lead Agencies	NASA, NOAA, ESA, EUMESTST, JAXA, JMA, FREMER, BOM, CSIRO, Met Office, Meteo France, many others…
Contacts	GHRSST-Project Office, ghrsst-po@nceo.ac.uk

Name	Hadley Centre Coupled Model version 3 (HadCM3)
Capability Area	- Understanding Climate Variability and Change
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 - Global
Data/Physical	- Data - Physical - Model Results - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Products/Physical	- Products - Physical - Projections (intrannual to multi-decadal) - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Fresh Water Resources - Community Planning and Development - Agriculture and Fisheries - Ecosystems
Description	HadCM3 is a coupled climate model that has been used extensively for climate prediction, detection and attribution, and other climate sensitivity studies. HadCM3 was one of the major models used in the IPCC Third and Fourth Assessments. It was developed in 1999 and was the first unified model climate configuration not to require flux adjustments. It also has the capability to capture the time dependent fingerprint of historical climate change in response to natural and anthropogenic forcings which has made it a particularly useful tool in studies concerning the detection and attribution of past climate changes.

Url	http://www.metoffice.gov.uk/research/modelling-systems/unified-model/climate-models/hadcm3
Lead Agencies	UK Met Office
Contacts	UK Met Office, enquiries@metoffice.gov.uk

Name	Hawaii Coastal Erosion Website
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - State Of Hawaii
Data/Physical	- Bathymetry and Topography - Imagery - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Products/Physical	- Products - Physical - Applications, including Visualization and Decision Support Tools - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Community Planning and Development - Recreation and Tourism
Description	The Hawaii Shoreline Study provides shoreline change data to the public and government partners to assist in decision-making in the coastal zone. This site provides sets of historical maps and air photos, modern vertical and oblique air photos, and maps depicting rates of shoreline change spaced every 20 m on the sandy beaches of Maui, Oahu, and Kauai.
Url	http://www.soest.hawaii.edu/coasts/erosion/
Lead Agencies	University of Hawaii/SOEST, State of Hawaii DLNR, USGS, USACE, County of Maui, County of Kauai, City and County of Honolulu
Contacts	Chip Fletcher, fletcher@soest.hawaii.edu

Name	Hawaii Drought Monitor
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Fresh Water Resources and Drought
Regions	- Central North Pacific - State Of Hawaii

Products/Physical	- Products - Physical - Outloooks (monthly to annual) - Impacts - Drought - Spatial Scale - Location/Site - Time Scale - Past - Current - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Terrestrial (e.g., Groundwater, Soil Moisture)
Sectors	- Public Health and Safety - Fresh Water Resources - Transportation/Communication and Commerce - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Description	Drought is a chronic and troublesome problem in Hawaii, at one time or another affecting virtually every part of the state. The Hawaii Drought Monitor disseminates drought monitoring information to the public and affected agencies. Featured forecast and impacts information includes: NDMC/NOAA/USDA U.S. Drought Monitor for the State of Hawaii; NDMC Drought Impact Reporter; NOAA/NWS Drought Information Statement; NOAA/NWS U.S. Seasonal Drought Outlook; NOAA/CPC Long-range Precipitation Forecast for Hawaii; USDA/NASS Hawaii Weekly Crop Weather Report; and TAO El Nino ocean conditions. Links to assistance, preparedness, news and research information sources are also provided.
Url	http://hawaii.gov/dlnr/drought/
Lead Agencies	State of Hawaii/DLNR/CWRM
Contacts	DLNR, dlnr@hawaii.gov

Name	Hawaii Ocean Observing System (HiOOS)
Capability Area	- Understanding Climate Impacts and Informing Adaptation

Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Central North Pacific - State Of Hawaii
Data/Physical	- Data - Physical - In-situ Observations - Satellite-Remote Observations - Model Results - Bathymetry and Topography - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Products/Physical	- Products - Physical - Hindcasts (climatologies) - Outloooks (monthly to annual) - Impacts - Flooding/Inundation - Bleaching - Spatial Scale - Location/Site - Time Scale - Past - Current - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Applications, including Visualization and Decision Support Tools - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)

Sectors	- Public Health and Safety - Energy - Transportation/Communication and Commerce - Community Planning and Development - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Description	HiOOS is the Hawaiian Islands component of the Pacific Islands Ocean Observing System which is one of eleven regional observing programs in the U.S. that are supporting the emergence of the U.S. Integrated Ocean Observing System. HiOOS is a coordinated effort among numerous researchers at UH/SOEST as well as various other federal, state, and county agencies, non-profit organizations, and private companies. HiOOS seeks to provide accurate, timely and reliable information about the coastal and open ocean. HiOOS component groups are collecting data and producing data products that focus on four main catalyst projects in the Hawaiian Islands: Coastal Resiliency; Marine Ecosystem Stewardship; Ocean & Beach Conditions; and Automated Water Quality Sensing.
Url	http://oos.soest.hawaii.edu/pacioos/regions/hawaii.php
Lead Agencies	University of Hawaii –SOEST, University of Hawaii - Sea Grant, NOAA
Contacts	Heather Kerkering, heather.kerkering@hawaii.edu, PacIOOS Director

Name	International Best Track Archive for Climate Stewardship (IBTrACS)
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin - Global
Products/Physical	- Products - Physical - Hindcasts (climatologies) - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Sectors	- Public Health and Safety

Description	The IBTrACS provides tropical cyclone best track data in a centralized location to aid the understanding of the distribution, frequency, and intensity of tropical cyclones worldwide. The IBTrACS project contains the most complete global set of historical tropical cyclones available, combines information from numerous tropical cyclone datasets, simplifies inter-agency comparisons by providing storm data from multiple sources in one place, provides data in popular formats to facilitate analysis, and checks the quality of storm inventories, positions, pressures, and wind speeds, passing the information on to the user.
Url	http://www.ncdc.noaa.gov/oa/ibtracs/
Lead Agencies	NOAA/NESDIS/NCDC, World Data Center for Meteorology - Asheville
Contacts	IBTrACS, IBTrACS.Team@noaa.gov

Name	International Pacific Research Center (IPRC)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
Focus Area	- 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
Data/Physical	- Data - Physical - In-situ Observations - Satellite-Remote Observations - Model Results - Reanalysis Products - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)

Products/Physical	- Products - Physical - Hindcasts (climatologies) - Outloooks (monthly to annual) - Impacts - Drought - Flooding/Inundation - Bleaching - Spatial Scale - Region/Nation - Time Scale - Past - Current - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Projections (intrannual to multi-decadal) - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Transportation/Communication and Commerce - Community Planning and Development - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Description	The IPRC is an international climate research center, with a focus on the Asia-Pacific region. The IPRC seeks to understand the climate system and how it may respond to human activity by conducting experiments with computer simulation models and by analyzing the many direct and remote observations related to climate. IPRC is a provider of down-scaled climate model data. IPRC also maintains a data center (Asia-Pacific Data Research Center) making atmospheric and oceanic data of relevance to the Asia-Pacific region readily available to its own researchers, the broader climate research community, policy makers and the general public.
Url	http://iprc.soest.hawaii.edu/
Lead Agencies	University of Hawaii/SOEST, Japan Agency for Marine-Earth Science and Technology (JAMSTEC), NOAA, NASA

Contacts	IPRC, iprc-help@lists.hawaii.edu

Name	International Research Institute for Climate and Society (IRI)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin - Global
Products/Physical	- Products - Physical - Hindcasts (climatologies) - Outloooks (monthly to annual) - Impacts - Drought - Flooding/Inundation - Bleaching - Spatial Scale - Region/Nation - Time Scale - Past - Current - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Projections (intrannual to multi-decadal) - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)

Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Agriculture and Fisheries - Recreation and Tourism
Description	The IRI Climate Program is a center of expertise in the development and communication of forecasts, monitoring, historical analyses and other climate-information products. We develop these products to meet the needs of local decision makers and others who work in sectors such as agriculture, water resources and public health. Products include: the ENSO Quick Look which provides a monthly summary of current and forecast ENSO conditions and places current conditions in historical context; Monthly Climate Forecasts which show estimated probabilities that precipitation and temperature over several upcoming 3-month periods will be below normal, near normal or above normal; and the Climate Predictability Tool designed to assist National Meteorological Services to produce their own tailored, downscaled seasonal climate forecasts.
Url	http://portal.iri.columbia.edu/portal/server.pt
Lead Agencies	NOAA/CPO, Columbia University
Contacts	IRI, info@iri.columbia.edu

Name	Island Climate Update
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- South Pacific - American Samoa - Australia - Cook Islands - Fiji - French Polynesia - Kiribati - New Zealand - PNG - Samoa - Tonga - Tuvalu - Vanuatu - Other South Pacific

Products/Physical	- Products - Physical - Hindcasts (climatologies) - Outloooks (monthly to annual) - Impacts - Drought - Spatial Scale - Region/Nation - Location/Site - Time Scale - Current - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Fresh Water Resources - Agriculture and Fisheries - Recreation and Tourism
Description	A monthly summary of the climate in the tropical South Pacific islands, with an outlook for the coming months, to assist in dissemination of climate information in the Pacific region. This bulletin is a multi-national project with collaboration from a number of Pacific nations and support from various organisations.
Url	http://www.niwa.co.nz/our-science/climate/publications/all/icu
Lead Agencies	NIWA, NZAID, SPREP, NOAA
Contacts	Andrew Lorrey, a.lorrey@niwa.co.nz

Name	Local 3-Month Precipitation Outlooks for Hawaii (L3MPO)
Capability Area	- Understanding Climate Variability and Change
Focus Area	- Fresh Water Resources and Drought
Regions	- Central North Pacific - State Of Hawaii

Products/Physical	- Products - Physical - Outloooks (monthly to annual) - Impacts - Drought - Flooding/Inundation - Spatial Scale - Location/Site - Time Scale - Future - Methodology - Obs/In-situ - Model/Statistical - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Sectors	- Fresh Water Resources - Agriculture and Fisheries
Description	Local 3-Month Precipitation Outlooks (L3MPO), akin to its already operational counterpart, the Local 3-Month Temperature Outlooks (L3MTO), is currently in testing stages. L3MPO will include approximately 1,200 sites across continental U.S., Alaska and Hawaii. These outlooks will be based on the guidance provided in the Climate Prediction Center's (CPC) Probability of Exceedance (POE) 3-month precipitation outlooks. The L3MPO will use local climatological biases together with expected regional climate variability derived from the more general CPC outlooks. The L3MPO consists of thirteen 3-month temperature outlooks for each specified site with lead times from 0.5 months to 12.5 months. L3MPOs will be provided in graphical, tabular, and text formats, and will be available via the NWS WFO Web pages concurrent with the issuance of the CPC 3-month precipitation outlooks.
Url	http://www.nws.noaa.gov/climate/climate_prediction.php?wfo=hnl
Lead Agencies	NOAA OCWWS/CSD, NCDC, CPC
Contacts	NWS Honolulu WFO, http://www.nws.noaa.gov/survey/web-survey.php?code=ClimateWeb

Name	Local 3-Month Temperature Outlooks for Hawaii (L3MTO)
Capability Area	- Understanding Climate Variability and Change
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - State Of Hawaii

Products/Physical	- Products - Physical - Outloooks (monthly to annual) - Spatial Scale - Location/Site - Time Scale - Future - Methodology - Obs/In-situ - Model/Statistical - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Description	Local 3-Month Temperature Outlooks (L3MTO) are produced operationally each month for about 1,200 sites across continental U.S., Alaska and Hawaii. These outlooks are based on the guidance provided in the Climate Prediction Center's (CPC) Probability of Exceedance (POE) 3-month temperature outlooks. The L3MTO uses local climatological biases together with expected regional climate variability derived from the more general CPC outlooks. The L3MTO consists of thirteen 3-month temperature outlooks for each specified site with lead times from 0.5 months to 12.5 months. L3MTOs are provided in graphical, tabular, and text formats, and are available via the NWS/WFO Web pages concurrent with the issuance of the CPC 3-month temperature outlooks.
Url	http://www.nws.noaa.gov/climate/calendar_outlook.php?wfo=hnl
Lead Agencies	NOAA OCWWS/CSD, NCDC, CPC
Contacts	NWS Honolulu WFO, http://www.nws.noaa.gov/climate/feedback.php?wfo=hnl

Name	Local Climate Analysis Tool (LCAT)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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

Products/Physical	- Products - Physical - Hindcasts (climatologies) - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Description	The Local Climate Analysis Tool (LCAT) will enable National Weather Service (NWS) Regional Headquarters, Weather Forecast Offices (WFO)/, Weather Service Offices (WSO)/, and River Forecast Centers (RFC) the ability to conduct regional and local climate studies using station and reanalysis gridded data and various statistical techniques for climate analysis. The analysis results will be used for climate services to guide local decision makers in weather and climate sensitive actions and to deliver information to the general public. LCAT will augment current climate reference materials with information pertinent to the local and regional levels as they apply to diverse variables appropriate to each locality. The LCAT outcomes will be useful for governmental, economic and business planning. NWS external partners and government agencies will benefit from the LCAT outputs that could be easily incorporated into their own analysis and/or delivery systems.
Lead Agencies	NOAA Office of Climate, Water and Weather Services (OCWWS)/Climate Services Division (CSD)
Contacts	Annette Hollingshead, Annette.Hollingshead@noaa.gov Marina Timofeyeva, Marina.Timofeyeva@noaa.gov

Name	Local Climate Estimator (LocCLIM)
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Fresh Water Resources and Drought - Marine and Terrestrial Ecosystems

Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin - Global
Products/Physical	- Products - Physical - Outloooks (monthly to annual) - Impacts - Drought - Spatial Scale - Location/Site - Time Scale - Current - Methodology - Obs/In-situ - Model/Statistical - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Terrestrial (e.g., Groundwater, Soil Moisture)
Sectors	- Fresh Water Resources - Agriculture and Fisheries - Ecosystems
Description	LocClim was developed to provide an estimate of climatic conditions at locations for which no observations are available. To achieve this, the program uses the 28800 stations of FAOCLIM 2.0, the global agroclimatic database maintained by the Agrometeorology Group of FAO. The program also provides estimates of growing season characteristics based on a comparison of rainfall and potential evapotranspiration (Franquin's method).
Url	http://www.fao.org/sd/2002/EN1203a_en.htm
Lead Agencies	UN/FAO
Contacts	Agrometeorology Group of FAO, agromet@fao.org

