FY 2005 Information Sheet

The Regional Integrated Sciences and Assessments (RISA) Program for Climate Sensitive Decision-Making and Policy Planning

Introduction:

The National Oceanic and Atmospheric Administration (NOAA) has a mandate to provide the US public with high quality scientific data and climate services. Fulfilling this mandate requires research, partnerships, and patience, as climate services are still embryonic, though maturing quickly. One form of research that is supported by NOAA and contributes to the development of a scientifically based climate service is the Regional Integrated Sciences and Assessment (RISA) program. The program supports integrated research across a range of disciplines to expand decision-makers options at the regional level. It does this in a manner that is cognizant of the context decision-makers function within and the constraints they face in managing their climate sensitive resources.

To further accomplish this mission, NOAA via the RISA program is sponsoring a series of exploratory workshops across the United States. The workshops are being held in regions that currently have no formal link with the RISA program. The focus areas for the workshops, without prioritization, are the southern plains, Alaska, the mid-Atlantic, the great lakes, the northern plains, the mid-west, and Puerto rice/Virgin Islands.
There are two purposes for the workshops. The first is to educate the RISA program management, and enlighten NOAA in general, about opportunities and needs for climate relevant integrated research and the available regional research capacity in a region. Second, the meetings are designed to educate regional research and decision-making communities about the RISA program's goals, research philosophy, and methodologies.

Why is NOAA supporting this activity? The results of the workshops will aid in the design of NOAA's national research and climate service policies, structures, and resource allocations and ensure effective partnering with other federal, state, and local agencies, decision-makers, and the private sector. It is expected that the workshops will provide interested parties in regions not currently involved in RISA activities an opportunity to acquaint themselves with the program. This knowledge should then translate into more uniform research proposals, should a competitive funding opportunity arise in the future.[1]

Why Is RISA Relevant and How Does It Work?

Normally, most decision-makers and policy planners include only the climatology (the long-term mean and distribution of weather) for a region in their decision processes. Scientific and decision-making communities increasingly recognize the need to include subtler climate trends and variability. This transformation is occurring because advances in knowledge of ocean surface-atmosphere and land surface-atmosphere interactions make climate variability prediction, and potentially climate change prediction, feasible.

[1] It is important to note that holding a workshop in a region does not mean that a RISA activity will necessarily be initiated in a region.

El Niño, for example, is now recognized as causing predictable seasonal climate variability in parts of the United States and the rest of the world. Climate change is now widely accepted as an influence on the physical environment and society. Historically, translating these advances into operationally useful information has been challenging because of the following issues:

1. Scientists often do not appreciate how climate information fits into the institutional, economic, and cultural parameters and factors facing decision-makers (Jacobs 2002).
2. Conversely, decision-makers tend not to actively identify new sources of information or establish contacts with experts who could contribute to making more informed decisions (Ibid).
3. There is a perceived lack of structured processes to identify, assess, and meet national, regional, private and local climate-related needs. This hinders the timely adoption and effective use of climate information and technology throughout the U.S. economy (U.S. Congress, 1998; NRC 2003).

The House of Representatives recognizes that RISA is contributing to ameliorating the preceding shortfalls (Jacobs 2002, U.S. House of Representatives).

> **"Other than a relatively small program [RISA] at NOAA, there is currently no structure or process within USGCRP to identify potential users, understand their needs, and connect them to the research agenda….RISA has been called a step in the right direction by some while others view it as a model that could guide larger efforts within USGCRP." Committee on Science U.S. House of Representatives, "New Directions for Climate Research and Technology Initiatives, April 17, 2002**

RISA Objectives and Methods

The goals of NOAA's Regional Integrated Sciences and Assessments Program (RISA) are as follows:

1. Identify the climate, physical, and social context in which decision-makers manage.
2. Identify climate sensitive constraints facing decision-makers that may be ameliorated by scientific research.
3. Collaborate with decision-makers to expand their options in the face of identified constraints by integrating research from a range of physical and social sciences to develop methodologies, prototypes, and policy-related insights.

The RISA program is congruent with the mission, strategic vision and goals of NOAA. The most relevant NOAA strategic goals and priorities for the RISA program are to; a) protect, restore, and manage the use of coastal and ocean resources through ecosystem-based management, b) understand climate variability and change to enhance society's ability to plan and respond, and c) serve society's needs for weather and water information.

