



INTERMOUNTAIN WEST  
TRANSFORMATION  
NETWORK

# Wildfire & Watershed Symposium Summary Report

February 2025

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*Group photo of symposium attendees at the end of Day 2.*

# Purpose

The Transformation Network hosted a Wildfire and Watershed Symposium in October 2024. This document provides an overview of that project, including the process of planning and coordinating the event, the implementation of the activities, proposed outputs and deliverables, and an evaluation summary from participants. We hope that this resource can serve as a reference and guide for other research teams and networks interested in hosting a similar event.

The Transformation Network (TN) is a NSF Sustainable Regional Systems Network ([NSF Grant #2115169](#)). The TN represents a partnership between eight Western U.S. universities with over 80 partner organizations representing Indigenous partners, governmental and non-governmental organizations, public utilities, conservation districts, irrigation districts, and municipalities. Our aim is to build capacity for adaptations and guided transformations towards sustainable regional systems in the Intermountain West through innovative and equitable solutions. Visit our website [transformimw.unm.edu](https://transformimw.unm.edu) to learn more.

This symposium was driven by members of the TN's Wildfire and Watershed Collaborative Working Group in collaboration with the Rio Grande Fireshed Place-Based Collaborative, Innovations in Governance Charter, and other TN-funded research teams, which identified post-fire recovery and restoration as a topic where interdisciplinary and convergent input with community partners could help shape future research and decision-making in the field. This workshop was designed to advance this work in two ways. The first is by engaging core participants in developing an applied paper based on a "horizon scan" of research needs in the field.

The second element of the workshop broadened the discussion to build on the scientific questions identified to identify possible new research trajectories suitable for convergent research. Lightning talks by our student participants and a StoryMapping activity were included to enrich participants' thinking and provide further opportunities for shared learning and identifying mutual interests for future work.

# What Is a Horizon Scan?

A horizon scan identifies emerging issues and scientific questions that, if answered, would guide practice and policy. It draws on expert knowledge to identify, analyze, and rank the most important emerging issues or scientific questions on a topic. This horizon scan focused on post-fire recovery and restoration.

About 30 Core Team members who have expertise and experience in the topic area were invited to participate in the horizon scan. Core Team members worked for months on these topics before engaging in a two-day workshop designed to facilitate key elements of the horizon scanning process.

## For Core Team Members, the Horizon Scan Process Included:

Task	Timeframe
Sharing a short survey with colleagues and network to identify priority scientific questions related to post-fire forest restoration.	April – May 2024
Selecting and ranking the most relevant scientific questions identified in the survey above and other sources in multiple rounds.	May – July 2024
Commit to researching 2 of the scientific questions identified as priorities, writing a 200-word summary with references for each issue to share with the Core Team.	August – September 2024
Participate in a 2-day workshop to discuss the scientific questions researched by the Core Team and then re-score the questions identified.	October 2024
Review and provide input on the manuscript that would be submitted to a peer-reviewed journal.	Spring 2025

# Pre-Event Planning & Coordination

## Horizon Scan Invitations

A Coordinating Team of TN funded faculty members was formed in January 2024 to lead the Horizon Scan initiative. These members are all experts in different areas of post-wildfire recovery. The Coordinating Team included Kelly Jones (NMSU), Daniel Cadol (NM Tech), Melinda Morgan (UNM), and Camille Stevens-Rumann (CSU).

The Coordinating Team invited individuals to participate in the Core Team based on their research expertise and professional connections to information related to wildfire and watershed research, and the needs of a post-fire landscape. Twenty-eight individuals participated as members of the Core Team out of 37 invitees. Core team members included research faculty and staff from Western U.S. universities and partners from federal or state agencies and non-profit organizations. Core Team members were required to attend the symposium for Day 1, when the major horizon scan activities took place, and encouraged to stay for Day 2.

In addition to Core Team members, TN funded PhD and Master's students in relevant fields were invited to attend the symposium and helped as facilitators and note takers. Many also gave lightning talks on Day 2 of the event. Several TN faculty or staff members and partners from outside the Core Team also attended the event for one or both days to observe Day 1 and participate in Day 2.