Name	Local Government and Climate Change Adaptation Toolkit
Capability Area	- Understanding Climate Impacts and Informing Adaptation
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 - Global
Non Physical	- Socio-economic - Cultural
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
Description	This toolkit, which should be used alongside the Climate Change Impacts & Risk Management guide from the Australian Government Department of Climate Change, outlines an adaptive management process and provides a set of tools and exercises meant to assist councils as they work through the process. This toolkit is organized according to the adaptive management process. It outlines how and when to use each of the included tools as a complement to the adaptive management process. As the tools are voluntary components of the adaptive management process and each tool is designed for specific needs, individual councils will need to determine which of the tools are appropriate for their particular use.
Url	http://www.iclei.org/index.php?id=adaptation-toolkit
Lead Agencies	ICLEI Oceania, Australian Government Department of Climate Change
Contacts	ICLEI Oceania Head Office, frances.ronchetti@iclei.org

Name	National Climatic Data Center - Pacific Region Climate Services (NCDC-RCSD)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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 - Global
Data/Physical	- Data - Physical - In-situ Observations - Satellite-Remote Observations - Model Results - Reanalysis Products - Imagery - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)

Products/Physical	- Products - Physical - Hindcasts (climatologies) - Outloooks (monthly to annual) - Impacts - Drought - Flooding/Inundation - Eroison - Bleaching - Spatial Scale - Region/Nation - Time Scale - Past - Current - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Projections (intrannual to multi-decadal) - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Agriculture and Fisheries - Recreation and Tourism - Ecosystems

Description	The National Climatic Data Center's (NCDC) Regional Climate Services Directors (RCSD) support the development and delivery of a wide range of place-based climate science and information products and services to help people make informed decisions. RCSDs regularly communicate with stakeholders about climate information needs, and help build and strengthen active partner networks with public and private constituents. They play a primary role in integrating the work within NOAA and among its partners engaged in developing and delivering climate services at the regional level, including the Regional Integrated Sciences and Assessment programs, Regional Climate Centers, state climatologists, the National Integrated Drought Information System as well as other agencies, institutions, and organizations. These efforts serve to increase the value of climate information to users and support more efficient, cost-effective delivery of products and services.
Url	http://www.rcsdhome.org/pacific
Lead Agencies	NOAA/NESDIS/NCDC
Contacts	John Marra, john.marra@noaa.gov, Regional Climate Services Director, Pacific Region

Name	NOAA Climate Services Portal
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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 - Pacific Basin - Global

Data/Physical	- Data - Physical - In-situ Observations - Satellite-Remote Observations - Model Results - Reanalysis Products - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
Products/Physical	- Products - Physical - Hindcasts (climatologies) - Outloooks (monthly to annual) - Impacts - Drought - Flooding/Inundation - Eroison - Bleaching - Spatial Scale - Region/Nation - Location/Site - Time Scale - Past - Current - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Projections (intrannual to multi-decadal) - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)

Non Physical	- Data, Products, and Tools - Non-physical - Biological - Socio-economic - Cultural
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
Description	With the rapid rise in the development of web technologies and climate services across NOAA, there has been an increasing need for greater collaboration regarding NOAA online climate services. The drivers include the need to enhance NOAA web presence in response to customer requirements, emerging needs for improved decision making capabilities across all sectors of society facing impacts from climate variability and change, and the importance of leveraging climate data and services to support research and public education. To address these needs, NOAA embarked upon an ambitious program to develop a NOAA Climate Services Portal. The goal is for the Portal to become the go to website for NOAA climate data, products, and services for all users.
Url	http://www.climate.gov/
Lead Agencies	NOAA
Contacts	NOAA Climate Services Portal, climate-portal@noaa.gov

Name	NOAA OceanWatch - Central Pacific
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
Focus Area	- 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

Data/Physical	- Data - Physical - In-situ Observations - Satellite-Remote Observations - Bathymetry and Topography - Imagery - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Products/Physical	- Products - Physical - Hindcasts (climatologies) - Outloooks (monthly to annual) - Impacts - Drought - Flooding/Inundation - Bleaching - Spatial Scale - Region/Nation - Time Scale - Past - Current - Future - Methodology - Obs/Remote - Model/Statistical - Model/Dynamical - Projections (intrannual to multi-decadal) - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Transportation/Communication and Commerce - Agriculture and Fisheries - Ecosystems

Description	NOAA OceanWatch - Central Pacific acquires and processes satellite information and creates a variety of satellite data products for the Pacific Ocean region. In this manner we seek to serve as an updated source of daily regional satellite oceanographic observations. Links are provided to access oceanographic satellite remote sensing database holdings, as well as some of the near-real time satellite-based products available for the Pacific region. Access is also provided to a Live Access Server, THREDDS server, and data catalog. As part of its operational responsibilities, OceanWatch - Central Pacific operates a direct readout station for the acquisition of realtime sea-surface temperature data from the Advanced Very High Resolution Radiometer (POES AVHRR).
Url	http://oceanwatch.pifsc.noaa.gov/
Lead Agencies	NOAA/NESDIS, NOAA/PIFSC
Contacts	Lucas Moxey, lucas.moxey@noaa.gov

Name	NRL Layered Ocean Model (NLOM)
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin - Global
Data/Physical	- Data - Physical - Model Results - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Transportation/Communication and Commerce - Agriculture and Fisheries - Recreation and Tourism
Description	This site contains real-time and archived nowcast/forecast results from the 1/32° global Naval Research Laboratory (NRL) Layered Ocean Model (NLOM), including snapshots, animations and forecast verification statistics for many zoom regions, mainly sea surface height (SSH), sea surface temperature (SST) and surface currents. It also contains direct model-data comparisons.
Url	http://www7320.nrlssc.navy.mil/global_nlom/
Lead Agencies	USN/NRL
Contacts	NLOM, nlom_webmaster@nrlssc.navy.mil

Name	Pacific Climate Change Data Portal

Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Western North Pacific - South Pacific
Data/Physical	- Data - Physical - In-situ Observations - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Products/Physical	- Products - Physical - Hindcasts (climatologies) - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Sectors	- Fresh Water Resources - Community Planning and Development - Agriculture and Fisheries
Description	The Pacific Climate Change Data Portal has been developed through the Pacific Climate Change Science Program as part of the International Climate Change Adaptation Initiative. This Australian Government Initiative aims to assist vulnerable countries in the Asia-Pacific region, especially Pacific Island countries and East Timor, to meet high-priority climate change adaptation needs. This website provides historical point-based data for climate observing sites across the Pacific. At present, climate variables available include temperatures, rainfall and Mean Sea-Level Pressure (MSLP), at monthly, seasonal and annual timescales. Climate data is presented as time series graphs and basic site information (metadata) is provided to assist users choose the most appropriate location. The website allows quick comparisons across international borders, and puts changes at individual sites into a broader whole of the Pacific perspective.
Url	http://www.bom.gov.au/climate/pccsp/
Lead Agencies	BOM/PCCSP
Contacts	Pacific Climate Change Data Portal, pccsp@cawcr.gov.au

Name	Pacific Climate Change Portal
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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 - Palau - RMI - South Pacific - American Samoa - Cook Islands - Fiji - Kiribati - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific
Data/Physical	- Data - Physical - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
Products/Physical	- Products - Physical - Hindcasts (climatologies) - Outloooks (monthly to annual) - Projections (intrannual to multi-decadal) - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
Non Physical	- Data, Products, and Tools - Non-physical - Biological - Socio-economic - Cultural

