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North Central
RISCC
MANAGEMENT NETWORK

NC RISCC Spring 2022 Workshop Report

North Central
Climate Adaptation
Science Center

NC RISCC Spring 2022 Workshop Report

Abstract

The objectives of the North Central RISCC are to:

     1) connect researchers, managers, and other stakeholders
     2) to conduct priority research including synthesizing existing information, and
     3) to ultimately reduce the impacts of invasive species in a changing climate.

On April 6th and 7th 2022, the NC RISCC held its first Science Integration Workshop, aiming to build regional and national connections, increase interest in the network, and showcase local work in management and research. This workshop, held virtually, helped establish and connect the community, raise awareness, and bridge the invasive species and climate change fields.

Description of Event

     The workshop was held on April 6th and 7th 2022, from 9:00 AM - 12:00 PM Mountain Time. Day 1 of the workshop included an introduction to the NC RISCC and the larger RISCC network, a plenary talk about the science of invasive species and climate change, breakout sessions designed to elicit feedback on future directions for the RISCC, and lessons learned from managers and practitioners in the field. Day 2 of the workshop featured a plenary talk about the North American Invasive Species Management Association (NAISMA) and the current state of policy and management, a panel discussing upcoming policy and funding priorities, a session featuring research advances, and finally flash talks by other regional RISCC groups. A full agenda can be viewed here. We hosted 21 speakers from a variety of backgrounds and areas of expertise. Attendance varied across the different days and sessions, ranging from 47-71, with an average of ~58 participants per session. Below is a chart of attendance numbers for each session (Table 1).

Table 1: Estimated number of participants in each session at the NC RISCC Spring 2022 Science Integration Workshop.

Session Title	Day	~# of Participants
NC RISCC Introduction	1	68
Plenary Talk #1	1	71
Breakout Groups	1	50-60
Manager Stories	1	55
Plenary Talk #2	2	53
Funding & Policy Panel	2	57
Research Advances	2	50-60
RISCC Flash Talks	2	47

Before the event, 148 people were registered, including all speakers. Using ~55 people as the core group of engaged participants (across all sessions, see Table 1), that equates to roughly a 37% participation rate among our registered attendees. Reminder emails were sent out prior to the event, and we will use this mechanism to increase participation in the future (e.g., 1 week prior, 1 day prior). Some workshop attendees did not register in advance and instead obtained the link from other sources, such as colleagues who were also attending.

On the registration form, participants were asked to list their current affiliation and where they heard about the event. Table 2 provides summary information of these affiliation types. While these reflect who registered rather than who attended per se, these numbers indicate 1) what organizations have interest in participating in RISCC events and 2) which communities were not well represented (e.g., Tribal groups, local or city agencies). Although the registrants captured our intended audience (Table 2), the NC RISCC team will aim to increase participation of Tribal representatives and local government workers in future workshops.

Table 2: Affiliations of registrants for the Spring 2022 workshop.

Federal Agency	State Agency	Local or City Agency	University / Academia	NGO or Industry	Tribal
41%	11%	8%	17%	13%	6%

Workshop registrants represented all 7 states of the NC region (Figure 1). Additionally, those from regions with their own RISCCs (NE, NW, PI, SE) were also among those who registered for the workshop.
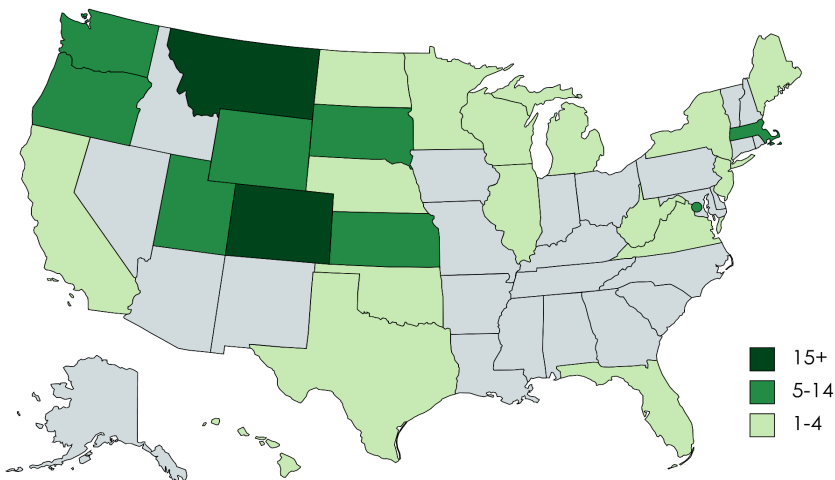
Figure 1: Locations of registrants for the NC RISCC workshop. Two additional registrations were from Canada and one from South Africa (not shown here).