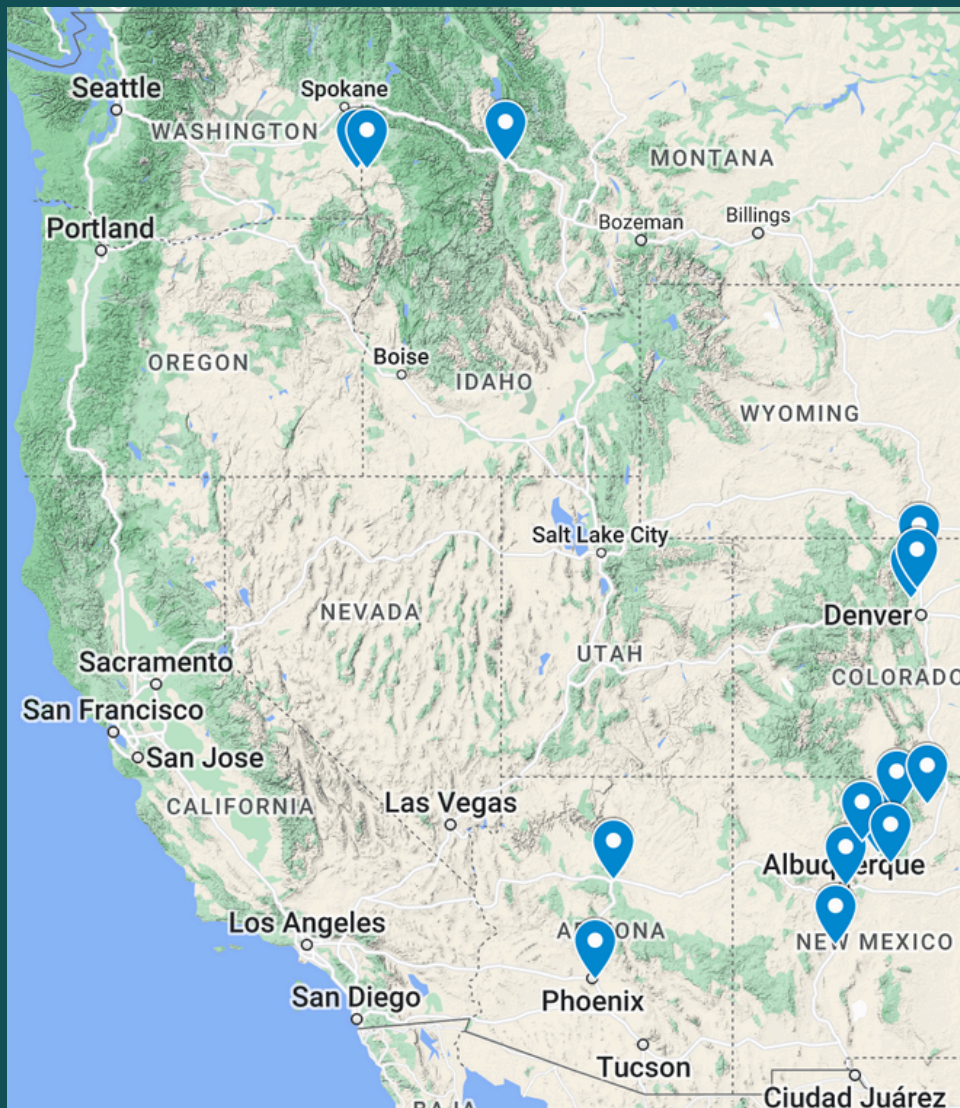
*Table participating in World Café Discussion on Day 1.*

# Pre-Event Planning & Coordination

## Travel

We invited TN-funded staff, faculty, and students, as well as Core Team members and other research partners. Individuals traveled from multiple states, primarily driving and flying to New Mexico.

The TN provided lodging and meals for all attendees, beginning the night before the event. The TN Administration Team at UNM coordinated travel needs for attendees who were not grant-funded several months prior to the event.



*Map representing the origin locations of Symposium attendees.*

# Event Details

The Wildfire & Watershed Symposium was a two-day event, at The University of New Mexico. The first day only included individuals who participated in the horizon scan, while the second day was opened to other attendees.