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
Description	The Secretariat of the Pacific Regional Environment Programme, in collaboration with its partners, is developing the Pacific Climate Change Portal. The Pacific Climate Change Roundtable (PCCR) and subsequent SPREP meetings (2009 & 2011) approved the development of the Pacific Climate Change Portal (PCCP). Regional and national institutions in the Pacific Island region hold a substantial amount of climate changerelated information and tools. The Pacific Climate Change Portal aims to ensure this information is readily accessible in a coordinated and user-friendly manner. The portal will provide a platform for institutions and governments in the Pacific region to share information that can be readily accessed by linking to information repositories such as the Pacific Islands Global Ocean Observing System. The Pacific Climate Change Portal will improve and strengthen understanding of climate change issues by a greater number of people in the Pacific region. Improved access to information will strengthen communication and collaboration to cope with climate change regionally and locally. This portal is also anticipated to leverage more climate change initiatives and innovation in Pacific Island Countries and Territories. The major target groups expected to use the portal are national stakeholders (PICTs), regional stakeholders (CROP agencies) and development partners. A broader audience, however, is not excluded.
Url	http://www.pacificclimatechange.net/
Lead Agencies	SPREP, USP, SPC, PIFS, GIZ
Contacts	Makelesi Gonelevu, makelesig@sprep.org, Knowledge Management Officer, SPREP

Name	Pacific Climate Change Science Program and Pacific-Australia Climate Change Science and Adaptation Planning Program (PCCSP)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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 - Australia - Cook Islands - Fiji - Kiribati - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific
Data/Physical	- Data - Physical - In-situ Observations - Satellite-Remote Observations - Model Results - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)

Products/Physical	- Products - Physical - Hindcasts (climatologies) - Outloooks (monthly to annual) - Impacts - Drought - Flooding/Inundation - Eroison - Bleaching - Spatial Scale - Region/Nation - Location/Site - Time Scale - Past - Current - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Projections (intrannual to multi-decadal) - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
Sectors	- Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Agriculture and Fisheries - Recreation and Tourism - Ecosystems

Description	The PCCSP and the PACCSAP science activities aim to improve the scientific understanding of past and future climate in the region to effectively inform adaptation. The research covers - past climate change and seasonal predictions, climate variability and large-scale climate features, climate projections and oceans. The research is complemented with a comprehensive capacity building program and science communication products and activities.
Url	www.pacificclimatechangescience.org
Lead Agencies	BOM, CISRO
Contacts	Jill Rischbieth, Communication Advisor PACCSAP Science, Jill.Rischbieth@CSIRO.au Dr. Kathy McInnes, Climate Scientist CSIRO, Kathleen.Mcinnes@CSIRO.au Dr. Scott Power, Climate Scientist BOM, Scott.Power@BOM.gov.au

Name	Pacific Climate Futures
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
Focus Area	- Fresh Water Resources and Drought
Regions	- Western North Pacific - FSM - Palau - RMI - South Pacific - Cook Islands - Fiji - Kiribati - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific
Products/Physical	- Products - Physical - Projections (intrannual to multi-decadal) - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Applications, including Visualization and Decision Support Tools

Sectors	- Public Health and Safety - Fresh Water Resources - Community Planning and Development - Agriculture and Fisheries - Ecosystems
Description	As a key initiative of the Pacific Climate Change Science Program, "Pacific Climate Futures" assists decision makers and planners in 15 partner countries of the Asia-Pacific region in understanding how their climate has changed and how it may change in the future. The Pacific Climate Futures web-tool has been designed to provide information and guidance in the generation of national climate projections and facilitate the generation of data for detailed impact and risk assessments.
Url	http://www.pacificclimatefutures.net/
Lead Agencies	CSIRO-Pacific Climate Change Science Program
Contacts	pacificclimatefutures@csiro.au

Name	Pacific ENSO Applications Climate Center (PEAC)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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

Products/Physical	- Hindcasts (climatologies) - Outloooks (monthly to annual) - Impacts - Drought - Spatial Scale - Region/Nation - Time Scale - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Projections (intrannual to multi-decadal) - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Fresh Water Resources - Energy - Transportation/Communication and Commerce - Community Planning and Development - Agriculture and Fisheries - Recreation and Tourism
Description	The mission of the Pacific ENSO Applications Climate Center is to conduct research and develop information products specific to the U.S.-Affiliated Pacific Islands (USAPI) on the ENSO climate cycle, its historical impacts and latest long-term forecasts of ENSO conditions, in support of planning and management activities in such climate-sensitive sectors as water resource management, fisheries, agriculture, civil defense, public utilities, coastal zone management and other economic and environmental sectors of importance to the communities of the USAPI. PEAC produces and distributes many information products related to ENSO and it's affects on the Pacific Islands. Seasonal sea level forecasts are issued in each quarterly edition of the Pacific ENSO Update newsletter. Additional sea level information is available on the Sea Level page. General climate information (including average seasonal rainfall) can be found by clicking on the desired location on the interactive map.
Url	http://www.prh.noaa.gov/peac/
Lead Agencies	NOAA National Weather Service, University of Hawaii - School of Ocean and Earth Science and Technology, University of Guam - Water and Environmental Research Institute

Contacts	Pacific ENSO Applications Climate Center, peac@noaa.gov

Name	Pacific Islands Climate Change Virtual Library (PICCVL)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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 - American Samoa - Samoa
Products/Physical	- Products - Physical - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
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
Description	The Pacific Islands Climate Change Virtual Library provides access to web-based climate change tools including case studies, guidebooks, and methodologies for assessing vulnerabilities. Originally designed to meet the needs of decision makers in Samoa and American Samoa, this site will likely be of value throughout the region, as different managers in the Pacific Islands often wrestle with the same issues. A forum is also hosted that is a place for communication and collaboration among regional decision makers and those agencies and organizations producing climate change information and resources.
Url	http://www.coris.noaa.gov/cgi-bin/piccvl
Lead Agencies	NOAA

Contacts	PICCVL, ccvlib@noaa.gov

Name	Pacific Islands Global Climate Observing System (PI-GCOS)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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
Data/Physical	- Data - Physical - In-situ Observations - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)

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
Description	The Global Climate Observing System (GCOS) addresses the total climate system across a number of scientific disciplines including physical, chemical and biological properties, and atmospheric, oceanic, hydrologic, cryospheric and terrestrial processes. While it neither makes direct observations nor generates data products, its purpose is to stimulate, encourage, coordinate and otherwise facilitate the taking of the needed observations by national or international organizations in support of their own requirements as well as of common goals. It provides an operational framework for integrating, and enhancing as needed, the observational systems of participating countries and organizations into a comprehensive system focused on the requirements for climate issues. PI-GCOS is a sub-program of the GCOS aimed specifically at meeting the observing needs of Pacific Islands.
Url	http://pi-gcos.org/
Lead Agencies	Secretariat of the Pacific Regional Environment Programme (SPREP)

Name	Pacific Islands Global Ocean Observing System (PI-GOOS)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
Focus Area	- 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 - Cook Islands - Fiji - French Polynesia - Kiribati - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific
Data/Physical	- Data - Physical - Imagery - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Products/Physical	- Products - Physical - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Applications, including Visualization and Decision Support Tools - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Energy - Transportation/Communication and Commerce - Community Planning and Development - Agriculture and Fisheries - Recreation and Tourism - Ecosystems

Description	PI-GOOS was established in 1998, and is currently one of twelve GOOS Regional Alliances (GRAs) operational worldwide. PI-GOOS is housed at SPREP. The position is funded by the U.S. National Oceanographic and Atmospheric Administration (NOAA), the Australian Bureau of Meteorology (BoM) and the Intergovernmental Oceanographic Commission (IOC) Perth office. PI-GOOS aims to raise the awareness of, and support for ocean observing systems in the Pacific Islands region. We also aim to identify and address gaps in the Pacific Ocean observing network.
Url	http://www.sprep.org/pi-goos
Lead Agencies	SPREP, BOM, NOAA, IOC
Contacts	Tommy Moore, tommym@sprep.org, PI-GOOS Officer

