Framework for a Pacific Region Integrated Data Activity for Environmental Ocean, Climate, and Ecosystem Information and Services (PRIDE)

Pacific Data Management Workshop
Honolulu, HI September 30, 2004

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U.S. Global Climate Observing System (GCOS) & NOAA International Pacific Research Center (IPRC) Program Manager
NOAA GCOS Manager Gets Stuck Again
How Did We Get Here?

• The Senate Appropriations Committee, through Senate Report Number 108-144, stated it “is concerned that with the significant increase in oceanographic and environmental data collection in Hawaii and the American Flag Territories, including the Northwestern Hawaiian Islands, NOAA has inadequate capacity to provide timely data and services to the region”. The Committee directed NOAA, through the National Ocean Service, the National Oceanographic Data Center, and the National Climatic Data Center, to submit a report to Congress addressing the region’s oceanographic and environmental data and information requirements.
Schedule

- Senate report requirement received in late January 2004
- Initial cross line office planning team for investigating better data integration in the Pacific established in late February 2004; led by NESDIS/NCDC
- Writing team for report established in late March 2004 and co-led by NESDIS and NOS
- Initial Writing Team Meeting on April 30, 2004
- Initial draft completed June 30, 2004 on schedule
- Due to NOAA Executive Secretary on July 29, 2004 [extension requested to accommodate AA review at NOS and NESDIS]
- Due to Senate Committee on September 30, 2004
Focus of Workshop

- Opportunity for information exchange among NOAA and some other agencies in Hawaii
- Given the NOAA report, the workshop is an opportunity to begin doing some initial planning for how we would begin to provide some integrated environmental products and services for the region
- Opportunity to leverage existing and funded resources in the region (e.g., IPRC, EWC) in order to partner on the provision of integrated environmental products and services
- Opportunity to set the stage for greater user input vis-à-vis existing forums such as PrlMO and possibly a new workshop to investigate targeted user needs.
- Begin developing a process to move forward.
Vision Statement

PRIDE

PRIDE:

Pacific Region Integrated Data Activity for Environmental Ocean, Climate, and Ecosystem Information and Services

Advance NOAA’s mission objectives and meet critical regional needs for ocean, climate, and ecosystem information to protect lives and property, support economic development and enhance the resilience of Pacific Island communities in the face of changing environmental conditions.
PRIDE Concept Team

• Initial Participants (March 2004):
  – Margaret Davidson, NOS/CSC
  – Howard Diamond, NESDIS/NCDC
  – Mike Johnson, OAR/OGP
  – Tom Karl, NESDIS/NCDC
  – Sharon LeDuc, NESDIS/NCDC
  – Tim Owen, NESDIS/NCDC
  – Eileen Shea, East-West Center
  – Diane Stanitski, OAR/OGP
  – Stan Wilson, NOAA/NESDIS
PRIDE Team

• Core Members (April 2004 – Present):
  – Howard Diamond, NESDIS/NCDC
  – John Kineman and Dave Clark, NESDIS/NGDC
  – Eileen Shea, East-West Center
  – Mike Seki, NMFS/PIFSC
  – Pacific Services Center (Bill Thomas, John Marra, Darceee Killpack)
  – Coastal Services Center (Jeff Payne and Cindy Fowler)
  – Jim Weyman, NWS/WFO Honolulu
  – Ed Young, NWS/PRH
  – IPRC (Jay McCreary and Peter Hacker)
  – pride@noaa.gov mailing list
    • Additions are welcome
The Opportunity

Summary – opportunity to integrate a variety of functions on a regional scale in a part of the world where:

- NOAA has a collection of relatively independent offices and functions, but where recent efforts in climate, coastal services and ocean observations reflect enhanced, cross-NOAA collaboration and the benefits of a NOAA-wide approach
- There is a need to serve an area in which the U.S. has a direct, but shared interest
- Communities, businesses and resources in the Pacific are very sensitive to environmental, ecological, and socio-economic factors affected by such things as climate change and coastal development
- An area where enhanced attention to the integration of NOAA data and information management programs could significantly leverage ongoing programs to help provide the expertise to address such factors
A quote from Admiral Lautenbacher’s Speech on February 17, 2004, announcing the Pacific RISA Grant:

"Understanding and effectively responding to changes in climate are critical elements of planning and economic development in Hawaii and other Pacific Islands. Their economies are dependent on climate-sensitive sectors like agriculture, tourism and fisheries, and the region is home to some of the world's most valuable marine resources such as coral reefs."
The Present Situation

- The challenge today is how to integrate environmental data and information for the climate, coastal, ocean, and ecosystem domains.
- There are a number of NOAA and NOAA-related organizations in the Pacific (e.g., JTWC, IPRC, PEAC, NWS, Pacific Services Center, Pacific RISA, NMFS).
- There are other related activities including the East-West Center, Pacific Disaster Center, and other federal activities such as USGS.
- There are several active regional Pacific Island Organizations (e.g., SPREP, SOPAC, SPC, Pacific Forum).
- There are multiple sources of observations (atmospheric, oceanic, terrestrial, and satellite) and growing interest and investments in regional ocean, climate, and coastal observing systems.
- User needs span the spectrum from basic data and information, to weather and ENSO predictions, to tailored products for resource managers dealing with fisheries and coastal management issues.
Future Needs

