

**REPORT**

Climate Change Science Program Listening Session

At

Pacific Climate Information System (PaCIS) Steering Committee and  
Working Group Meeting

Honolulu, HI

August 5, 2008

U.S. Climate Change Science Program Office  
1717 Pennsylvania Avenue NW, Suite 250  
Washington, DC 20006

## Introduction

On August 5, 2008, the Climate Change Science Program (CCSP), with NOAA as the lead agency for this session, convened a listening session of nearly 60 stakeholders at the Pacific Climate Information System Steering Committee and Working Group Meeting in Honolulu, Hawaii for 1.5 hours. Most of the stakeholders came from organizations that have investments in research focused on understanding the physical mechanisms behind climate change and its impact on the Pacific islands. Stakeholders associated with the U.S. federal government constituted 54% of the audience, while those from academia, other foreign governments, and business represented 21%, 23%, and 2% respectively. Included in the stakeholder participants were scientists serving as members of the Pacific Climate Information System (PaCIS) Steering Committee or working groups. Many of the government representatives interface with users of climate information in the Pacific because they are the principle information brokers for their governments on climate information in the Pacific as a major part of their work. For example, the local meteorological officers interact with a wide range of users within their local jurisdictions (government and private sector) and are often the primary resource for climate change information.

The purpose of the listening session was for CCSP to obtain input from stakeholders in the Pacific Islands to assess stakeholders' needs for climate information and to inform future CCSP program activities. The session began with the facilitator asking attendees about their familiarity with CCSP. Only about one-third of the audience believed it had more than a passing knowledge of CCSP, so the participants were presented with a general description of the CCSP, including goals, activities, and product descriptions. The facilitator also provided a short description of the CCSP strategic planning process and posed the following questions to the stakeholders:

- What decisions do you currently use climate information for? What decisions would you like to climate information for but aren't yet able to?
  - Is this a question of data accessibility? Availability? Appropriate scale(s)? Something else?
- What can an interagency federal climate program offer to meet Pacific region climate science and information needs?
- How would you like to see scientific assessments proceed so that they provide adequate and appropriate information?
- What approaches should be pursued to more effectively link research to decision making and the public interest?
- What are the key emerging climate science priorities? What makes these a priority?
- What types of research approaches should be pursued more aggressively?

- e.g., climate process teams, coordinated large-scale modeling, coordinated *in situ* obs., etc.?

During the session, a facilitator (Rick Rosen) led a general discussion of the questions and two rapporteurs (Eileen Shea and James Weyman) recorded the comments from the stakeholders. Those comments are summarized in this report. In addition to providing input to the CCSP planning process, the listening session proved a valuable opportunity to inform stakeholders about CCSP itself.

### **Comment Summary**

The Pacific islands, as stated in the Intergovernmental Panel on Climate Change (IPCC) Assessment Report 4, “have characteristics which make them especially vulnerable to the effects of climate change” and thus the island participants were extremely interested in the Listening Session process. During this session, the audience identified many issues related to climate change that are important to them. Three of the issues that are regionally important are: (1) sea level rise, (2) coastal changes, and (3) coastal resiliency. Stakeholders indicated a need for additional decision support tools, climate change indices, and sustained observations for monitoring and evaluating these issues. These data and tools should also include uncertainty information and social science research for use in decision making and risk management, particularly when applied to adaptation and mitigation. The audience also recommended a research portfolio that is problem driven instead of purely science driven, one that establishes linkages with traditional and local knowledge of practices. Additionally, they identified a need for local and regional climate forecasts that extend from 20 to 50 years instead of typical centennial climate forecasts.

The audience emphasized the need for clear and ongoing communication with stakeholders to understand their data/research needs. This communication should extend to decision makers and other stakeholders, as well, to ensure that they understand climate variability and all the potential causes of climate change, including anthropogenic causes, as described by the last set of reports written by the Intergovernmental Panel on Climate Change (IPCC). Lastly, the group suggested that an intergovernmental organization, such as CCSP, should have some budget authority and input into agency budget decisions to be effective.

## Combined Stakeholder Comments

The stakeholder comments listed below were written and synthesized by a rapporteur at the session and are not exact quotes from individual stakeholders. The main point of the comment was documented.

- Historically, CCSP focused largely on science supporting mitigation discussions in the context of United Nations Framework Convention on Climate Change (i.e., global-scale, century timescales); is it time to re-think the focus of the program? If so, might want to consider options such as:
  - A program to support decisions that are robust to (in the face of) uncertainty – i.e., a science+decision support program which focuses, for example, on plausible futures instead of more accurate predictions;
  - A focus on science to support adaptation which would link science to decision-making in a practical sense;
  - Targeted research focused on problems/needs which can be transitioned to solutions/guidance for multi-level decision-makers.
  