Name	Pacific Islands Ocean Observing System (PacIOOS)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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 - Pacific Remote Islands - Western North Pacific - CNMI - FSM - Guam - Palau - RMI - South Pacific - American Samoa
Data/Physical	- Data - Physical - In-situ Observations - Satellite-Remote Observations - Model Results - Bathymetry and Topography - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)

Products/Physical	- Products - Physical - Hindcasts (climatologies) - Outloooks (monthly to annual) - Impacts - Drought - Flooding/Inundation - Eroison - Bleaching - Spatial Scale - Region/Nation - Location/Site - Time Scale - Past - Current - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Projections (intrannual to multi-decadal) - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Energy - Transportation/Communication and Commerce - Community Planning and Development - Agriculture and Fisheries - Recreation and Tourism - Ecosystems

Description	PacIOOS is one of eleven regional observing programs in the U.S. that are supporting the emergence of the U.S. Integrated Ocean Observing System. PacIOOS works to develop the observational, modeling, data management, and outreach components of an end to end ocean observing system to generate products that help to ensure a safe, clean, and productive ocean and a resilient coastal zone for the U.S. Pacific Islands. PacIOOS has focused initial development on water quality sensing, prediction of coastal hazards, ocean state observations, marine ecosystem information, ocean models, and the development of integrated data access and visualization capabilities. PacIOOS Voyager is an interactive map interface for visualizing and downloading oceanographic observations, forecasts, and other geospatial data and information related to the marine environment and beyond.
Url	http://www.soest.hawaii.edu/pacioos/
Lead Agencies	University of Hawaii –SOEST, University of Hawaii - Sea Grant, NOAA PacIOOS
Contacts	Heather Kerkering, heather.kerkering@hawaii.edu

Name	Pacific Islands Water Science Center (PIWSC)
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Fresh Water Resources and Drought
Regions	- Central North Pacific - State Of Hawaii - Western North Pacific - CNMI - FSM - Guam - Palau - RMI - South Pacific - American Samoa
Data/Physical	- Data - Physical - In-situ Observations - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Terrestrial (e.g., Groundwater, Soil Moisture)

Products/Physical	- Products - Physical - Hindcasts (climatologies) - Outloooks (monthly to annual) - Impacts - Drought - Spatial Scale - Region/Nation - Location/Site - Time Scale - Past - Current - Future - Methodology - Obs/In-situ - Model/Statistical - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Terrestrial (e.g., Groundwater, Soil Moisture)
Sectors	- Public Health and Safety - Fresh Water Resources - Community Planning and Development - Agriculture and Fisheries
Description	USGS web page for the water resources of Hawaii and the Pacific area. This is your direct link to water-resource information and products for the State of Hawaii, the U.S. Territories of Guam and American Samoa, the U.S. Commonwealth of the Northern Mariana Islands, the Republic of Palau, the Republic of the Marshall Islands, and the Federated States of Micronesia.
Url	http://hi.water.usgs.gov/
Lead Agencies	USGS
Contacts	USGS Pacific Islands Water Science Center, gs-w-hi_webmaster@usgs.gov

Name	Pacific Sea Level Extremes Outlooks Products
Capability Area	- Understanding Climate Variability and Change
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience

Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin
Products/Physical	- Products - Physical - Outloooks (monthly to annual) - Impacts - Flooding/Inundation - Eroison - Spatial Scale - Location/Site - Time Scale - Future - Methodology - Model/Statistical - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Community Planning and Development
Description	The objective of this effort is to build upon seasonal sea level outlooks currently provided by the NWS Pacific ENSO Applications Climate Center as well as similar types of information being provided by other agencies, institutions, and organizations in the Pacific Islands region. The goal is to provide information to planners, managers, and other decision-makers that affords them an opportunity to appropriately address risks from elevated water levels. Extreme water levels are experienced when seasonal high tides combine with intra-annual sea level variations associated with ocean processes (e.g., ENSO, mesoscale eddy events) and surge and/or high run-up due to wind, wave, and atmospheric forces associated with storms. Recent work suggest that not only can stations can be grouped regionally into those where high tides dictate extremes, where the combination of high tides and the nontidal residual is important, and where nontidal residual events are the primary cause of extreme levels, but by the combination of processes that contribute to the nontidal residual (e.g., tropical and extra-tropical storms, ocean mesoscale variability, and swell events from distant storms). This effort is exploring how this knowledge can be used, for example by establishing forecast skill through statistical relationships to teleconnections or other such indices, to create one to three month extreme water level outlooks that are specific to a particular location.
Lead Agencies	NOAA/NCDC/Regional Climate Services
Contacts	John Marra, john.marra@noaa.gov

Name	Pacific Sea Level Extremes Scenario Products
Capability Area	- Understanding Climate Variability and Change

Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin
Products/Physical	- Products - Physical - Outloooks (monthly to annual) - Impacts - Flooding/Inundation - Eroison - Spatial Scale - Location/Site - Time Scale - Future - Methodology - Model/Statistical - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Community Planning and Development
Description	The objective of this effort is to advance best practices pertaining to the formulation of probabilistic Sea Level Rise (SLR)/coastal inundation scenarios for specific locations in the Pacific Islands. The goal is to provide information to planners, managers, and other decision-makers that affords them an opportunity to appropriately address risks from elevated water levels. For sea levels (excluding run-up), extreme value analysis of sea level station records based on the Generalized Extreme Value (GEV) or modified Peak Over Threshold (POT) distributions may currently represent the best attempt to move beyond relatively simplistic SLR/coastal inundation scenarios based on global rate of change projections. However, the tendency has been to assume that the observations are stationary (are not time dependent). Recognizing a changing climate, this effort is building upon the work of recent investigators that have employed other types of statistical or numerical analysis that, for example allow the GEV parameters to be temporal functions (linear, quadratic, exponential, and periodic) or covariates. The appeal of such advanced statistical and numerical techniques it that they may provide a means to generate information that reflects a more nuanced – tailored to the site and situation – portrait of vulnerability of Pacific Islands to risks associated with SLR/coastal inundation.
Url	http://www.pacificstormsclimatology.org/
Lead Agencies	NOAA/NCDC/Regional Climate Services
Contacts	John Marra, john.marra@noaa.gov

Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin
Products/Physical	- Products - Physical - Hindcasts (climatologies) - Projections (intrannual to multi-decadal) - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Fresh Water Resources - Transportation/Communication and Commerce - Community Planning and Development - Agriculture and Fisheries - Recreation and Tourism
Description	Pacific Storms is focused on improving our understanding of patterns and trends of storm frequency and intensity - storminess - within the Pacific region. Pacific Storms 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. Pacific Storms is developing an integrated set of extremes indicators and associated inter-annual and annual strong winds, heavy rains, and high seas derived data products. The intent of these products is to delineate the patterns and trends of extremes within and between locations and regions, how they have been expressed historically, and may be expected to be expressed in a changing climate. Much of the information available via this site represents the analysis of historical records by a team of recognized agency and university-based experts in the area of climate-related processes that govern storminess and its expression in the Pacific region. It includes plots delineating things such as the rates of sea level rise and high water return periods; 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.
Url	http://www.pacificstormsclimatology.org/
Lead Agencies	NOAA/NCDC, Pacific Climate Information System (PaCIS)
Contacts	John Marra, john.marra@noaa.gov

Name	Permanent Service for Mean Sea Level (PSMSL)

Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin - Global
Data/Physical	- Data - Physical - In-situ Observations - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Transportation/Communication and Commerce - Community Planning and Development - Ecosystems
Description	Established in 1933, the PSMSL is the global data bank for long term sea level change information from tide gauges and bottom pressure recorders. It is based in Liverpool, U.K. at the National Oceanography Centre. The PSMSL data set is the main source of information on long term changes in global and regional sea level rise and variability during the last two centuries. The data have been employed intensively in studies such as those of Intergovernmental Panel on Climate Change.
Url	http://www.psmsl.org/
Lead Agencies	UK NOC, IOC
Contacts	PSMSL, psmsl@pol.ac.uk

Name	Physical Oceanography Distributed Active Archive Center (PO.DAAC)
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- 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 - Global

Data/Physical	- Data - Physical - Satellite-Remote Observations - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Transportation/Communication and Commerce - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Description	The PO.DAAC is a NASA data center responsible for archiving and distributing data relevant to the physical state of the ocean. Most of the data products available were obtained from Earth observing satellites and are primarily intended for use in scientific research. PO.DAAC is an element of the Earth Observing System Data Information System (EOSDIS). PO.DAAC's primary responsibility is to provide distribution and archive support for NASA's physical oceanography missions such as TOPEX/Poseidon and SeaWinds on QuikSCAT. However, PO.DAAC additionally collaborates with other institutes to acquire complementary data products and value-added services. This site provides access to an extensive catalog of mostly satellite-derived physical oceanographic data and products (e.g. SST, winds, circulation, and salinity).
Url	http://podaac.jpl.nasa.gov/
Lead Agencies	NASA Jet Propulsion Laboratory
Contacts	PO.DAAC, podaac@podaac.jpl.nasa.gov

Name	Precipitation Frequency Estimates for Selected Pacific Islands
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Fresh Water Resources and Drought
Regions	- Western North Pacific - CNMI - FSM - Guam - Palau - RMI - Other Western North Pacific - South Pacific - American Samoa
Data/Physical	- Data - Physical - In-situ Observations - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)

Products/Physical	- Products - Physical - Hindcasts (climatologies) - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Sectors	- Fresh Water Resources
Description	NOAA Atlas 14 Volume 5: Precipitation-Frequency Atlas of the United States, Selected Pacific Islands. The estimates have been published through the HDSC Precipitation Frequency Data Server. The release includes: precipitation frequency estimates; cartographic maps of select durations/frequencies; the annual maximum series data used in the analysis; temporal distribution data; and accompanying documentation describing the data, metadata and methodology in detail.
Url	http://hdsc.nws.noaa.gov/hdsc/pfds/
Lead Agencies	NOAA/NWS/HDSC
Contacts	HDSC, HDSC.questions@noaa.gov

Name	Precipitation Frequency Estimates for the Hawaiian Islands
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Fresh Water Resources and Drought
Regions	- Central North Pacific - State Of Hawaii
Data/Physical	- Data - Physical - In-situ Observations - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Products/Physical	- Products - Physical - Hindcasts (climatologies) - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Sectors	- Fresh Water Resources
Description	NOAA Atlas 14 Volume 4: Precipitation-Frequency Atlas of the United States, Hawaiian Islands. The estimates have been published through the HDSC Precipitation Frequency Data Server. The release includes: precipitation frequency estimates; cartographic maps of select durations/frequencies; the annual maximum series data used in the analysis; temporal distribution data; and accompanying documentation describing the data, metadata and methodology in detail.
Url	http://hdsc.nws.noaa.gov/hdsc/pfds/
Lead Agencies	NOAA/NWS/HDSC
Contacts	HDSC, HDSC.questions@noaa.gov

Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Fresh Water Resources and Drought - Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience - Marine and Terrestrial Ecosystems
Regions	- Global
Data/Physical	- Data - Physical - In-situ Observations - Satellite-Remote Observations - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
Products/Physical	- Products - Physical - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
Non Physical	- Data, Products, and Tools - Non-physical - Socio-economic
Sectors	- Public Health and Safety - Community Planning and Development - Social and Cultural Resources
Description	The PREVIEW Global Risk Data Platform is a multiple agencies effort to share spatial data information on global risk from natural hazards. Users can visualize, download or extract data on past hazardous events, human & economical hazard exposure and risk from natural hazards. It covers tropical cyclones and related storm surges, drought, earthquakes, biomass fires, floods, landslides, tsunamis and volcanic eruptions. The collection of data is made via a wide range of partners. This was developed as a support to the Global Assessment Report on Disaster Risk Reduction (GAR) and replace the previous PREVIEW platform already available since 2000.
Url	http://preview.grid.unep.ch/
Lead Agencies	UN Environment Program (UNEP)
Contacts	UNEP/GRDP, earlywarning@grid.unep.ch

Name	Providing Regional Climates for Impacts Studies (PRECIS)

Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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 - Global
Data/Physical	- Data - Physical - Model Results - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Products/Physical	- Products - Physical - Projections (intrannual to multi-decadal) - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Fresh Water Resources - Community Planning and Development - Agriculture and Fisheries - Ecosystems
Description	PRECIS is based on the UK Met Office Hadley Centre regional climate modeling system. It has been ported to run on a PC (under Linux) with a simple user interface. PRECIS was developed in order to help generate high-resolution climate change information for as many regions of the world as possible. The intention is to make PRECIS freely available to groups of developing countries in order that they may develop climate change scenarios at national centers of excellence, simultaneously building capacity and drawing on local climatological expertise. These scenarios can be used in impact, vulnerability and adaptation studies.
Url	http://www.metoffice.gov.uk/precis/
Lead Agencies	UK Met Office
Contacts	UK Met Office, enquiries@metoffice.gov.uk

Name	Rainfall Atlas of Hawaii

Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Fresh Water Resources and Drought
Regions	- Central North Pacific - State Of Hawaii
Products/Physical	- Products - Physical - Outloooks (monthly to annual) - Impacts - Drought - Spatial Scale - Location/Site - Time Scale - Past - Methodology - Obs/In-situ - Model/Statistical - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Terrestrial (e.g., Groundwater, Soil Moisture)
Sectors	- Public Health and Safety - Fresh Water Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Description	The Rainfall Atlas of Hawaii is a set of maps of the spatial patterns of rainfall for the major Hawaiian Islands. Maps are available for mean monthly and annual rainfall. The maps represent our best estimates of the mean rainfall for the 30-yr base period 1978–2007. However, for many reasons, it is not possible to determine the exact value of mean rainfall for any location. Therefore, for every map of mean rainfall, we provide a corresponding map of uncertainty. Uncertainty tends to be greatest where we have the poorest information about rainfall, for example in remote locations far from the nearest rain gage.
Url	http://rainfall.geography.hawaii.edu/
Lead Agencies	University of Hawaii – Department of Geography
Contacts	rainfall@hawaii.edu

Name	ReefGIS
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Marine and Terrestrial Ecosystems

Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin - Global
Data/Physical	- Data - Physical - Satellite-Remote Observations - Bathymetry and Topography - Imagery - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Community Planning and Development - Social and Cultural Resources - Agriculture and Fisheries - Recreation and Tourism - Ecosystems
Description	ReefGIS is the ReefBase online Geographic Information System, which was developed to display coral reef related data and information on interactive maps in your web browser.
Url	http://reefgis.reefbase.org/
Lead Agencies	ReefBase
Contacts	ReefBase, reefbase@cgiar.org