## Day 1 Agenda

- Coffee & Networking
- Welcome & Introduction to World Café Process
- World Café Discussion, Rounds 1 – 2
- Break
- World Café Discussion, Rounds 3 – 5
- Lunch
- Return to World Café Round 1 Group & Report Outs
- Break
- Birds of a Feather Discussion & Report Outs
- Soapboxes
- Next Steps
- Refreshments
- Keynote Speaker
- Dinner

## Day 2 Agenda

- Coffee & Networking
- Welcome & Summary of Day 1
- Moving Towards Convergence
- Lightning Talks from Transformation Network Students
- Break
- Identifying Possible Trajectories in Post-Fire Recovery Research & Collaboration Activity
- Lunch
- Lightning Talks from Transformation Network Students
- Break
- StoryMapping Overview & Activity
- Concluding Thoughts & Evaluation

# Identified Research Topics

A major goal of the Wildfire & Watershed symposium was to identify the most urgent and important topics related to post-wildfire recovery. The following pages detail the identified topics, organized by theme.

## Urgent and Important Topics, Social Science

### Social Science

Institutional coordination: What formal and informal institutional structures and approaches are necessary to better integrate the response to fires and post-wildfire impacts across scale?

Collaborative governance: What types of collaborative governance structures and approaches can be developed to better prepare for wildfire recovery?

Pre-fire planning: Do pre-fire planning processes that include post-fire preparation lead to better post-fire recovery outcomes?

Community engagement and equity: How can we design post-fire recovery processes to be equitable, inclusive, reflective of community values, and attentive to social justice issues?

Workforce development: How do we develop and maintain a restoration workforce?



# Identified Research Topics

## Urgent and Important Topics, Forestry

### Forestry

Reforestation pipeline: What strategies can be applied that lead to greater seedling survival, establishment, and growth in the field?

Outplanting strategies: How do we optimize site selection and spatial patterns of outplantings to maintain/enhance ecosystem services in post-fire landscapes?

Prioritizing post-fire forest recovery trajectories: When, where, and how to accept forest conversion, support natural regeneration, and/or intentionally perform reforestation?

Species and population sources for climate-informed reforestation: How can the understanding of how tree species and population sources influence forest resilience inform planting strategies in a changing climate?

# Identified Research Topics

## Urgent and Important Topics, Hydrology

### Hydrology

Soil erosion mitigation: What pre- and post-fire management actions are most effective to mitigate soil loss and water turbidity post-fire?

Flood and debris flow mitigation: What pre- and post-fire management techniques are most effective to mitigate flooding and debris flow impacts through prevention and prediction?

Post-fire water quantity and quality trajectory: What factors explain the post-fire trajectories of snowpack dynamics, water quantity, and water quality through time?

# Products

Several publications and presentations aimed based on the results of the horizon scan and this symposium have either occurred or are in development. By pursuing a variety of outputs from this experience, we aim to meet a variety of audiences. Additional manuscript topics and presentation opportunities have been identified and will be pursued in the 2025.

## Manuscript

A manuscript is currently in process summarizing results of the horizon scan scoring and identifying the most impactful and urgent topics that came out of this process. All core team members will be listed as co-authors on this paper. The paper will be submitted to journals in the Spring of 2025.

## StoryMap

Alyssa Mineau, a PhD Student at New Mexico State University, and Marsella Macias, a Master's Student at The University of New Mexico, are developing a StoryMap sharing information about the Horizon Scan and key research ideas that fall under the Hydrology, Forestry, and Social Science themes. The StoryMap will be made available on the Transformation Network website and will be geared for a more general audience to learn about the work done at this symposium.

## Presentation

Daniel Cadol gave a presentation on the Horizon Scan process, called “A convergent research agenda for post-wildfire restoration and recovery in the western US” at the Southwest Fire Ecology Conference in November 2024 in Santa Fe, NM.

## Summary Report

This document was created to summarize the symposium, outcomes, and logistics that went into planning it. We hope that it can serve as a guide for other members of the Transformation Network other research networks when planning and preparing for similar events.

# Reflection and Improvement

## Internal Evaluation

After the event concluded, the symposium organizers met to reflect on their experience coordinating this activity, in an effort to support the Transformation Network's commitment to high quality scholarship and research. The Transformation Network has invested in creating opportunities that increase traditional and western knowledge of regional sustainability with cultural open-mindedness and scientific granularity, while identifying and addressing real-world ecosystem issues and community challenges. Without reflection that includes humility and accountability, this process is incomplete.

The following section of this report includes a summary of feedback from event organizers, including grant-funded faculty, staff, students, and external contractors.