- An adaptation science + decision support program, for example, might focus on:
  - Moving beyond global to routine, regional information; i.e., local actions require local information;
  - Science, products and services that are relevant in a regional and/or national context;
  - Going the extra mile to provide information used to support decisions, i.e., focus on discovery, access, derived products, interpretation and applications;
  - Regional science needs societal impacts and implications of climate change and climate change policy (e.g., policies affecting the cost of fuel impacts trade among islands, fishing industry, development)
  - Communications with decision-makers/users. Making decisions now based on some source of data or assumptions.
  - Sensitivity to regional decision makers
    - What keeps them up at night
    - Documents by high level leaders already available – what are their needs and problems?
    - Regional focus, phenomenon based

- Utilize the vast array of approaches and methods within the social science community:
  - Risk communications
  - Ask the social scientists to help frame the next generation of questions
- Timescales of interest differ if the focus is adaptation – e.g., decades to centuries with a particular emphasis on next 20-30-50 years:
  - REMEMBER: **The timescale of interest depends on**
    - **Problem you’re trying to address/inform**
    - **Phenomenological processes involved**
    - **Global, regional, community scale of problem**
  - How to identify and communicate to decision-makers natural climate variability and anthropogenic produced changes
- Some specific priority science needs from the Pacific might include:
  - Independent, Sustained Observations
  - One size doesn’t fit all, even from one island to the next
  - Expand “indices” of change -- Temperature, precipitation,, wind PLUS storms, soil moisture/drought thresholds, flooding thresholds, coastal inundation, and other integrated products
  - Improve skill of regional models for climate and extreme events prediction
  - Sea level changes including information on attribution – e.g., are observed changes in coastlines attributable to GHG-induced climate change?
  - Science to understand and enhance resilience of coastal waters and resources (e.g., ocean acidification plus studies of climate-ecosystem interactions)
  - Linking climate and weather extremes (includes variability)
  - Higher-resolution models and downscaling tools
  - Verification and assessment of models
  - Linking top-down (model-based) assessment with bottom-up assessment
  - Support local studies of local mitigation activities (carbon reservoirs)
  - Role of conservation areas especially in small Pacific islands
  - Enhanced model resolution for ecosystem assessments and resource management
  - Local gaps and Context -- Need to redirect our thinking (adaptation, impacts, vulnerability)
  - Integration of physical and social sciences
  - Documentation and assessments of the quality of appropriateness of adaptation and assessment methodologies and tools, as well as mainstreaming methodologies
  - Socio-economic analysis and economic impact evaluation tools
  - Improve determination of uncertainty and communications methods to convey uncertainty to decision-maker
  - Determination of changes in coast lines and methods to deal with impacts
- Continuous dialogue and feedback among partners, scientists and users essential
  - Requires support for regional and local institutions and partners

- Requires ways to communicate science to decision makers in understandable way
- Leaders and decision makers at all levels
- The U.S. doesn't end at either California or Hawaii! The Pacific Ocean is 1.6 times larger than Atlantic Ocean
- Look at Pacific experience:
  - Look at the PI Leaders Priorities and Pacific Island National statements of climate change issues and needs and priorities
  - Focus on problems/decisions as the starting point (vs. "science")
  - Engage mission agencies as well as science agencies
  - Enduring links among partners and decision-makers; building trust and credibility a long-term endeavor;
  - Organize around problems and remember regions (lesson from national health science program?)
  - Linkages w/traditional and local knowledge of practices;
  - Provide a synthesis of what has been learned about climate and (Pacific) islands – i.e., not just scientific reports but easy to read and understand summaries of what we know for more non-technical users
  - Data, Data, Data
    - Network healthy, sufficient coverage and continuity
    - Data records – preservation, storage, accessibility
    - Data needs driven by users' needs and problems
  - Communication, education and outreach
    - Info on understanding end users messages and methods
    - Transition from research to operations (feedback on priorities)
    - Listen to users and regionally – relevant products (role of private sector)
    - Bridging the gap from research to operations
    - Sustaining observing networks ("reference networks/stations")
- For CCSP as a program – need to address the NRC criticism related to separation of leadership and Budgetary Authority:
  - Currently a Federation but NEED lines of responsibility and budget authority and leadership-policy-setting and
  - Clear mechanisms for ensuring that insights from science programs are integrated in planning and budget development within participating agencies.