

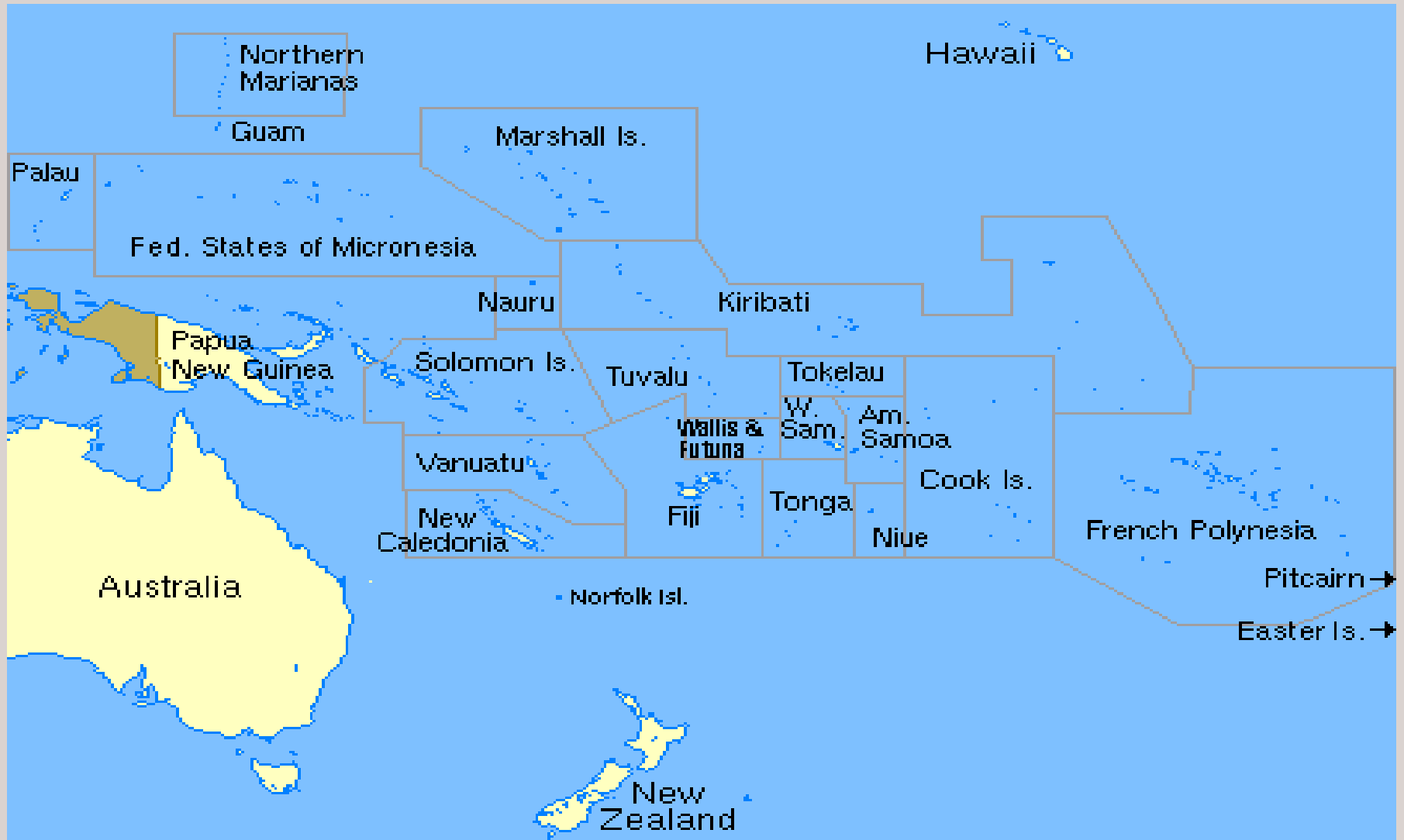
Climate Services: The Pacific Climate Information System (PaCIS) Approach

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Climate Prediction Applications Science Workshop

20-23 March 2007

Climate Forecasting in the Pacific Region



Pacific El Niño-Southern Oscillation (ENSO) Applications Center



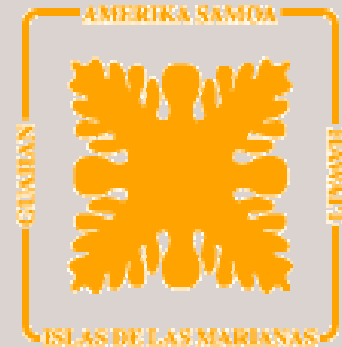
NOAA



UOG/WERI



UH/SOEST



PBDC

- NOAA – National Weather Service (NWS) Pacific Region; NWS Climate Prediction Center (CPC); and Office of Marine and Atmospheric Research Office of Global Programs (now Climate Program Office)
- University of Guam Water and Environmental Research Institute (UOG/WERI)
- University of Hawaii (UH)/School of Ocean and Earth Science and Technology (SOEST)
- Pacific Basin Development Council (PBDC) - UH Social Sciences Research Institute
- PEAC established as research pilot project in 1994