*Group orientation at the beginning of the symposium.*

# Recommended Strategies for Success

## Clear Leadership

As lead of the TN Wildfire & Watershed Collaborative Working Group, Kelly Jones (NMSU), took a strong leadership role in planning and coordinating this experience. Her leadership and direction ensured a successful event and completion of deliverable and outputs. The TN Administration Team (UNM) provided logistics support and coordination for the in-person event, including hosting Zoom meetings, note-taking during meetings, and sharing materials.

## Pre-Event Communication

The Coordinating Team shared detailed information to participants about the horizon scan process months prior to the deadline, with regular emails outlining expectations and deadlines. All documents were available online in a shared drive. Attendees reported that this process supported their work.

## Attendee Materials

The TN Administration team put together several documents that described organizers' expectations of attendees, and how to be prepared to fully participate in the horizon scan and symposium. The documents included details about travel, lodging, meals, and other logistics.

## External Facilitators

The Coordinating Team contracted University of New Mexico staff in the Office of Research to facilitate discussions. This allowed the grant funded staff and researchers to focus on actively participating in discussion and activities. The facilitators ensured that discussions remained on topic and encouraged all attendees to stay engaged and were supported.

# Recommended Strategies for Success

## Clear Roles and Responsibilities

The Coordinating Team assigned students to facilitator roles during the discussions on the first day of the event. All students were required to meet with the team ahead of time so they understood the expectations for that role.

## Opportunities to Socialize

The planning team ensured there were multiple opportunities for attendees to informally gather to build rapport and connection, including a happy hour the evening before the in-person event began.

## Breaks and Snacks

When building the agenda, breaks were included to provide a chance for participants to attend to their personal needs, professional responsibilities, and to take a few minutes to pause. There were always light snacks and beverages available.

## Event Swag

The TN Administration team provided branded tote bags for all participants that included a branded notebook and pen. Attendees received their swag when checking in for the symposium.



*Swag bags provided for attendees.*

# Lessons Learned

When hosting another event of this scale, we recommend the following changes to our approach to planning and organizing:

## **Fewer Activities on Each Day**

The agenda was very full, especially on the first day. Organizers should ensure that there are not more transitions or different activities than absolutely necessary.

## **Consistent Attendance Across the Two Days**

The majority of the Horizon Scan attendees were present both days, but some attendees only participated in Day 2. This caused some confusion and feelings of being left out. Organizers should ensure that all participants attend all activities for multi-day events.

## **Additional Logistics Support During the Event**

Although the project admin team was able to provide a great deal of logistic support prior to the event, it was difficult to meet all the needs of all attendees with only two staff people during the symposium. Organizers should identify at least one or two students or staff to provide additional support during the event.

## **Clearly Defined Goals**

There were some complaints that attendees did not understand the goals of the symposium, particularly on the second day. Organizers should have external reviewers check the stated goals prior to sending out to attendees to ensure clarity, and potentially check in with attendees prior to the event to confirm their understanding of the goals.

## **Data Organization**

Much of the work involved in the Horizon Scan took place in advance of the workshop, with participants providing input related to topics and suggestions in an Excel spreadsheet, which was transferred to a Zotero database. Earlier use of the Zotero database to organize citations and notes would have greatly aided manuscript development and provided an ongoing resource.

# External Evaluation Report

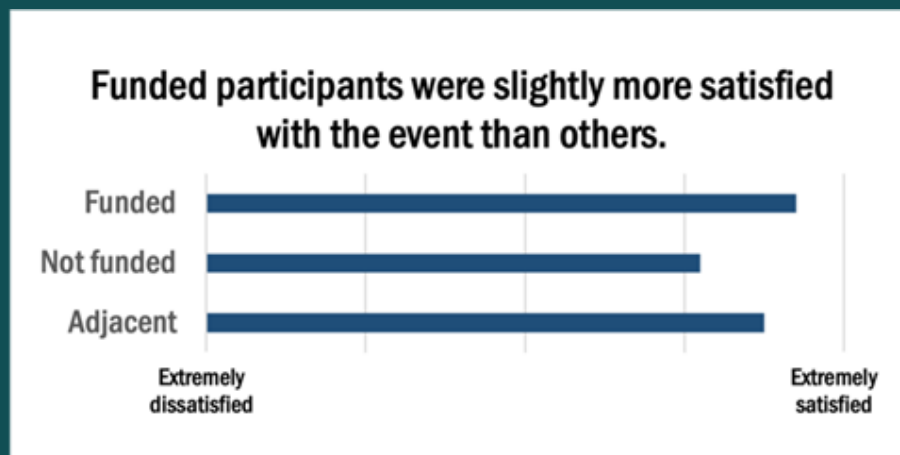
As a National Science Foundation funded project, the Transformation Network contracts with an external evaluator, Lynn Nordstrom, PhD. The Senior Program Manager, Lee Ann Ratzlaff, and Dr. Nordstrom collaborated on developing a survey for symposium participants to provide feedback regarding their experiences at the event, and provide input on how to improve future events. This section summarizes the findings from this survey.

