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# Listening Sessions

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## Tribal Engagement and Indigenous-Led Public Health Disaster Research

<https://hazards.colorado.edu/research/public-health-disaster/listening-sessions>

### Listening Session 2 Report: Disaster Impacts and Capabilities of Indigenous Communities

June 13, 2023, 1:00 – 2:00 PM MDT

**Notetakers and Report Authors:** Shelby Ross and Melissa Villarreal

**Report Reviewers:** Musabber Ali Chisty, Brigid Mark, and Lori Peek

**Audience for this Report:** This report is prepared for the Centers for Disease Control and Prevention by the Hazards Center at the University of Colorado Boulder.

#### Report Outline:

- I. Listening Session 2 – Key Takeaway
- II. Listening Session 2 – Session Overview
- III. Appendix A: Listening Session 2 – Table of Registrants
- IV. Appendix B: Listening Session 2 – Zoom Session Participant List
- V. Appendix C: Listening Session 1 – Zoom Chat
- VI. Appendix D: Resources

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#### I. Listening Session 2 – Key Takeaways:

During this second session, participants engaged in discussion of the health impacts of disasters for Indigenous communities. Lessons we learned from the participants that could inform future research efforts, funding streams, or other activities included:

- Indigenous communities are impacted by a variety of natural hazards, which lead to several health consequences. These include direct impacts, such as decrease in access to healthcare for vulnerable groups, trauma and post-traumatic stress for disaster survivors, and declining air quality and exacerbation of respiratory diseases, as well as indirect impacts, such as displacement from traditional homelands, rising sea temperatures and harmful algal blooms, and disruption to diets.
- Indigenous participants stressed the need for Indigenous sovereignty. In the previous session, many expressed a concern with ensuring research done with Indigenous communities guarantees data sovereignty. In this session, Indigenous participants stressed that losing access to traditional food sources and cultural resources reduces Indigenous sovereignty. One participant also emphasized that there needs to be the creation of a

subsistence community within Indigenous populations. The purpose of a subsistence community would be for Indigenous populations to navigate hazard impacts and health challenges together. In their words, it is important for Indigenous communities to learn how to navigate these issues themselves.

- Disasters have impacted Indigenous communities' ability to engage in traditional, culturally significant practices. Traditional plans are dying due to extreme weather. Hunting and fishing are also being impacted. Natural food sources are critical for Indigenous populations, without which they cannot prepare traditional meals. Extreme weather is also affecting elders' abilities to attend traditional ceremonies. Natural hazards, including wildfires and flooding due to sea-level rise, are disrupting traditional sites, such as burials, in Indigenous communities.

Some of the key lessons that we learned, as conveners, included:

- As with this first session, although this session was geared toward Indigenous community members and professionals, most attendees were non-Indigenous. When we went into small break out rooms as planned, participants brought this issue to our attention. They expressed discomfort at being placed in rooms without Indigenous people to discuss issues that were impacting the Indigenous community. We changed our plans and instead decided to close all breakout rooms and discuss as a large group. By doing this, the few Indigenous community members and professionals, as well as those that work closely with Indigenous communities, were able to center their experiences and knowledge in the discussion. This was taken into consideration when planning our next three listening sessions and highlights an important factor to consider when planning future events. It also showed us the importance of gathering specific details from attendees, such as who is an Indigenous community member or professional and who works closely with Indigenous communities.

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## II. Listening Session 2 - Session Overview

### Introduction to Listening Session 2

For this second session in the series, 96 people registered (see **Appendix A** for full list of registrants) and 28 people attended and participated (see **Appendix B** for full list of participants). The second listening session began with a land [acknowledgment](#) and a short introduction to the session's theme and guiding questions. Participants were then asked to join a [Jamboard](#) to do a "test run," particularly for the benefit of new participants that were not in attendance during the first session. The question during this test run was "Tell us about yourself." Participants placed names and affiliations into the Jamboard.

### Group Discussion

After the "test run," we placed participants into six breakout rooms. However, some participants rightly expressed some discomfort at being placed in rooms without Indigenous people to discuss issues that were impacting the Indigenous community. As such, we pivoted and instead kept everyone in the main room so that we could hear from those who represent Indigenous communities or had experience working closely with Indigenous communities and Tribes. Everyone seemed happy with this choice.