Around 90% of registrants reported that they heard about the workshop from either 1) the NC RISCC or NC CASC listservs, or 2) a colleague or word of mouth. A fewer number of registrants (<15%) listed that the advertisements on the NC RISCC webpages or other organizations' websites and listservs were a key source of information.

Lessons Learned
Planning Period

We began brainstorming for the workshop in January 2022 and planning picked up at the start of February. We found that this was enough time to plan the bulk of the workshop (i.e., session types, duration). However, finding speakers took longer than expected, particularly among the management/practitioner sector. To identify speakers, we first asked our external advisory board (EAB) for suggestions. We also pulled from folks who were already on our listserv (and thus were already familiar with the RISCC and what we do). To identify additional speakers needed for particular categories (i.e., managers), we conducted web searches across agencies and states in the NC region. In the future, starting the planning period earlier, particularly identifying speakers, may allow for more pre-workshop interaction and preparation with presenters (i.e., expectations and logistics of presentations).

Feedback from the NC RISCC team and the EAB

Positive feedback about the workshop included that the breakout sessions worked very well virtually, largely owing to the clear Zoom instructions presented (i.e., prompts for breakout groups to follow) and the "choose your own room" feature where participants selected the topic that was of most interest to them. Grouping participants based on major topics of interest via the polling feature in Zoom was noted as a very innovative feature that worked well in practice. The EAB also noted that we had engaged participants for the entire workshop, with numbers remaining relatively consistent across all sessions of the workshop. The Northeast RISCC reported that they often see a significant drop in participants after the main talks. Therefore it seems like our group of participants, while smaller than the NE RISCC network, was committed to the workshop and to learning about the network.

While the workshop ran largely smoothly, we did learn some key lessons that we will integrate into future workshops or events (specifically in a virtual setting). First and foremost, although we accounted for some amount of transition time between speakers, we should have allotted more time for this, especially in-between speakers within a session and for discussion at the end of sessions. This would also help us manage any technical difficulties associated with sharing screens or sound/audio and presenters exceeding their allotted time. Second, to address the issue of speakers going over time, there are several things we could integrate into future workshops including: having a designated cue (e.g., a timer that is visible on screen) for when people are getting close or over time that flashes on the screen, clearer communication with speakers ahead of the event (e.g., reminding them of the time limit), and a rehearsal process with all speakers in advance to help them get used to sharing their slides. Third, our behind-the-scenes communication with the NC RISCC team during the event was functional, but was difficult to manage with multiple windows/applications open. Having a dedicated, easy-to-access tool would improve this (e.g., communicating only via Slack, Google docs). Fourth, volunteers should be given more direction ahead of time with clear instructions about

session facilitation regarding moderation/note-taking and perhaps trying to split these duties across several volunteers.

Feedback from participants

A week after the workshop was completed, we sent out an anonymous feedback form to the list of registered participants. Thirteen participants responded, or around 24% of the average number of participants per section, and crossed all breakout sessions (Figure 2). Several participants did not remember or did not participate in breakout groups, which corresponds to the lower participant numbers for that section (Table 1). To incentivize participants to respond in the future, we can send additional reminder emails about the survey after the event.

What breakout group did you participate in?
13 responses

Figure 2: Post-workshop survey respondents' self identification of which breakout group they participated in.

Survey respondents were asked to comment on the usefulness of the workshop in meeting some of our overarching goals (Figure 3). Participants overwhelmingly said that they learned about related work that was relevant to them, and most agreed that they were able to make new professional connections and had the opportunity to provide input on RISCC directions. All survey participants indicated that they found the workshop useful.

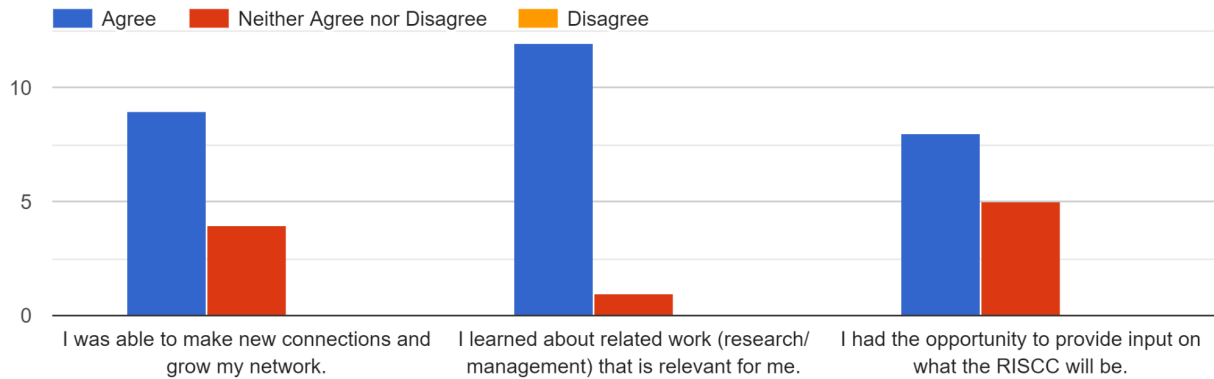Please indicate your agreement with the following statements.