## Respondents

The organizers identified and invited 35 individuals and organizations to participate in the Horizon Scan, 28 of whom agreed and engaged in at least part of the process. After completing the literature review and scoring, all core team members were invited to attend a two-day in-person symposium held at the University of New Mexico in Albuquerque. Including grant-funded students and staff supporting the symposium, 51 individuals RSVP'd, and 54 people attended at least one day of the event.

The survey was distributed to 43 individuals, excluding the TN administrative staff. Twenty-six participants responded to the survey (60%). Overall, the event was rated highly and respondents reported being very satisfied with the event. Individuals funded by the TN (n=10) were slightly more positive than those who are not funded (n=10) or those who are not funded but work with TN members (i.e., adjacent) (n=6).

Figure 1.

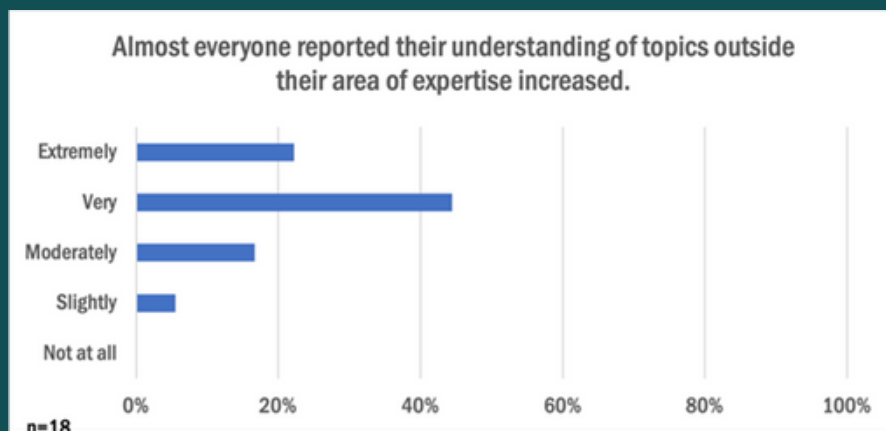




## Results

One of the goals of the Symposium in general and the World Café discussions in particular was to increase participants' understanding of subjects that, while outside their specific area, were important to the understanding of wildfires and watersheds. Almost 75% of respondents reported the size of their change in understanding as extreme or very (Figure 2).

Figure 2.



Four other questions were asked about other aspects of the symposium. First, respondents were reminded that the primary goal of the Horizon Scan and the TN Wildfire & Watershed Symposium was to “identify emerging issues and scientific questions that, if answered, would guide practice and policy” around post-fire recovery and restoration. Everyone responded positively that the World Café process advanced that goal (Figure 3). Materials and communications were viewed as helpful (Figure 4) and attendees were satisfied with the Horizon Scan process before the seminar (Figure 5). Finally, everyone responding thought that the Symposium was effective in identifying possible research trajectories (Figure 6).

Figure 3.

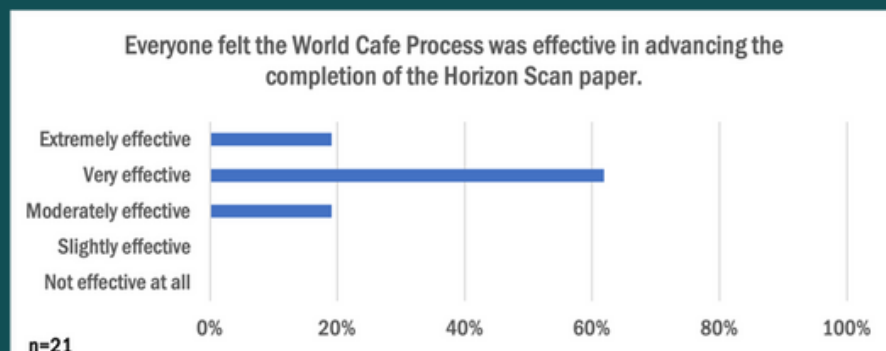


Figure 4.