We shared another [Jamboard](#) (originally meant for one of the breakout rooms) and encouraged participants to answer the main guiding questions in the Jamboard or via Zoom chat. The questions for this session were 1) *What are the types of disasters that have been experienced in the*

Indigenous/Native American communities that you work with/are from?, 2) What were the direct and indirect health impacts experienced?, and 3) How have disasters impacted the community's ability to practice traditional culturally significant practices? The summary of responses from the [Jamboard](#), large group discussion, and chat (see **Appendix C** for Zoom chat transcript) are below. Some participants also shared resources in the chat (see **Appendix D** for a list of resources).

1) *What are the types of disasters that have been experienced in the Indigenous/Native American communities that you work with/are from?*

Some of the disasters that participants identified through the Jamboard and chat which are affecting Indigenous communities and Tribal areas include floods related to coastal erosion, tornadoes, pandemics, heatwaves, the "devastatingly high" death rates from COVID-19 among Indigenous communities, wastewater issues, hurricanes, freezes, droughts, wildfires, and wildfire smoke.

2) *What were the direct and indirect health impacts experienced?*

The participants discussed both direct and indirect impacts of these disasters on Indigenous communities and Tribal areas in the Jamboard and the chat. The impacts mentioned include health impacts from flood mitigation attempts, difficulties with land conservation, potential displacement from traditional home lands on the shoreline, anguish and declining mental health, trauma and post-traumatic stress for disaster survivors and disaster workers responding to help, sediment in floodwater eroding coral reef as a result of heavy rains combined with drought, erosion of traditional food sources and cultural resources, displacement and loss of property, decrease in access to healthcare for vulnerable groups such as elders and the young, decrease of crop output for Indigenous farmers, evacuation of vulnerable groups, declining air quality and exacerbation of respiratory diseases, inability to do subsistence hunting or fishing, and intensification of poverty in Navajo Nation.

Other concerns raised in the Jamboard and the chat include disaster preparedness of Indigenous communities and questions about what qualifies as a "natural disaster" vs what qualifies as "higher than normal run-off." One participant simply stated they do not have much experience in public health disaster research impacts for Indigenous communities, but they are "very happy and excited to listen and learn!"

We then transitioned to a large group discussion where participants could elaborate on these comments. One issue discussed in the large group discussion was sea-level rise and rising sea temperatures. For one reservation, any year that there is above average snowfall, the area floods. This type of flooding happens every two or three years, yet the reservation has not seen any response to these disasters. Relatedly, temperature is rising in water, which is influencing harmful algal blooms along several coastal communities. These algae, which form the lower base of the aquatic food web, impacts the aquatic food web, and is resulting in elevated toxin levels within the traditional aquatic foods of Coastal Tribes/ Indigenous communities. A participant stressed that more samples must be taken regularly to learn more about this issue. While there are conversations about moving away from coasts due to sea level rise and rising sea temperatures, these areas are culturally significant and some of the oldest homeland for these communities. It is not easy to "just move away" because these are Indigenous peoples' homelands and their lifestyles (fishing and hunting) depend on this land. Losing resources like aquatic life and the erosion of the land is like "losing your Indigenous identity." Instead, participants discussed the need to do cautious outreach to both Indigenous residents of these areas and to Indigenous people

who have an interest in mitigating these issues to create a subsistence community; it is important for Indigenous communities to learn how to navigate these issues themselves.

Participants were also very worried about the effects of wildfires and wildfire smoke. One participant is preparing to conduct focus groups with a research team in Alaska after wildfire smoke started affecting Indigenous families and led to evacuations. In Montana, Native populations are unable to do controlled fires based on Indigenous knowledge due to non-Native people moving into these areas and not wanting them, leading to more wildfires and negative impacts.

3) *How have disasters impacted the community's ability to practice traditional culturally significant practices?*

One issue raised by participants is the destruction of traditional foods. One participant discussed a large wildfire in Northern Montana and how it destroyed a major area for gathering juneberries on a reservation. Other traditional plants are dying due to extreme weather. These affect Indigenous communities by destroying food that is utilized in traditional meals and jeopardizes food sovereignty. It also impacts the diets of Indigenous peoples. Natural food sources are critical for these populations.