Name	Sea Level Rise and Coastal Flooding Impacts Viewer
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - State Of Hawaii - Western North Pacific - CNMI - Guam

Products/Physical	- Products - Physical - Outloooks (monthly to annual) - Impacts - Flooding/Inundation - Spatial Scale - Location/Site - Time Scale - Future - Methodology - Model/Statistical - Model/Dynamical - Applications, including Visualization and Decision Support Tools - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Energy - Community Planning and Development - Social and Cultural Resources - Recreation and Tourism - Ecosystems
Description	The Sea Level Rise and Coastal Flooding Impacts Viewer: 1) Displays potential future sea levels; 2) Provides simulations of sea level rise at local landmarks; 3) Communicates the spatial uncertainty of mapped sea levels; 4) Models potential marsh migration due to sea level rise; 5) Overlays social and economic data onto potential sea level rise; and 6) Examines how tidal flooding will become more frequent with sea level rise. Being able to visualize potential impacts from sea level rise is a powerful teaching and planning tool, and the Sea Level Rise Viewer brings this capability to coastal communities. Work done as part of NOAA Digital Coast. Mapping completed for Pacific Islands. Working on pilot for flood frequency in Guam.
Url	www.csc.noaa.gov/slr
Lead Agencies	NOAA/CSC/OCRM, NOAA/CO-OPS, NOAA/NGS, U of South Carolina, U of Hawaii, Dewberry, U.S. Bureau of Labor Statistics
Contacts	Doug Marcy, doug.marcy@noaa.gov

Name	Sea Level Trends
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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 - RMI - South Pacific - American Samoa - Pacific Basin - Global
Data/Physical	- Data - Physical - In-situ Observations - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Products/Physical	- Products - Physical - Hindcasts (climatologies) - Applications, including Visualization and Decision Support Tools - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Transportation/Communication and Commerce - Community Planning and Development - Agriculture and Fisheries - Recreation and Tourism
Description	The NOAA Center for Operational Oceanographic Products and Services has been measuring sea level for over 150 years, with tide stations operating on all U.S. coasts through the National Water Level Observation Network. Changes in Mean Sea Level, either a sea level rise or sea level fall, have been computed at 128 long-term water level stations using a minimum span of 30 years of observations at each location. These measurements have been averaged by month to remove the effect of high frequency phenomena, such as waves and tides, to compute an accurate linear sea level trend. The trend analysis has also been extended to a network of global tide stations including 114 additional non-NOAA stations.
Url	http://tidesandcurrents.noaa.gov/sltrends/sltrends.shtml
Lead Agencies	NOAA/NOS/CO-OPS
Contacts	NOAA/NOS/CO-OPS, nos.info@noaa.gov

Name	Seasonal Climate Outlooks in Pacific Island Countries (SCOPIC)

Capability Area	- Understanding Climate Variability and Change
Focus Area	- Fresh Water Resources and Drought
Regions	- South Pacific - Cook Islands - Fiji - Kiribati - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific
Products/Physical	- Outloooks (monthly to annual) - Impacts - Drought - Flooding/Inundation - Spatial Scale - Location/Site - Time Scale - Future - Methodology - Model/Statistical - Applications, including Visualization and Decision Support Tools - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction)
Sectors	- Fresh Water Resources - Community Planning and Development - Agriculture and Fisheries - Ecosystems
Description	SCOPIC is a decision support system for generating probabilistic predictions (seasonal climate outlooks) for rainfall, temperature or other climate related parameters. SCOPIC was developed to provide Pacific Island nations with a standalone PC version of the Commonwealth Bureau of Meteorology's operational seasonal climate prediction system. Based on historical data, the system uses a statistical method called linear discriminant analysis. Forecast probabilities of the variable we're interested in (called the predictand), e.g. rainfall, are generated via historical relationships with different predictors.
Url	http://www.bom.gov.au/cosppac/comp/scopic/
Lead Agencies	BOM/COSPPac/COMP
Contacts	Amanda Amjadali, a.amjadali@bom.gov.au

Name	Seasonal Water Level and Storminess Outlook for the Pacific Islands
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - Western North Pacific - South Pacific
Products/Physical	- Products - Physical - Outloooks (monthly to annual) - Impacts - Flooding/Inundation - Spatial Scale - Location/Site - Time Scale - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Applications, including Visualization and Decision Support Tools - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
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

Description	The Seasonal Water Level and Storminess Outlook proof-of-concept (POC) product for the Pacific Islands is specifically tailored for coastal flooding/erosion risk warning. The POC product aims to project the potential for elevated water levels at the shoreline due to: 1) regional changes in mean sea level associated with ENSO and other modes of natural variability; 2) tropical and extra-tropical storms; and 3) unusually high tides. The POC product responds to a need from community planners, resource managers, and other decision-makers for information about the potential for coastal flooding and erosion to threaten coastal structures and property, groundwater reservoirs, harbor operations, waste water systems, sandy beaches, coral reef ecosystems, and other social and economic concerns. Currently, information of this type is limited in scope and not well integrated. The POC constitutes a path-finding activity directed towards aligning complementary interests and activities, sponsoring joint projects, and leveraging funding as a way to minimize duplication of effort and maximize the use of agency resources in the Pacific. It represents a center of action within a broader effort to support regional collaboration in the areas of data and observations, applied research and analysis, product development, and outreach and training and demonstrate the value of regionally integrated water level-related products and services.
Lead Agencies	NOAA NESDIS/NCDC, NOS/CO-OPS and NWS/PEAC, Australian BOM and CSIRO, New Zealand NIWA and MetService, SPC/SOPAC
Contacts	John Marra, NOAA/NESDIS/NCDC Pacific Region Climate Services Director, john.marra@noaa.gov

Name	Secretariat of the Pacific Community Applied Geoscience and Technology Division (SOPAC)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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
Data/Physical	- Data - Physical - Bathymetry and Topography - Imagery - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
Products/Physical	- Products - Physical - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Applications, including Visualization and Decision Support Tools - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
Non Physical	- Data, Products, and Tools - Non-physical - Biological - Socio-economic - Cultural

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
Description	The mission of the SPC is to help Pacific island people position themselves to respond effectively to the challenges they face and make informed decisions about their future and the future they wish to leave for the generations that follow. The goal of the Applied Geoscience and Technology Division is to apply geoscience and technology to realize new opportunities for improving the livelihoods of Pacific communities. The Division has three technical work programmes: Ocean and Islands; Water and Sanitation; and Disaster Reduction.
Url	http://www.sopac.org/
Lead Agencies	SPC
Contacts	SOPAC, director@sopac.org

Name	Secretariat of the Pacific Regional Environment Programme (SPREP)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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

Products/Physical	- Products - Physical - Hindcasts (climatologies) - Outloooks (monthly to annual) - Impacts - Drought - Flooding/Inundation - Eroison - Bleaching - Spatial Scale - Region/Nation - Location/Site - Time Scale - Past - Current - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Projections (intrannual to multi-decadal) - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
Non Physical	- Data, Products, and Tools - Non-physical - Biological - Socio-economic - Cultural
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

Description	SPREP is a regional organisation established by the governments and administrations of the Pacific region to look after its environment. SPREP has 21 Pacific island member countries and four countries with direct interests in the region. The SPREP mandate is to promote cooperation in the Pacific islands region and to provide assistance in order to protect and improve the environment and to ensure sustainable development for present and future generations. SPREP operates two programmes: Island Ecosystems and Pacific Futures.
Url	http://www.sprep.org/
Lead Agencies	SPREP
Contacts	SPREP, sprep@sprep.org