The RISA activities succeed to a great extent because of the partnerships the RISA teams develop across a spectrum of interests (Federal, State, local and private etc.). These partnerships enable the RISA teams to identify risks, uncertainties, and critical knowledge gaps, make balanced syntheses, and identify needed services on an ongoing basis. The RISA program has been influenced by documents from the National Research Council, the U.S. Congress, the NOAA Strategic Plan, the U.S. Climate Change Science Program (CCSP) Report (2003), and others. Figures one and two illustrate where current teams are situated and the types of activities in which they are engaged.

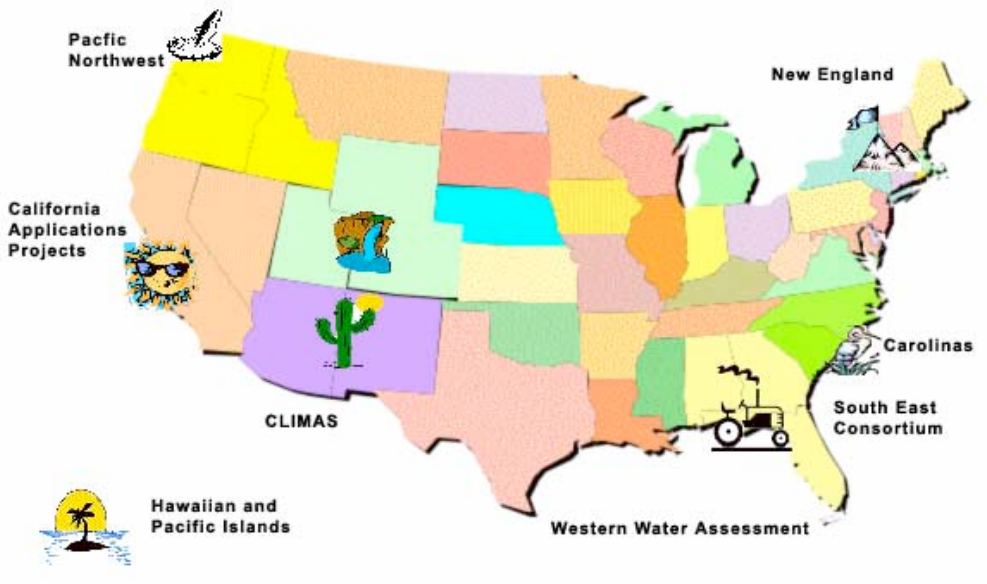

Figure 1 – Map of RISA Teams

California Applications	Fire, health, drought, stream flow forecasts, reservoir management, climate change
Carolinas	Water quality, drought
CLIMAS	Agricultural and groundwater management, forecast validation, drought response
Hawaii and Pacific Islands	Extreme events, climate services
New England	Air quality, health
SE Consortium	Agricultural crop modeling, extension development, hydrology, fire, frost-freeze
Pacific Northwest	Reservoir management, fisheries, drought, snow pack, climate change mitigation and adaptation

Western Water Assessment Water policy, snow pack, drought

Figure 2 – RISA Team Activity Description

In addition to the NOAA strategic goals the RISA program contributes to the CCSP's Goal 5 ("Explore uses and identify limits of evolving knowledge to manage risks and opportunities related to climate variability and change"). RISA activities contribute to identifying a) uses and limitations of observations, data, forecasts, and other projections in decision support for selected sectors and regions; b) best-practice approaches to characterize, communicate, and incorporate scientific uncertainty in decision-making, c) decision support experiments and evaluations using seasonal to inter-annual forecasts and observational data.

The methodologies and policy insights identified by RISA teams are contributing key component of the research foundations for a climate service. These results are yielding well thought out prototypes and policy guidance that has high potential or is already being transitioned into operational settings. It is important to note, however, that the RISA program is not an operational extension service. It conducts research that often leads to prototypical decision support products. The teams cannot produce sustained operational products.

Conclusions

Although The RISA program is a national program there are many regions of the United States that do not have RISA-supported teams. This document is an example of the RISA program management's intention to methodically identify the needs of regions and educate regional players about the RISA research effort. It is hoped that by conducting workshops now, in the future as resources become available, NOAA shall be able to competitively develop the RISA program in a manner that best benefits regional and national interests and needs.

Bibliography

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