A second issue is that the extreme weather is affecting elders' abilities to attend traditional ceremonies, which are usually held outside. Although extreme heat is not something new for Indigenous communities, it is "changing" and worsening. In fact, one participant said, someone died at one of the ceremonies, showing the negative impact of the changing climate, particularly of extreme heat. As such, participants noticed that older people are less and less able to join these ceremonies, missing social involvement, which used to happen through these ceremonies, or that it is taking longer to recover if they do attend.

Further, sea-level rise is exposing burial sites for Native Hawaiian communities because people are traditionally buried in sand dunes that are disrupted during flooding. Although this is a major issue, communities are not in agreement about changing burial practices. Like with flooding, culturally significant sites (burial sites and otherwise) are damaged or become less accessible due to wildfires.

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### III. Appendix A: Listening Session 2 - Table of Registrants

Name	Email
Jennifer Eisele	<a href="mailto:jeisele@beyondtoxics.org">jeisele@beyondtoxics.org</a>
Dayea Shim	<a href="mailto:dayea@hawaii.edu">dayea@hawaii.edu</a>
Lori Peek	<a href="mailto:lori.peek@colorado.edu">lori.peek@colorado.edu</a>
Mary Hannah Smith	<a href="mailto:smithmh@uw.edu">smithmh@uw.edu</a>
Meghan Mordy	<a href="mailto:memo4153@colorado.edu">memo4153@colorado.edu</a>

<b>Nancy McPherson</b>	<a href="mailto:nancy.m.mcpherson@hawaii.gov">nancy.m.mcpherson@hawaii.gov</a>
<b>Brenda Nowatak</b>	<a href="mailto:kokhanoktrp@gmail.com">kokhanoktrp@gmail.com</a>
<b>Carson MacPherson-Krutsky</b>	<a href="mailto:carson.m-k@colorado.edu">carson.m-k@colorado.edu</a>
<b>Vanessa Jackson</b>	<a href="mailto:vanessa.jackson@oem.oregon.gov">vanessa.jackson@oem.oregon.gov</a>
<b>Shelby Ross</b>	<a href="mailto:shelby.ross@colorado.edu">shelby.ross@colorado.edu</a>
<b>Jenna Stathopoulos</b>	<a href="mailto:Jenna.stathopoulos@portlandoregon.gov">Jenna.stathopoulos@portlandoregon.gov</a>
<b>Keli M</b>	<a href="mailto:keli@kelleynonprofitconsulting.com">keli@kelleynonprofitconsulting.com</a>
<b>Robbie Hood</b>	<a href="mailto:robbiehood@bluethunderbirdllc.com">robbiehood@bluethunderbirdllc.com</a>
<b>Victoria LaMar-Haas</b>	<a href="mailto:victoria.lamar-haas@caloes.ca.gov">victoria.lamar-haas@caloes.ca.gov</a>
<b>Michele Pinkham</b>	<a href="mailto:mpinkham@naranorthwest.org">mpinkham@naranorthwest.org</a>
<b>Zhen Cong</b>	<a href="mailto:zcong@uab.edu">zcong@uab.edu</a>
<b>Olajumoke Akinrimisi</b>	<a href="mailto:Olajumoke.Akinrimisi@vdem.virginia.gov">Olajumoke.Akinrimisi@vdem.virginia.gov</a>
<b>Cristy Munoz</b>	<a href="mailto:cristym@unitedway-pdx.org">cristym@unitedway-pdx.org</a>
<b>Shinwoo Choi</b>	<a href="mailto:shinwoo.choi11@gmail.com">shinwoo.choi11@gmail.com</a>
<b>Anne Garland</b>	<a href="mailto:awhgarland@yahoo.com">awhgarland@yahoo.com</a>
<b>Andrew Cowell</b>	<a href="mailto:cowellj@colorado.edu">cowellj@colorado.edu</a>
<b>Diana Restrepo Osorio</b>	<a href="mailto:drestrepo-osorio@usgs.gov">drestrepo-osorio@usgs.gov</a>
<b>Gary Collins</b>	<a href="mailto:garrettcollins112@gmail.com">garrettcollins112@gmail.com</a>
<b>Jen Uhler</b>	<a href="mailto:jen.uhler@summitcountyco.gov">jen.uhler@summitcountyco.gov</a>
<b>Sherry Young</b>	<a href="mailto:Youngsc@cdmsmith.com">Youngsc@cdmsmith.com</a>
<b>Paola Rivera Gonzalez</b>	<a href="mailto:priveragonzalez@contractor.usgs.gov">priveragonzalez@contractor.usgs.gov</a>
<b>Eugene Barnard</b>	<a href="mailto:eabarnard@prodigy.net">eabarnard@prodigy.net</a>