Agree ■ **Neither Agree nor Disagree** ■ **Disagree** ■

| | I was able to make new connections and grow my network. | I learned about related work (research/management) that is relevant for me. | I had the opportunity to provide input on what the RISCC will be. |

Figure 3: Survey respondents' opinions on the usefulness of the workshop, in terms of meeting workshop goals.

When asked about the usefulness of individual sessions, survey respondents found the plenary talks and manager stories to be the most useful, while the breakout sessions were not highly ranked as useful among survey respondents (Figure 4).

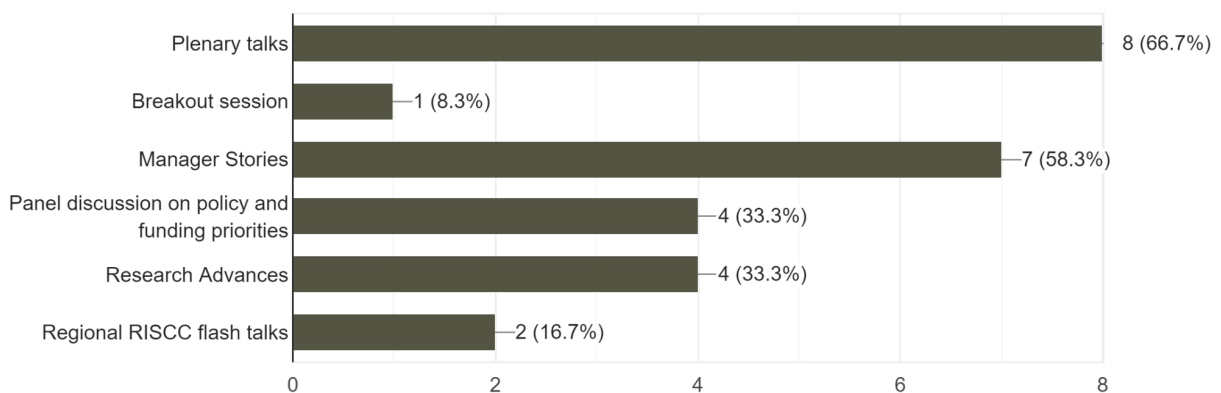Which session(s) did you find the most useful?
12 responses

Session	
Plenary talks	8 (66.7%)
Breakout session	1 (8.3%)
Manager Stories	7 (58.3%)
Panel discussion on policy and funding priorities	4 (33.3%)
Research Advances	4 (33.3%)
Regional RISCC flash talks	2 (16.7%)

Figure 4: Post-workshop survey respondents' ranking of the usefulness of different workshop sessions.

Participants were also asked three open-ended questions. The first question, "Were there aspects of the workshop that you particularly enjoyed?" garnered 8 responses. These responses included the following: plenary talks, Tribal perspective, comparison to the Northeast

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RISCC, breakout sessions, and bridging the gap between research, management, and policy. One participant said, "I think it was a fantastic workshop, I kind of wish we could do them every 4-5 months just to keep in touch with the latest research, etc.". And another offered, "It was well planned out, except for climate change and the spring winter storm that kept a few from attending, including some of our Tribal folks from attending and presenting."

Seven people responded to the second question: "Do you have any feedback on what we can do better in future workshops?" These responses included giving more time to Indigenous speakers in particular, asking presenters to provide their take-home messages in case talks need to be cut short, planning for longer breakout sessions and more opportunities for breakout sessions, creating opportunities to better integrate the science with the management, keeping presenters in their allotted speaking times, and allowing more time for questions after each presentation.

The third question, "Was there anything that we didn't cover in the workshop that you would have liked us to cover (e.g., topics of interest, study areas, different workshop sessions)?" received six responses. Most responses said that the team had done a good job of providing a host of different topics, and that they did not have suggestions for improvement. Some mentioned they would like a focus on the NC region and the specific species, range shifts, and tools that apply for the region. One person suggested a session on climate optimism and coping with environmental change. Another was interested in a connection between One Health (a CDC program) and the RISCC.

Overall, the feedback we received suggests that the workshop was a success and provided useful information for participants (at least for those who filled out the survey). The constructive feedback provided by survey respondents mirrors the issues that we discussed with our EAB.