• More than a traditional data center archive for data services
• Integrated enterprise for environmental products and services
• To strengthen delivery of ocean and ocean-related climate and ecosystem products and services to the diverse Pacific Island user community
• To provide feedback mechanism to ocean and ocean-related climate and ecosystem observing systems
• To provide a true focus for the regional integration and delivery of such products
Background and Discussion

PRIDE Initiative

- Establish a NOAA-wide Pacific information activity
  - Integrate regional observations, research, assessment and services,
  - Provide a prototype for the next generation of NOAA data centers
  - Support NOAA research and service programs in the Pacific

- Provide for integrated products and services across the Federal sector in the region, responsive to needs of Pacific Island communities, governments & businesses

- Support emerging regional and global services
  - GCOS, GOOS, and IOOS
  - Ecosystem science and services
  - Demonstrate NOAA/U.S. leadership in the emergence of a global environmental observing system
Background and Discussion

PRIDE Initiative

- Relevant factors
  - Strong Congressional support for improving environmental data and information services in the Pacific
  - Report to Senate for FY04 on Pacific Data Management Activities
  - Funds in the FY04 budget for continued support for the IPRC
  - Funds in the FY04 budget for initial planning of a new NOAA facility in Honolulu
  - Creation of a new Pacific region office for NMFS
  - Robust regional GCOS and GOOS programs in place, and plans for a regional IOOS program emerging
  - Strong bi-lateral support/agreements with Australia, France, Japan, and New Zealand exist
  - On-going plans for a WMO Regional Climate Center
  - Logical follow-on as a 2nd WW2BW case study
Writing Team Members

• Report Leads
  – Howard Diamond, NESDIS/NCDC
  – Jeff Payne, NOS/Coastal Services Center (CSC)

• NESDIS
  – NCDC: Tom Karl, Sharon Leduc, and Tim Owen
  – NGDC: Dave Clark and John Kineman
  – NODC: Kurt Schnebele, Charles Sun, Wayne Wilmot

• NMFS:
  – Pacific Islands Fisheries Science Center: Jeff Polovina and Mike Seki

• NOS
  – CSC: Cindy Fowler
  – Pacific Services Center: Darcee Killpack, John Marra, Bill Thomas
Writing Team Members (cont)

• NWS
  – NWS IA: Kelly Sponberg
  – Honolulu Weather Forecast Office: Jim Weyman
  – NWS PRH: Ed Young and Laura Kong

• OAR
  – Sid Thurston, Office of Global Programs
Structure of the Report

• Report written to
  – Provide an introduction to the region that sets the context for NOAA’s activities.
  – Define basic information requirements, current activities, and unmet needs in 6 thematic areas.
  – Document opportunities for interagency, regional, and international collaboration.
  – Set the stage for options, recommendations, and subsequent steps for NOAA to pursue in the region.

• Builds on NOAA’s 5 Strategic Goals from the latest draft NOAA Strategic Plan (July 2004)
Six thematic areas chosen as focus for the report as follows:

- Improving weather and water information forecasting and warning
- Supporting risk-management activities
- Supporting adaptation to climate variability and change
- Managing and restoring coastal and oceanic ecosystems
- Facilitating economic sustainability
- Collecting and managing environmental data
Report Findings

• The vision of the NOAA team that prepared the report was to “advance NOAA’s mission objectives to help meet critical regional needs for ocean, climate, and ecosystem information to protect lives and property, support economic development, and enhance the resilience of Pacific island communities in the face of changing environmental conditions.”

• As such, the team suggested that NOAA should work towards studying the feasibility of a pilot NOAA-wide information activity in helping to fill existing data and information gaps.

• This pilot activity is not a “bricks and mortar” center approach, but is a distributed and integrated approach that leverages upon existing resources in order to:
Report Findings (cont)

- Integrate regional observations, research, assessment, and services, and provides a prototype for the next generation of NOAA data centers.
- Strengthen the delivery of ocean, ocean-related, climate, and ecosystem products and services to the diverse Pacific islands user community.
- Support NOAA research and service programs in the Pacific.
- Provide a comprehensive portal for NOAA products and services that are responsive to needs of Pacific island communities, governments, and businesses.
- Support the emergence of regional ocean and climate services in the Pacific.
- Support integrated ecosystem science and services needed for Pacific island ocean and coastal resource management programs.
- Demonstrate NOAA/U.S. leadership in the emergence of a global environmental observing system.
- Be a meaningful public-private partnership supporting NOAA’s mission and broader public benefits.
A pilot virtual data and information activity would leverage on and integrate a number of existing resources across NOAA and other Federal agencies including:

- The International Pacific Research Center [NESDIS]
- Pacific Islands GCOS and GOOS [NESDIS]
- National Data Center Activities [NESDIS]
- CoastWatch and other Satellite Services [NESDIS]
- Coastal and Pacific Services Center Activities [NOS]
- Marine Sanctuaries and Coral Reef Activities [NOS]
- Weather, Tsunami Forecasting, and PEAC Activities [NWS]
- TAO/TRITON Array, Tsunami DART Buoys [OAR/NWS]
- Pacific Islands Regional Regional Integrated Science and Assessment (RISA) Program [OAR]
- Pacific Islands Fisheries Science Center [NMFS]
- Joint Typhoon Warning Center [U.S. Navy]
Conceptual Framework for PRIDE

IPRC EWC

Global/Regional Observations
GCOS/GOOS/IOOS/PBIF

Bi-Laterals with
Australia
Japan
New Zealand

New NOAA Facility in Hawaii

Pacific Climate Information System
WMO/NOAA RCCs
RISA

Pacific Services Center

NOAA Data Centers