<b>Lavell Craven</b>	<a href="mailto:Lavell.Craven@Yahoo.com">Lavell.Craven@Yahoo.com</a>
<b>Janna Black</b>	<a href="mailto:Jblack30@uwyo.edu">Jblack30@uwyo.edu</a>
<b>Jolie Breeden</b>	<a href="mailto:Jolie.breeden@colorado.edu">Jolie.breeden@colorado.edu</a>
<b>Hannah Hoffmann</b>	<a href="mailto:hannah.hoffmann@redcross.org">hannah.hoffmann@redcross.org</a>
<b>Hyejeong Park</b>	<a href="mailto:park@irides.tohoku.ac.jp">park@irides.tohoku.ac.jp</a>
<b>Cynthia Sanders</b>	<a href="mailto:CSanders@cmn.edu">CSanders@cmn.edu</a>
<b>Oral Saulters</b>	<a href="mailto:osaulter@gmail.com">osaulter@gmail.com</a>
<b>Jesse Wesolek</b>	<a href="mailto:jwesolek@baymills.org">jwesolek@baymills.org</a>
<b>Christopher Schubert</b>	<a href="mailto:schubert@usgs.gov">schubert@usgs.gov</a>
<b>Anderson de Figueiredo</b>	<a href="mailto:adefigue@uwyo.edu">adefigue@uwyo.edu</a>
<b>Traci Olson</b>	<a href="mailto:onlygroomingkitties@gmail.com">onlygroomingkitties@gmail.com</a>
<b>Deniz Cengiz</b>	<a href="mailto:dcengiz@ideo.com">dcengiz@ideo.com</a>
<b>Lara Stafford</b>	<a href="mailto:lara_stafford@optum.com">lara_stafford@optum.com</a>
<b>Christine Benally</b>	<a href="mailto:CHRISTINE.BENALLY@HHS.GOV">CHRISTINE.BENALLY@HHS.GOV</a>
<b>Julie Raymond</b>	<a href="mailto:jraymond@pgst.nsn.us">jraymond@pgst.nsn.us</a>
<b>Joe Chandler</b>	<a href="mailto:joe.chandler@fema.dhs.gov">joe.chandler@fema.dhs.gov</a>
<b>Marija Verner</b>	<a href="mailto:marija.verner@yale.edu">marija.verner@yale.edu</a>
<b>Lauren Dent</b>	<a href="mailto:ldent@usgs.gov">ldent@usgs.gov</a>
<b>Deb Wetherill</b>	<a href="mailto:deborah.wetherill@state.co.us">deborah.wetherill@state.co.us</a>
<b>Jorge Lopez</b>	<a href="mailto:jorge_lebeau@hotmail.com">jorge_lebeau@hotmail.com</a>
<b>Maureen Nso</b>	<a href="mailto:maureenso24@gmail.com">maureenso24@gmail.com</a>
<b>Yiwen Wu</b>	<a href="mailto:yiwen@ku.edu">yiwen@ku.edu</a>