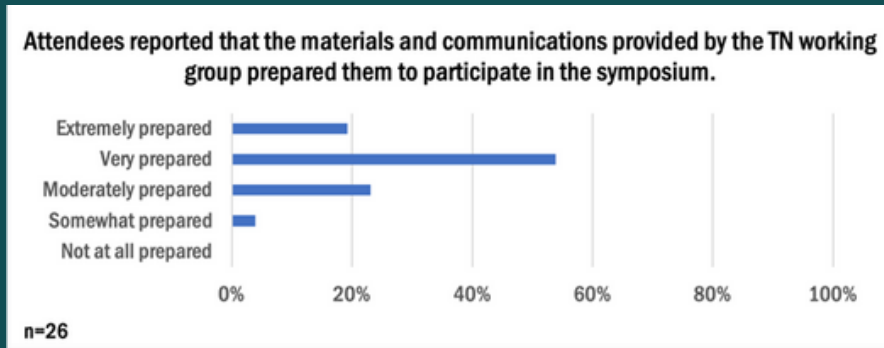


Figure 5.

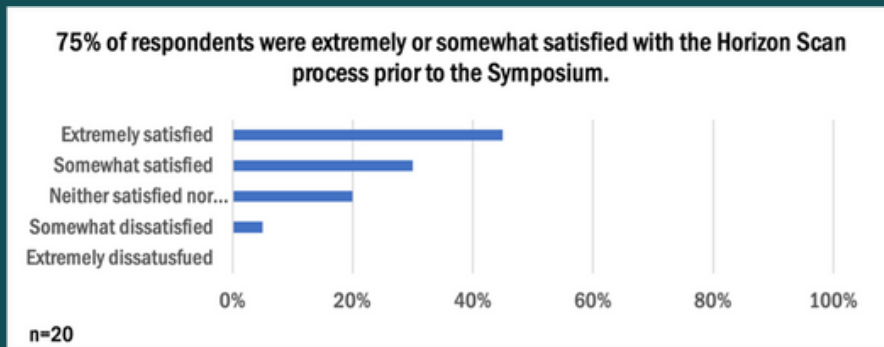
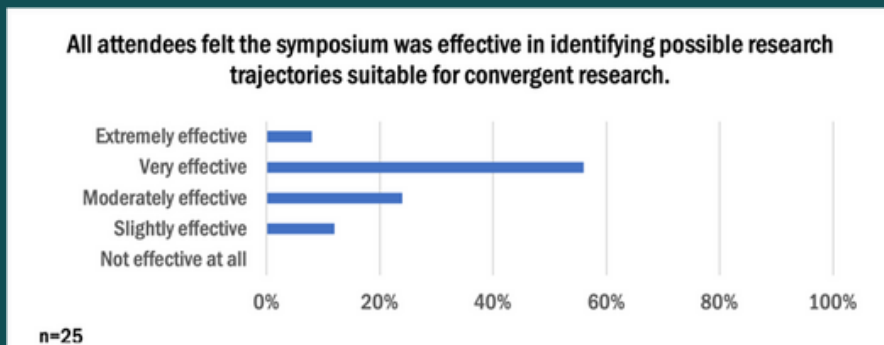
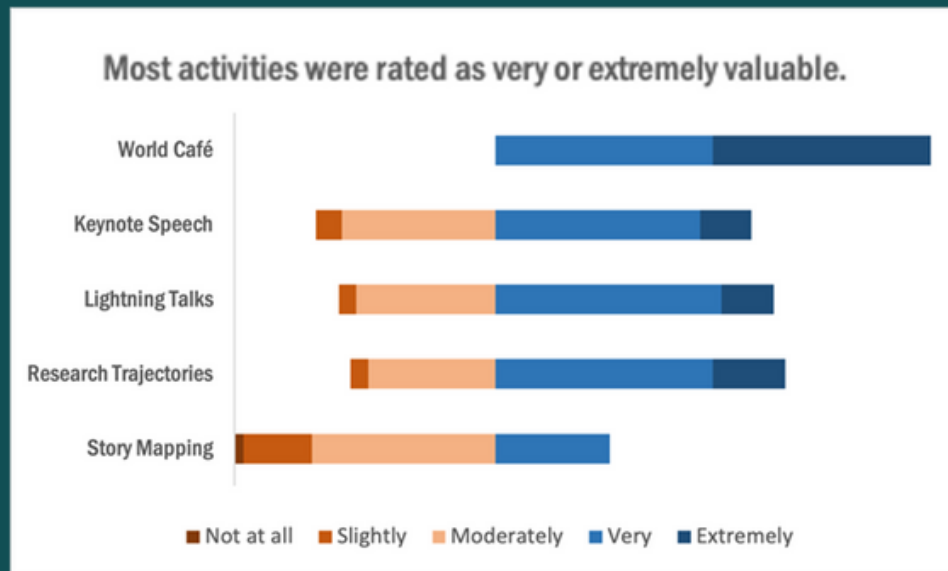


