SESSION ABSTRACTS: RISA ANNUAL MEETING 2016

THEME I: EVALUATION OF CLIMATE ADAPTATION

A. Evaluation of Regional Climate Adaptation Efforts

Facilitator: Gigi Owen

Presenters: Maria Carmen Lemos, Kirsten Dow, Radley Horton, Gigi Owen

Goal: To synthesize RISA's role in climate adaptation as a whole and to better understand how the different RISAs are positioned to address, engage with and evaluate regional climate adaptation efforts.

The RISA program is designed to build regional capacities to adapt to climate variability and climate change. This session brings together RISA researchers who are engaged in regional climate adaptation. It addresses how RISAs are responding to climate adaptation needs and contributing to adaptation planning and activities. The session also addresses how RISAs measure progress in climate adaptation by evaluating our own efforts as well as other regional adaptation efforts. The session consists of four presentations on current RISA climate adaptation work. It includes a facilitated discussion with panelists and audience members to tie together RISA projects and the approaches used.

The discussion will investigate overarching ideas and approaches to how RISAs are addressing regional climate adaptation. Topics might include: How could (or should) RISAs coordinate efforts to inform climate adaptation at a national scale? What adaptation questions or efforts should RISAs be addressing/evaluating that they currently aren't? How do RISA adaptation efforts contribute to climate services, science policy, and adaptation science?

B. Presentation/Discussion: Evaluating Co-Produced Climate Science Workshop

Speakers: Tamara Wall & Alison Meadow

A brief presentation and discussion to provide a debrief from the Evaluating Co-Produced Climate Science Workshop (Reno, February 2016) and solicit feedback from meeting participants.

C. Evolving Resources for Decision Support and Co-Production of Knowledge

Facilitator: Tina Buxbaum

This 1 hour session will include presentations from ACCAP, CNAP, GLISA, and CISA. The session will be an opportunity to share decision support resources, discuss the utility of various resources, and consider how scenarios and scenario planning can be used in engagement and evaluation processes.

Melanie Colavito, ACCAP

Title: Assessment of the Application of Climate Information in Wildfire Management and Decision-Making in Alaska

Summary: Measuring and evaluating progress in climate adaptation and decision support science necessitates a robust understanding of science co-production and communication within different management contexts. For example, in Alaska, climate change is contributing significantly to wildfire activity and effects, which are expected to intensify in coming years. Wildfire managers at the state and federal level have therefore identified climate change and its ecological impacts as a top research need. In order to better apply science and climate information in wildfire management in Alaska, it is critical to better understand how scientific information can most effectively contribute to decision-making through effective knowledge co-production and communication between scientists and managers. The Alaska Fire Science Consortium (AFSC) is a boundary organization that convenes scientists and managers to better develop and apply science for decision-making. AFSC is formally partnering with the Alaska Center for Climate Assessment and Policy (ACCAP) to better assist in this process. To that end, this presentation will describe research that will begin in 2016 to reflexively measure and evaluate the process of science co-production and communication within this context. Specifically, this presentation will address how we plan to investigate the decision contexts of wildfire management in Alaska, explore organizational frameworks for connecting science with users, analyze the innovation of decision-support services and evolution of use-inspired science, and contribute to generalizable knowledge to inform decisions through science application.

Tamara Wall, CNAP

Title: Verification of Spot Weather Forecasts

Stakeholders: National Weather Service and Wildland Fire Agencies

Summary: Spot weather forecasts are forecast provided by NWS to fire agencies during fires or for controlled burns. They are increasingly used as "go/no go" decision management tools for prescribed wildfire activities by fire management agencies. Spot weather forecasts are inherently probabilistic in nature, but the decisions they support are often more deterministic. This project address both the wildland fire agency community by assessing the accuracy of spot weather forecasts, as well as identifying common uses, communication pathways between the fire community and the NWS, and opportunities to improve decision support.

Ricky Rood, GLISA

Over the past five years GLISA has explored a variety of approaches to the co-development of knowledge through the use a decision support and engagement tools. The dissemination of historical climate data via local climatologies based on GHCN weather stations and historical regional climatologies based on NOAA's Regional Climate Divisions provide a foundation for our engagement with a variety of end users. More recently engagement with the National Park Service and other

partners has advanced our understanding of the utility of scenario planning. Through engagements with the National Park Service we have a better understanding of how the co-production of these scenarios impacts their acceptance and usefulness in a decision making context.

Chip Konrad, CISA

Title: web-based heat-health vulnerability tool (HHVT) in North Carolina

Summary: presentation on our work engaging with stakeholders on the web-based heat-health vulnerability tool (HHVT) in North Carolina. HHVT uses National Weather Service forecasts to predict the number of cases of heat illness across different regions and demographics of the state. We rolled out version 1 of the tool last July and held a webinar and face-to-face engagements in September. We received lots of valuable feedback and are currently using it to develop a second version of the tool that we hope to release this coming May.