<b>Katie Huang</b>	<a href="mailto:katie.huang@disasterphilanthropy.org">katie.huang@disasterphilanthropy.org</a>
<b>Khondhaker Al Momin</b>	<a href="mailto:momin@ou.edu">momin@ou.edu</a>
<b>Kathryn Curtis</b>	<a href="mailto:kathryn.curtis@fema.dhs.gov">kathryn.curtis@fema.dhs.gov</a>
<b>Christinia Eala</b>	<a href="mailto:christiniawin@yahoo.com">christiniawin@yahoo.com</a>
<b>laura caplins</b>	<a href="mailto:lcaplins@piikanilodge.org">lcaplins@piikanilodge.org</a>
<b>Rebecca Blackwood</b>	<a href="mailto:rebeccablackwood75@gmail.com">rebeccablackwood75@gmail.com</a>
<b>Malini Roy</b>	<a href="mailto:roy.malini91@gmail.com">roy.malini91@gmail.com</a>
<b>Laurel Schafer</b>	<a href="mailto:lschafer@co.montezuma.co.us">lschafer@co.montezuma.co.us</a>
<b>Suzanne Malcolm</b>	<a href="mailto:suzanne.malcolm@fema.dhs.gov">suzanne.malcolm@fema.dhs.gov</a>
<b>Michelle Clark</b>	<a href="mailto:mclark@spthb.org">mclark@spthb.org</a>
<b>Christine Gibb</b>	<a href="mailto:Cgibb2@uottawa.ca">Cgibb2@uottawa.ca</a>
<b>Maki Koyama</b>	<a href="mailto:maki.gifu@gmail.com">maki.gifu@gmail.com</a>
<b>Cynthia Rose Harris</b>	<a href="mailto:c4harris@yahoo.com">c4harris@yahoo.com</a>
<b>Amanda Quarshie</b>	<a href="mailto:quarshie@iastate.edu">quarshie@iastate.edu</a>
<b>Farah Mneimneh</b>	<a href="mailto:mneimneh@iastate.edu">mneimneh@iastate.edu</a>
<b>Waleska Sanabria León</b>	<a href="mailto:waleska_sanabria@pucpr.edu">waleska_sanabria@pucpr.edu</a>
<b>Liz Gall</b>	<a href="mailto:lgall@iasolutions.com">lgall@iasolutions.com</a>
<b>Simplice Feikoumo</b>	<a href="mailto:sfeikoumo@gmail.com">sfeikoumo@gmail.com</a>
<b>Logan Gerber-Chavez</b>	<a href="mailto:lmgc@udel.edu">lmgc@udel.edu</a>
<b>Dawn Essenmacher</b>	<a href="mailto:dawn.essenmacher.2@fema.dhs.gov">dawn.essenmacher.2@fema.dhs.gov</a>
<b>Maia Foster-Sanchez</b>	<a href="mailto:maia@geccanada.ca">maia@geccanada.ca</a>
<b>Chelsea LeNoble</b>	<a href="mailto:Chelsea.lenoble@ucf.edu">Chelsea.lenoble@ucf.edu</a>

<b>Alain Philippe Binyet Bi Mbog</b>	<a href="mailto:omepcpcameroon@gmail.com">omepcpcameroon@gmail.com</a>
<b>Laura Olson</b>	<a href="mailto:lauralynolson@gmail.com">lauralynolson@gmail.com</a>
<b>Bill Steele</b>	<a href="mailto:wsteele@uw.edu">wsteele@uw.edu</a>
<b>Heather Beffa</b>	<a href="mailto:Heather@craftemergency.org">Heather@craftemergency.org</a>
<b>Consuelo Crow</b>	<a href="mailto:consuelo.crow2@seattle.gov">consuelo.crow2@seattle.gov</a>
<b>Ranjan datta</b>	<a href="mailto:rdatta@mtroyal.ca">rdatta@mtroyal.ca</a>
<b>Kelsey Nicholson</b>	<a href="mailto:knicholson2@alaska.edu">knicholson2@alaska.edu</a>
<b>Kathleen Moloney</b>	<a href="mailto:kmoloney@uw.edu">kmoloney@uw.edu</a>
<b>Cat Hartwell</b>	<a href="mailto:chartwel@uw.edu">chartwel@uw.edu</a>
<b>Heidi Carlin</b>	<a href="mailto:heidi.carlin@fema.dhs.gov">heidi.carlin@fema.dhs.gov</a>
<b>Caitlin Langmead</b>	<a href="mailto:clangmead@synergy-dr.com">clangmead@synergy-dr.com</a>
<b>Candy Cates</b>	<a href="mailto:candy.k.cates@oha.oregon.gov">candy.k.cates@oha.oregon.gov</a>
<b>Aubrey McAllister</b>	<a href="mailto:amcallister@usgs.gov">amcallister@usgs.gov</a>
<b>Dayea Shim</b>	<a href="mailto:dshim@hhf.com">dshim@hhf.com</a>
<b>Crystal Luce</b>	<a href="mailto:Crystal.luce@ucdenver.edu">Crystal.luce@ucdenver.edu</a>
<b>Heather Champeau</b>	<a href="mailto:hech2276@colorado.edu">hech2276@colorado.edu</a>
<b>John Wiener</b>	<a href="mailto:john.wiener@colorado.edu">john.wiener@colorado.edu</a>
<b>ray foxworth</b>	<a href="mailto:rfoxworth@hluce.org">rfoxworth@hluce.org</a>
<b>Johanna Blake</b>	<a href="mailto:Jmtblake@usgs.gov">Jmtblake@usgs.gov</a>
<b>Mary Painter</b>	<a href="mailto:mary.painter@colorado.edu">mary.painter@colorado.edu</a>
<b>Jeffrey Gunderson</b>	<a href="mailto:jeffrey.gunderson@gmail.com">jeffrey.gunderson@gmail.com</a>
<b>Tracy Thomas</b>	<a href="mailto:tct5@cdc.gov">tct5@cdc.gov</a>