Pacific Island Regional Assessment of
the Consequences of Climate Change
and Variability (Oct 2001):

Overarching Recommendation:

**“an ongoing commitment to the
*emergence of a Pacific climate
information system* that supports the
development and use of climate
information to support decision-
making”**

Pacific Regional Integrated Sciences and Assessments (RISA)

- **Emphasis on reducing vulnerability to climate-related extreme events** (droughts, floods, tropical cyclones)
- **Support and enhance climate risk management activities** of Pacific Island governments, communities, resource managers and businesses

Some Lessons Learned for Climate Information Services

- Focus on **integrated climate-society system**
- **Early and continuous partnership with users essential (“eyeball to eyeball”):**
 - Collaborative, participatory process
 - Shared learning and joint problem-solving
- **Problem-focused approach:**
 - Understand place, context, history and decision making process
 - Useful and usable information responsive to user needs

Some Lessons Learned for Climate Information Services

- **Decision-makers interested in information on a continuum of timescales:**
 - Address today's problems and plan for the future
 - Climate Information vs. events
- **Address both process and products:**
 - Continuous evaluation and adjustment
- **Build on existing systems, institutions, programs, relationships and networks**
 - Partnership between science and operations

Evolution of a Pacific Climate Information System (PaCIS)

- PEAC pilot project; 1997-1998 El Niño
- 1999 Regional Meteorological Service Directors Meeting
 - Agreement on PaCIS Vision, Goal and Objectives
- Discussions Among Likely Partners
 - Monthly forecast calls
 - Planning for World Meteorological Organization Regional Association V Regional Climate Centre

Evolution of a Pacific Climate Information System

- Pacific Regional Assessment and Pacific RISA
- PEAC First Decade Review—Lessons Learned
- US NWS Climate Services
- Related Regional Activities
 - Pacific Island Global Climate Observing System, NOAA Integrated Data and Environmental Applications (IDEA) Center, Pacific Risk Management ‘Ohana, and International Activities

PaCIS Vision

Resilient and sustainable Pacific communities using climate information to manage risks and support practical decision-making in the context of climate variability and change.

PaCIS Mission

- Clarify climate information needs and guide monitoring, research, forecasting and assessment
- Provide access to critical data, research and new climate information products and services
- Translate research and assessment results into useful and usable climate information

PaCIS Mission

- Interpret global and regional climate forecasts for local applications
- Enhance regional and local capabilities to manage risks and support sustainable development in the context of climate variability and change
- Enhance collaboration among national, regional and international institutions and programs

PaCIS Program Elements

- **Education, Outreach and User Information:**
 - User dialogue and feedback
 - Educational materials
 - Weather Service Offices' (WSO) as local experts/ coordinators in partnership with experts in key sectors
- **Operational Products and Services:**
 - Develop and evaluate PaCIS services
 - Regional climate services test bed
 - Cross-regional coordination
 - Support regional observations and data management systems (e.g., PI-GCOS, PI-GOOS, PacIOOS)

PaCIS Program Elements

- **Research and assessment to enhance resilience:**
 - Regional downscaling and local applications
 - Enhanced understanding of nature and consequences of climate variability and change with a *focus on extreme events*
 - Support for regional vulnerability assessment and adaptation programs

PaCIS Governance Structure

- **Steering Committee (overall guidance and support):**
 - Users in key sectors
 - Local Pacific Weather Service Offices
 - NOAA and other U.S. climate agencies (e.g., US Geological Survey)
 - PRiMO (and its agencies)
 - International partners, regional organizations and programs
 - Social science, decision support, prediction and climate applications science experts

PaCIS Governance Structure

- **Working Groups for each program element:**
 - Education, Outreach and User Information Needs
 - Operational Climate Observations, Products & Services
 - Research and Assessment
- **Executive Director – NWS Pacific Region Climate Services Program Manager**

Emergence of PaCIS: Next Steps and Timeline

- **Convene PaCIS Steering Committee**
 - Summer 2006 and annually
- **Complete Draft Action Plan (April 2007)**
- **Convene Working Groups (Spring 2007)**
 - Education, Outreach, User Needs
 - Operational Products and Services
 - Research and Assessment
- **Working Groups and Steering Committee complete Initial Action Plan (Fall 2007)**
 - Living Document with routine evaluation and revision

Sustainable Development



Observations, science & information services

Engagement
Empowerment

Individual, Institutional,
Community Capacity Building

Education
& Training
Equipment
(tools & technology)