D. Discussion: Lessons in Communicating El Niño

Moderator: Ben McMahan

Panelists: Dan Cayan, Michael Crimmins, Phil Mote, Kelly Redmond

This discussion will explore the current state of El Niño, what can be expected, and the difficulties of forecasting impacts for climate scale impacts when mass media expects weather scale information. Selected speakers will be asked to reflect on their experiences in communicating El Niño and discuss what they have learned over time that might help to create better messaging about the current event.

THEME II: RESPONDING TO EXTREME EVENTS

A. RISA Responses to Disasters: How to Take Advantage Without Taking Advantage Session

Facilitators: Ursula Rick & Kirstin Dow

Speakers: Greg Carbone, CISA (2015 Floods) Jeff Lukas, WWA (2013 Floods) Radley Horton, CCRUN (Hurricane Sandy) Rachel Riley, SCIPP (2013 Tornado)

Goal: To share ideas for RISA responses to extreme events through the experience of those teams that have experienced disasters in their regions.

Several RISA teams have recently experienced large disasters in their regions. Intense rains caused major flooding in South Carolina in October, 2015 and on the Colorado Front Range in September, 2013. Hurricane Sandy hit the Northeast in 2012, and an EF 5 tornado struck Oklahoma in May 2013. Each of these events provided an opportunity to inform stakeholders about the climatological causes of the current disaster, but also to discuss extreme events in the context of climate change. Extreme events

may also be a catalyst for social science research and/or working with new stakeholders. Any communication with the public during such disasters must be informative but also sensitive to the community's needs and condition at the time. In this session, short presentations will be given on the responses and actions of RISA's during disasters. These will be followed by a discussion of best practices, actions to avoid in the middle of an extreme event, whether and how we leverage such events to raise attention to our RISA work or to create new projects, and how we do this in a way that doesn't mislead about extreme events and climate.

B. Fast and Slow, Big and Small: Extreme Events and Agency's Needs

Facilitator: Tamara Wall

Speakers: Katia Kontar, Dan Cayan

Goal: Identify a few key lessons about responding to extreme events that can be shared with a broader regional audience

This session will investigate how RISA teams work with different levels of government in their response to extreme events, both fast and slow onset. Examples include: 1) ACCAP's work with different federal, state, and local entities on spring break-up floods, their impacts on communities and the response to the floods and 2) CNAP's work with federal, state and local entities in California and the Great Basin in coping with the continuing drought and preparing for a strong El Nino. In addition to focusing on the work that is being done, we would like to delve into strategies and actions that have been employed in previous cases or other settings through facilitating a break-out session after the presentations. During the break-out session, we will ask for examples of how a specific approach was used to respond to an extreme event (slow or fast onset) and the outcome(s). We envision this as a chance for the RISAs to share and discuss approaches to working across agencies and also the different challenges that both slow vs. acute onset extreme events present. At the end of the session we hope to have highlighted a few key lessons about responding to extreme events that can be shared with a broader regional audience.

C. Drought University: sharing knowledge across RISA teams

Facilitator: Kathie Dello

<u>Speakers</u>

The Freshmen: Kathie Dello (CIRC)

The Seniors: Amanda Sheffield (CNAP)

The Grad Students: Mark Shafer (SCIPP)

The Continuing Scholars: Kirstin Dow (CISA)

Goal: We aim to transfer knowledge on drought response, communication, preparedness, and research across the RISA teams.

Many RISA teams have gathered valuable knowledge in their response to drought that can be transferred to other teams. We have invited 4 teams in various stages of drought to participate on the panel. Each speaker will have 7 minutes to give the incoming class some advice (3 lessons learned) on how to cope with drought in their region. This may or may not include participating or standing up their regional Drought Early Warning System.

THEME III: EMERGING THEMES AND PARTNERSHIPS

A. NWS-RISA Partnerships, existing and emerging

Facilitators: Jin Huang & Fiona Horsfall
Speakers: David Dewitt, Jeff Zimmerman, Allan Curtis

NWS/NCEP Climate Prediction Center (CPC) provides official climate monitoring and forecasts products on the timescales from week 2 to months and seasons for the entire US, as well as forecast verifications in terms of skill scores. CPC products have been widely used for various sectoral applications (e.g., water resources, wildfire, and agriculture). Additionally, NWS WFO's/Field Offices provide a unique opportunity to interact with partners at multiple levels, including regional, state, local, and more. Many offices actively take part in climate monitoring, research, data dissemination, and outreach and may provide a valuable opportunity to partner with existing and new RISA's and further partnerships with NCEP.