<b>Rachel Adams</b>	<a href="mailto:rachel.adams-1@colorado.edu">rachel.adams-1@colorado.edu</a>
<b>Meghan Mordy</b>	<a href="mailto:meghan.mordy@colorado.edu">meghan.mordy@colorado.edu</a>
<b>Jennifer Tobin</b>	<a href="mailto:Jennifer.L.tobin@colorado.edu">Jennifer.L.tobin@colorado.edu</a>

#### **IV. Appendix B: Listening Session 2 – Zoom Session Participants List**

- |                                     |                           |
|-------------------------------------|---------------------------|
| 1. Melissa Villarreal (Facilitator) | 15. Jennifer Tobin        |
| 2. Shelby Ross (Facilitator)        | 16. Jolie Breeden         |
| 3. Lori Peek (PI)                   | 17. Keli M                |
| 4. Anderson de Figueiredo           | 18. Marija Verner         |
| 5. Andrew Cowell                    | 19. Mary Hannah Smith     |
| 6. Carson MacPherson-Krutzky        | 20. Mary Painter          |
| 7. Cat Hartwell                     | 21. Meghan Mordy          |
| 8. Christopher Schubert             | 22. Michele A. Pinkham    |
| 9. Cynthia Sanders                  | 23. Paola Rivera Gonzalez |
| 10. Dayea Shim                      | 24. Rachel Adams          |
| 11. Eugene Barnard                  | 25. Suzanne Malcolm       |
| 12. Hannah Hoffmann                 | 26. Tracy Thomas          |
| 13. Heather Champeau                | 27. Vanessa Jackson       |
| 14. Heidi Carlin                    | 28. Zhen Cong             |

#### **V. Appendix C: Listening Session 2 - Zoom Chat**

14:01:58 From Heidi Carlin to Everyone:

I'm new here!

14:02:14 From Melissa Villarreal, Natural Hazards Center (she/her) to Everyone:

Welcome everyone!

14:02:22 From Hannah Hoffmann to Everyone:

Hi there, Hannah Hoffmann, Red Cross

14:02:24 From Zhen Cong to Everyone:

My name is Zhen Cong, UAB, School of Public Health

14:02:26 From Melissa Villarreal, Natural Hazards Center (she/her) to Everyone:

I am Melissa Villarreal, Natural Hazards Center 😊

14:02:27 From Mary Hannah Smtih to Everyone:

Hi everyone, my name is Mary Hannah Smith. I'm a research coordinator at the University of Washington

14:02:31 From Jen Uhler to Everyone:

Jen, I work at Summit County Planning Department

14:02:33 From Heidi Carlin to Everyone:

Hi, I'm Heidi Carlin. I work as an outreach specialist in FEMA headquarters, but I live in Golden, Colorado.

14:02:44 From Suzanne Malcolm to Everyone:

Hi, my name is Suzanne. I wasn't on the last call. I work for FEMA.

14:02:45 From Laurel Schafer to Everyone:

Laurel Schafer- Montezuma County Public Health Assistant Director

14:02:47 From Cat Hartwell to Everyone:

New Here. Cat Hartwell, Research Coordinator at University of Washington and working with the new Public Health Extreme Event Research network which is part of NHERI CONVERGE

14:02:51 From Lori Peek to Everyone:

Hi! I'm a returnee! Lori Peek, Natural Hazards Center (calling from an airplane dear so listening!)