Suggestions for Future Workshops

The NC RISCC core team had already been planning for our next workshop (Spring 2023) to focus on finding and using relevant tools and data for invasive species in a changing climate. The feedback we received during and after the workshop suggests that this would be an appropriate focus that the community would be interested in exploring. Tools like INHABIT and others would be useful to showcase in this type of workshop. Efficacy of different management strategies could be a topic for another workshop in the future. Another idea would be to focus on some of the social science aspects of invasive species and climate change. Potential topics could include: coping with environmental change, OneHeath (or other holistic health frameworks) and invasive species/climate change, the role of environmental values in decision-making, language use around invasive species and climate change, or strategies for engaging with stakeholders (e.g., Bamzai-Dodson et al. 2021).

Table 3 provides a summary of things that we can improve on in future workshops and things that worked well in this workshop.

Table 3: Summary of things to improve or keep the same for future workshops.

Things to Improve	Things to Keep
Finalize speakers ~ two months ahead of	Interest-oriented breakout sessions run by

workshop Run a rehearsal session with all speakers a week before the workshop Set up a timer for speakers that they can see on their screen Allow more time for each speaker (either fewer speakers or more time overall) and for questions Offer more breakout group sessions Share Zoom best practices document with speakers (and participants) Provide more clear instructions for volunteers (e.g., facilitators) and streamline behind-the-scenes team communications	RISCC team and volunteers Interesting plenary talks Opportunities for Tribal representatives to speak/present Remote format - allowed for a more inclusive audience Clear Zoom instructions for workshop participants

Appendix 1: Records of notes taken on Jamboards during the breakout group sessions. Comments have been divided into three major categories based on the questions asked and responses given.

Breakout Group	Purpose of the RISCC	What They Can Contribute / What They Do	Challenges + Specific Wants
Native Species/ Community Resilience	Cross agency interaction, sharing resources and reports that might not make it into the literature, expand partnerships, transferring knowledge/outreach. Infographics to rapidly communicate information at a larger scale, especially for private landowners	Systems studied in this room: Kansas- prairies, wetlands, some hardwood forests; mixed and short grass prairie; mixed sagebrush steppe, high plains desert; oaks-Flint Hills Management approaches used in the room: Prescribed fire, herbicide, mechanical thinning	Need a tool for planting suitable natives out of home range with future climate change Timing of herbicide efficacy e.g., russian olive and tamarisk or cheatgrass (usually apply in Sept or Oct, but wondering if that needs to be shifted with climate change) Johnson grass is problematic in eastern Kansas; hard to get in to apply herbicide due to changing precipitation
Human & Societal Impacts	Expand collaborative network Learn more about the invasives OR climate side, becoming more aware of synergies Looking for resources to guide management More ideas for being forward-thinking	Interest is more general, see where it goes Input on synthesis documents for the region Bringing the policy angle into decision-making about these topics	This has been tricky so far – big projects on invasive species but they often have no climate angle Tribal document for invasive species management One example of aquatic management trying to get climate into the conversation, but we're still in the early stages of figuring out how to navigate the way these topics fit together Funding is a big barrier (for invasive species); Montana has an invasive species trust (from the Department of

			Agriculture) that doles out funds for different projects Potential conflicts between personal interest and organizational missions
Extreme Events	What type of products does the RISCC provide? How do we choose tools to make decisions? Hard to scale to the management unit; small scale isn't as useful How are other RISCC's discussing this? More information they have on dynamics between fire and invasive species as justification in quick decision-making for fire management	Folks in this group are doing on the ground fieldwork, modeling Build connections between these two groups to explore over larger area	Struggles finding empirical evidence Only tertiary things to find on the internet Most literature on post-fire response and how invasions might influence that Need information on the front-end about being proactive and the potential fuels from invasive grasses and how it might impact the fire season Anyone who is willing to jump in during fire mitigation is usually emergency response teams, with little concern for propagation and spread during activities Struggling to make large scale fire models Some of the remote sensing is under-predicting fire
Management Challenges	Online tools make prioritization easier. Need more information about what is to come. How do we choose species for restoration given the changing climate? What tools are available; Who is using them; Are they working? A good network would allow us to learn from	Having tools to be able to make good decisions is important. NC RSCC has a desire to meet the needs of managers. Need to understand manager needs.	Hard to know how to plan work, reduce invasives, protect natives in a changing climate (new patterns - drought, wind, snow). Having tools to be able to make good decisions is important.

	others. How do we use the tools that we have more effectively? What tools are available that others might be using that have been successful and how do we learn about those (a good community of practice may be one way to gather the information)?		
Range Shifts & Hotspots	Land management wants: Central database of resources Clear advice in bullet points and available data to add to reports. People want recommendations and a degree of uncertainty to suggest how good that recommendation is. How do you make decisions without complete knowledge? Need to organize land managers' thoughts. Need a list for land managers to list necessary questions. What do you want to get out of the RISCC? Infographic pamphlets Interactive website Partners map to help link collaborators.	Want to contribute on-the-ground experiences There is a bias for action in land management.	Historically there has been poor communication between what land managers need and what researchers want to work on (Cross et al. 2022).