Increased Interaction between the NWS field (CPC and the regions) and the RISA network should lead to beneficial knowledge sharing about potential use of short-term climate forecast and monitoring products and how stakeholders currently use existing products and decision contexts. NOAA Climate Test Bed (CTB) is one mechanism for transitioning research to advance NWS capabilities and to promote the usage of NCEP/CPC tools and products for sectoral applications.

Bringing together the RISA community, NWS WFO's/Field Offices, NWS regional users and NCEP/CPC forecast producers, this session is aimed at exploring needs, opportunities and mechanisms to build NWS-RISA partnership to further understand and address the following issues:

1) How are NCEP monitoring and forecasts products used in different regions for different applications?

2) Potential areas for future use of NCEP products and effective mechanisms for collaboration on product development.

3) What are the effective ways for regional and sectoral users to access the state of art modeling and forecast capabilities?

4) How can NWS WFO's/Field Offices best interact and develop a mutually beneficial working partnership with existing and new RISA's?

a. Can a WFO/Field Office act as a conduit of information, such as proof of concept, outreach and more developed by the RISA's and vice versa?

Tentative Agenda:

- NCEP/CPC existing products and future plans (Dave DeWitt)
- NWS experiences in interacting with RISA and using NCEP/CPC products (Jeff Zimmerman and Allan Curtis)
- Discussions (Jin Huang and Fiona Horsfall)

B. Building Collaboration between RISAs and the Climate Resilience Toolkit

Facilitators: Beth Gibbons & Daniel Brown

Speakers: Daniel Brown, David Herring

Goal: The goal of this session is to outline a preliminary concept of how a RISA can benefit from, contribute to, maintain, and expand regional frameworks of the Climate Resilience Toolkit.

GLISA has partnered with many communities in the Great Lakes region to develop locally-relevant resources that draw upon the best available physical climate data and climate adaptation strategies. One challenge we face is scaling up services we've provided to specific partners to meet demands for similar engagement across our region. The technical hurdle of providing resources online in an accessible, standardized format causes a recurring bottleneck in the interpretation and dissemination of climate information. The Climate.gov Climate Resilience Toolkit (CRT) provides a solution to this challenge and would allow RISAs to deliver material to their stakeholders more effectively in a standardized format that can be shared easily both within their own regions and nationally. Many RISAs have already provided resources to the CRT, and ACCAP has also expressed interest in how to further develop materials that would be beneficial to the CRT and other RISAs.

GLISA and CRT team members will present a case study of a recent CRT-GLISA partnership in Marquette, Michigan and a vision of how RISAs and the CRT may develop together to build out regional portals following the CRT framework and facilitate the RISA iterative process of evaluating what climate information is most useful.

Session Outline:

Presentation on design, goals, and vision of the Climate Resilience Toolkit — David Herring, Director of Communication & Education, NOAA CPO (15 mins)

This presentation will highlight the design and vision of the CRT and how it will serve RISAs in collective, ongoing efforts to provide decision-support services for stakeholder communities.

Presentation on Regional Resource Development and Case Study of CRT-GLISA Collaboration in

Marquette, MI — Daniel Brown (15 mins)

This presentation will describe the collaboration that built on existing GLISA resources and followed the CRT framework. Successes of the process and challenges of sustaining regionally-relevant CRT portals will be discussed.

Small Group Deliberations on Challenges and Opportunities of RISA collaboration with the CRT (30 mins)

Small groups will deliberate on how the technical infrastructure or the engagement process of the CRT might be applied in their own projects. The goal is to identify challenges and opportunities for RISAs that operate as regional facilitators of the Climate Resilience Toolkit. This presentation will highlight the design and vision of the CRT and how it will serve RISAs in collective, ongoing efforts to provide decision-support services for stakeholder communities.

C. RISA experiences with private sector partnerships

Organizers: Dan Ferguson, Chelsea Combest-Friedman, Victoria Keener, Linda Sohl

Goals:

1. Understand the range of private sector work currently taking place across RISAs

2. Identify commonalities across RISA experiences (including opportunities and challenges)

3. Gather some collective wisdom about RISAs role in private sector climate services work

This session will be a facilitated discussion about experiences RISA teams have had working with private sector partners. We will start off with a brief review of information the session organizers gathered from RISA teams in advance of the meeting. That initial information will be followed by questions to seed a discussion with all workshop participants. The primary goals of the session are to: understand the range of private sector work currently taking place across RISAs; identify commonalities across RISA experiences (including opportunities and challenges); gather some collective wisdom about RISAs role in private sector climate services work.