14:03:05 From Jennifer Tobin to Everyone:

Jennifer Tobin, Natural Hazards Center, University of Colorado Boulder

14:03:49 From Mary Painter to Everyone:

Hello! I'm Mary Angelica Painter from the Natural Hazards Center

14:05:50 From Melissa Villarreal, Natural Hazards Center (she/her) to Everyone:

To learn more about the listening session series, you can visit:

<https://hazards.colorado.edu/research/public-health-disaster/listening-sessions>

14:06:07 From Jolie Breeden to Everyone:

Jolie Breeden. More Hazards Center! :-)

14:06:13 From Shelby Ross to Everyone:

<https://jamboard.google.com/d/1wx1DIQN9EasM04yizG4h0HPoQ2c8BQqKMz28fIAIWN4/edit?usp=sharing>

14:06:40 From Carson MacPherson-Krutsky to Everyone:

Carson M-K, Natural Hazards Center!

14:06:40 From Shelby Ross to Everyone:

To access the JamBoard, click this link: [to fill in]. You do not have to sign in. You will find the "sticky note" function on the left-hand side toolbar. It is the fourth icon down. To post a sticky note on the JamBoard, you can click that icon and type in your comment in the pop-up box, then click save. Your sticky note will then be added to the JamBoard. You can do this as many times as you'd like to add different responses.

14:15:56 From Melissa Villarreal, Natural Hazards Center (she/her) to Everyone:

To access the JamBoard, click this link:

[https://jamboard.google.com/d/1yJqXZcycJIEgTlcObuXsZCzDCy3auWQaWsd\\_5GVIRvc/edit?usp=sharing](https://jamboard.google.com/d/1yJqXZcycJIEgTlcObuXsZCzDCy3auWQaWsd_5GVIRvc/edit?usp=sharing). You do not have to sign in. You will find the "sticky note" function on the left-hand side toolbar. It is the fourth icon down. To post a sticky note on the JamBoard, you can click that icon and type in your comment in the pop-up box, then click save. Your sticky note will then be added to the JamBoard. You can do this as many times as you'd like to add different responses.

14:21:56 From Melissa Villarreal, Natural Hazards Center (she/her) to Everyone:

To access the JamBoard, click this link:

[https://jamboard.google.com/d/1bksFPYSShhJxV\\_QYQgldiFh6j\\_HNQzOWs5Szj6qRgZ8/edit?usp=sharing](https://jamboard.google.com/d/1bksFPYSShhJxV_QYQgldiFh6j_HNQzOWs5Szj6qRgZ8/edit?usp=sharing). You do not have to sign in. You will find the "sticky note" function on the left-hand side toolbar. It is the fourth icon down. To post a sticky note on the JamBoard, you can click that icon and type in your comment in the pop-up box, then click save. Your sticky note will then be added to the JamBoard. You can do this as many times as you'd like to add different responses.

14:27:01 From Shelby Ross to Everyone:

<https://jamboard.google.com/d/1wBbDoZhXDEGAAbdClIdlQrllrmzYpH6GdPgzyGJmnbR0/edit?usp=sharing>

14:28:26 From Melissa Villarreal, Natural Hazards Center (she/her) to Everyone:

You do not have to sign in. You will find the "sticky note" function on the left-hand side toolbar. It is the fourth icon down. To post a sticky note on the JamBoard, you can click that icon and type in your comment in the pop-up box, then click save. Your sticky note will then be added to the JamBoard. You can do this as many times as you'd like to add different responses.

14:29:32 From Zhen Cong to Everyone:

How about we add our names to the sticky notes?

14:30:22 From Heather Champeau to Melissa Villarreal, Natural Hazards Center (she/her) (Direct Message):  
Great pivot. You're doing a wonderful job 😊

14:30:41 From Andrew Cowell to Everyone:  
I can't seem to post in the jam board. Disasters over the last 5-10 years: floods, tornadoes, COVID, fires. Question is what qualifies as 'natural disaster' and what qualifies as 'higher than normal run-off'?

14:31:23 From Melissa Villarreal, Natural Hazards Center (she/her) to Shelby Ross (Direct Message):  
Woo! Okay this is a great lesson for moving forward. I think it's definitely best to stay in the big room now. In another minute, do you want to start sharing some of the responses in the sticky notes and in the chats and encouraging folks to come off mute to talk about them more?