Figure 6.



Participants were asked to rate the main five activities on a scale from Not at all valuable to Extremely valuable. The World Café Discussions were the most highly rated (see Figure 7). While some felt the StoryMapping activity was very valuable, most thought it was only moderately valuable.

Figure 7.



## Interpretation

Based on the qualitative analysis of the responses provided, several key themes and points emerge from participants' reflections on the Horizon Scan and Symposium. The interactive and collaborative elements of the event were frequently highlighted as impactful. Many respondents specifically mentioned the World Café exercise and small group discussions as valuable experiences. Participants appreciated the opportunity for focused conversations and brainstorming with colleagues from diverse backgrounds.

Networking and interdisciplinary interactions stood out as a significant benefit of the event. Many respondents valued the chance to meet and interact with colleagues from different fields, emphasizing the mix of practitioners, partners, and researchers as particularly beneficial. The networking opportunities during breaks were also appreciated, allowing for informal exchanges of ideas.

Learning and knowledge exchange were central to many participants' experiences. They valued gaining insights into others' perspectives and research priorities. Some specifically noted the value of understanding wildfire impacts and management issues in the Southwest. The opportunity to learn from practitioners and experts in various fields was highlighted as a key takeaway.

The structure and organization of the event received praise. Participants commended the well-organized nature of the symposium and appreciated how different types of attendees (students, professors, practitioners) were given defined roles. The facilitation was noted for allowing each role to contribute meaningfully to the discussions.

The Horizon Scanning methodology itself was a point of interest. For some, this was their first experience with the approach, and they found the concept intriguing. However, there was a mix of opinions on its effectiveness, with one participant expressing concerns about its resource-intensive nature and suggesting potential improvements.

Specific discussions and topics stood out for some participants. Conversations about research trajectories, classifying urgency versus impact across different scales, and the opportunity to explore topics outside one's area of expertise were mentioned as memorable aspects of the event.

Overall, the responses indicate that the symposium was impactful in various ways, from the structured exercises to the informal interactions. The event seemed to successfully bring together diverse perspectives and foster new ideas and potential collaborations. Participants valued the opportunity to engage with wildfire restoration issues from multiple angles, highlighting the symposium's effectiveness in promoting interdisciplinary dialogue and knowledge sharing.

## Participant Feedback

When asked for suggestions to improve future TN workshops and symposia, the responses fell into four broad categories:

### **Scheduling and Structure:**

- Schedule keynotes during regular work hours or provide virtual options
- Consider lightening the content load for the first day
- Allocate more time for activities on day one and consider ending earlier on day two
- Use a slightly bigger room
- Include more breaks
- Consider including field trips or site visits

### **Clear Communication and Objectives:**

- Clearly communicate session objectives, intended outcomes, and their alignment with activities in advance and at the event
- Provide clear next steps and plans for outcomes
- Offer more clarity on what transdisciplinary research looks like

### **Facilitation and Activities:**

- Continue to hire professional facilitators
- Reconsider the effectiveness or provide more structure for the StoryMap activity
- Create more opportunities for small, topic-specific group discussions
- Allow time for groups to draft research statements

### **Inclusivity and Networking:**

- Improve integration of newcomers and foster a more inclusive environment
- Balance structured activities with informal networking opportunities
- Increase participation from community partners