Name	SimCLIM (SimCLIM)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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 - Global
Data/Physical	- Data - Physical - In-situ Observations - Satellite-Remote Observations - Model Results - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
Products/Physical	- Products - Physical - Projections (intrannual to multi-decadal) - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)

Non Physical	- Data, Products, and Tools - Non-physical - Biological - Socio-economic - Cultural
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
Description	SimCLIM is a flexible software package that links data and models in order to simulate the impacts of climatic variations and change, including extreme climatic events, on sectors such as agriculture, health, coasts or water resources. SimCLIM is a user-friendly, open-framework system that can be customized and maintained by users. It contains tools for importing and analyzing both spatial and time-series data. For generating scenarios of future climate and sea-level changes, SimCLIM uses a pattern scaling method that involves the use of spatial data from complex atmosphere-ocean general circulation models together with projections of global-mean climate changes.
Url	http://www.climsystems.com/simclim/
Lead Agencies	CLIMsystems Ltd.
Contacts	CLIMsystems, info@climsystems.com

Name	South Pacific Sea Level and Climate Monitoring Project (SPSLCMP)
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience

Regions	- Western North Pacific - FSM - RMI - South Pacific - Australia - Cook Islands - Fiji - Kiribati - PNG - Samoa - Solomon Islands - Tonga - Tuvalu - Vanuatu - Other South Pacific
Data/Physical	- Data - Physical - In-situ Observations - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Community Planning and Development
Description	The SPSLCMP was developed in 1991 as an Australian Government response to concerns raised by member countries of the South Pacific Forum over the potential impacts of human-induced global warming on climate and sea levels in the Pacific region. Its primary goal is to generate an accurate record of variance in long-term sea level for the South Pacific and to establish methods to make these data readily available and usable by Pacific Island countries. The project established a network of 12 high resolution SEAFRAME (Sea Level Fine Resolution Acoustic Measuring Equipment) sea level and climate monitoring stations sited at locations in participating countries to provide a wide coverage across the Southwest Pacific basin. Processed and analysed data has since been made available to partner countries and the international scientific community, and information products and training have been provided to targeted groups in the Pacific Island countries.
Url	http://www.bom.gov.au/pacificsealevel/index.shtml
Lead Agencies	Australia Bureau of Meteorology, SOPAC
Contacts	National Tidal Centre, ntc@bom.gov.au

Name	Statistical Methods for the Analysis of Simulated and Observed Climate Data
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation

Regions	- Global
Data/Physical	- Data - Physical - In-situ Observations - Satellite-Remote Observations - Model Results - Reanalysis Products - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
Products/Physical	- Products - Physical - Outloooks (monthly to annual) - Impacts - Drought - Flooding/Inundation - Eroison - Bleaching - Spatial Scale - Region/Nation - Location/Site - Time Scale - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Projections (intrannual to multi-decadal) - Guidance, including “Best Practices” Manuals, Toolkits, and Guides - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)

Description	In December 2010, a workshop was held at the Climate Service Center (CSC) in cooperation with the research priority KLIMZUG (Managing climate change in regions for the future). The workshop was initiated by CSC and focused on "Statistical methods for the analysis of data from climate models and climate impact models". The presentations showed the variety of issues and methods associated with climate research and climate impact research. There was an agreement that the structured, organized collection of statistical methods would be useful for both current projects as well as for future projects dealing with climate change adaptation. The collection of statistical methods is being realized in this brochure by the working group statistic at the CSC. The brochure is addressed to different users of from climate and impact model data as well as observational data who need help in finding suitable methods for their data evaluation. The brochure is not a textbook, which teaches the fundamental concepts of statistics. It rather complements the existing literature and gives suggestions on how practical issues can be solved. The described methods additionally contain information about the authors of the respective method sheet, to give an opportunity for further inquiries.
Url	http://www.climate-service-center.de/imperia/md/content/csc/projekte/csc-report13_englisch_final-mit_umschlag.pdf
Lead Agencies	Climate Service Center (CSC) Germany
Contacts	CSC Secretariat, csc-sekretariat@hzg.de

Name	Tropical Pacific Climate Information and Prediction System (TPCIPS)
Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
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

Data/Physical	- Data - Physical - In-situ Observations - Satellite-Remote Observations - Model Results - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
Products/Physical	- Products - Physical - Hindcasts (climatologies) - Outloooks (monthly to annual) - Impacts - Drought - Flooding/Inundation - Spatial Scale - Region/Nation - Location/Site - Time Scale - Current - Future - Methodology - Obs/In-situ - Obs/Remote - Model/Statistical - Model/Dynamical - Atmospheric (e.g., Air Temperature, Rainfall, Wind Speed and Direction) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height) - Terrestrial (e.g., Groundwater, Soil Moisture)
Sectors	- Fresh Water Resources - Community Planning and Development - Agriculture and Fisheries
Description	The NOAA Climate Prediction Center TPCIPS provides rainfall forecasts, data sets, and assessments of climate impacts of El Nino and La Nina on Pacific Islands, primarily focusing on Hawaii and the U.S.-Affiliated Pacific Islands.
Url	http://www.cpc.ncep.noaa.gov/pacdir/HOME3.shtml
Lead Agencies	NOAA/NWS/CPC
Contacts	Luke He, luke.he@noaa.gov

Capability Area	- Understanding Climate Variability and Change - Understanding Climate Impacts and Informing Adaptation
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience
Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin
Data/Physical	- Data - Physical - In-situ Observations - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Products/Physical	- Products - Physical - Hindcasts (climatologies) - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Community Planning and Development
Description	The UHSLC is a research facility of the University of Hawaii/NOAA Joint Institute for Marine and Atmospheric Research within the School of Ocean and Earth Science and Technology. The mission of the UHSLC is to collect, process, distribute, and analyze in-situ tide gauge data from around the world in support of climate research. Primary support for the UHSLC comes from NOAA's Office of Global Programs. Funding is also provided by NASA under the JASON program for the development of In Situ Tide Gauge/GPS Stations for Monitoring the Temporal Drift of Satellite Altimeters. The UHSLC also hosts the Joint Archive for Sea Level, a collaborative effort with the National Oceanographic Data Center.
Url	http://ilikai.soest.hawaii.edu/uhslc/
Lead Agencies	University of Hawaii/SOEST, University of Hawaii/JIMAR, NOAA, NASA
Contacts	Mark Merrifield, markm@soest.hawaii.edu

Name	WAVEWATCH III
Capability Area	- Understanding Climate Impacts and Informing Adaptation
Focus Area	- Coastal Inundation/Sea Level Rise, Extreme Weather, and Community Resilience

Regions	- Central North Pacific - Western North Pacific - South Pacific - Pacific Basin - Global
Data/Physical	- Data - Physical - Model Results - Oceanic (e.g., Water Temperature, Salinity, Acidity, Sea Level, Wave Height)
Sectors	- Public Health and Safety - Transportation/Communication and Commerce - Recreation and Tourism
Description	The operational ocean wave predictions of NOAA/NWS/NCEP use the wave model WAVEWATCH III using operational NCEP products as input. The model is run four times a day: 00Z, 06Z, 12Z, and 18Z. Each run starts with 9-, 6- and 3-hour hindcasts and produces forecasts of every 3 hours from the initial time out to 180 hours. The wave model suite consists of global and regional nested grids.
Url	http://polar.ncep.noaa.gov/waves/
Lead Agencies	NOAA/NWS/NCEP
Contacts	NCEP/EMC, NCEP.EMC.waves@noaa.gov