14:31:51 From Olajumoke Akinrimisi to Everyone:  
To add to the board- Flooding, land conservation (run off from sunny day).

14:31:54 From Jolie Breeden to Everyone:  
Added Andrew!

14:34:39 From Anne Garland to Everyone:  
Are we using natural hazards or disasters? This is a contention about defining disasters as consequences of human actions which are usually related to the incident. That is why it is the Natural Hazards Center...Thanks.

14:34:45 From Melissa Villarreal, Natural Hazards Center (she/her) to Everyone:  
I stopped sharing so we can see each other!

14:39:56 From Jennifer Tobin to Everyone:  
Hi Anne, we should definitely be discussing disasters and not just natural hazards alone! Such an important distinction. Thank you!

14:44:50 From Melissa Villarreal, Natural Hazards Center (she/her) to Everyone:  
Thank you for sharing, Nancy and Keli

14:50:04 From Melissa Villarreal, Natural Hazards Center (she/her) to Everyone:  
Thank you for sharing all of that Anne. Is anyone else on the call doing research on this?

14:54:35 From Melissa Villarreal, Natural Hazards Center (she/her) to Everyone:  
Thank you, Mary!

14:54:43 From Anne Garland to Everyone:  
Harmful Algal Blooms <https://ahab.aaos.org/>

14:54:56 From Olajumoke Akinrimisi to Everyone:  
Reacted to "Harmful Algal Blooms..." with 👍

14:55:12 From Keli M to Everyone:  
Where will the recording be posted? (sorry if this was answered I missed the beginning)

14:55:31 From Keli M to Everyone:  
Thank you!

14:55:41 From Jolie Breeden to Everyone:  
Thank for sharing Andrew, really enlightening perspectives from your work.

14:55:42 From Mary Painter to Everyone:  
Thank you so much, Shelby and Melissa!

14:55:45 From Hannah Hoffmann to Everyone:  
I actually enjoyed the big group chat so it worked out! Thank you!

14:55:52 From Carson MacPherson-Krutzky to Everyone:  
Thank you Shelby and Melissa for putting this together!

14:55:52 From Zhen Cong to Everyone:  
Thanks!

14:56:05 From Heidi Carlin to Everyone:  
Reacted to "I actually enjoyed t..." with ❤️

14:56:06 From Tracy Thomas to Everyone:

Is there a report for each session or one overall summary report?

14:56:07 From Anderson de Figueiredo to Everyone:

Thanks!

14:56:11 From Carson MacPherson-Krutsky to Everyone:

Reacted to "I actually enjoyed t..." with 👍

14:56:25 From Melissa Villarreal, Natural Hazards Center (she/her) to Everyone:

For recordings: <https://hazards.colorado.edu/research/public-health-disaster/listening-sessions>

14:56:38 From Cynthia Sanders to Everyone:

Mvto (Thank you)

14:56:43 From Olajumoke Akinrimisi to Everyone:

Reacted to "For recordings: http..." with ❤️

14:56:45 From Mary Painter to Everyone:

See y'all next week! ❤️

14:57:15 From Hannah Hoffmann to Everyone:

Thank you!

14:57:18 From Michele A Pinkham, NARA NW to Everyone:

qe'cii yew yew, Happy Pride!

14:57:27 From Vanessa Jackson to Everyone:

Thank you!!!

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## VI. Appendix D: Resources (Including Sessions 1 and 2)

Article links shared in chat:

- Carter, L., and Peek, L. 2016. "[Participation Please: Barriers to Tribal Mitigation Planning.](#)" Natural Hazards Center.
- Dent, L.A., Donatuto, J., Campbell, L. *et al.* [Incorporating Indigenous voices in regional climate change adaptation: opportunities and challenges in the U.S. Pacific Northwest.](#) *Climatic Change* **176**, 27 (2023). <https://doi.org/10.1007/s10584-023-03499-z>
- LeNoble, C., Naranjo, A., Shoss, M. *et al.* [Navigating a Context of Severe Uncertainty: The Effect of Industry Unsafety Signals on Employee Well-being During the COVID-19 Crisis.](#) *Occup Health Sci* (2023). <https://doi.org/10.1007/s41542-023-00155-x>

