



Social Science Extreme Events Research (SSEER) Virtual Forum – 2024 Tornadoes

Natural Hazards Center and CONVERGE
University of Colorado Boulder



NSF Award #1635593 and #1841338



Natural Hazards Center



CONVERGE



SSEER is a
 NSF-supported **global network of social scientists** who study hazards and disasters. SSEER **identifies** researchers to develop the social science workforce and **coordinates** social science research teams in large-scale disasters to **advance scholarship** on the root causes and human consequences of extreme events.



1,699 SOCIAL SCIENTISTS
 HAVE JOINED SINCE 2018

converge.colorado.edu/research-networks/sseer/

Purpose of the Virtual Forum Series

1. Encourage *communication, coordination, and collaboration* among the research community and in partnership with practitioners
2. Engage in *resource sharing*
3. Learn about *launched or planned research*
4. Establish *research priorities*
 - Open and urgent questions
 - Ethical and cultural considerations
 - Research access protocols



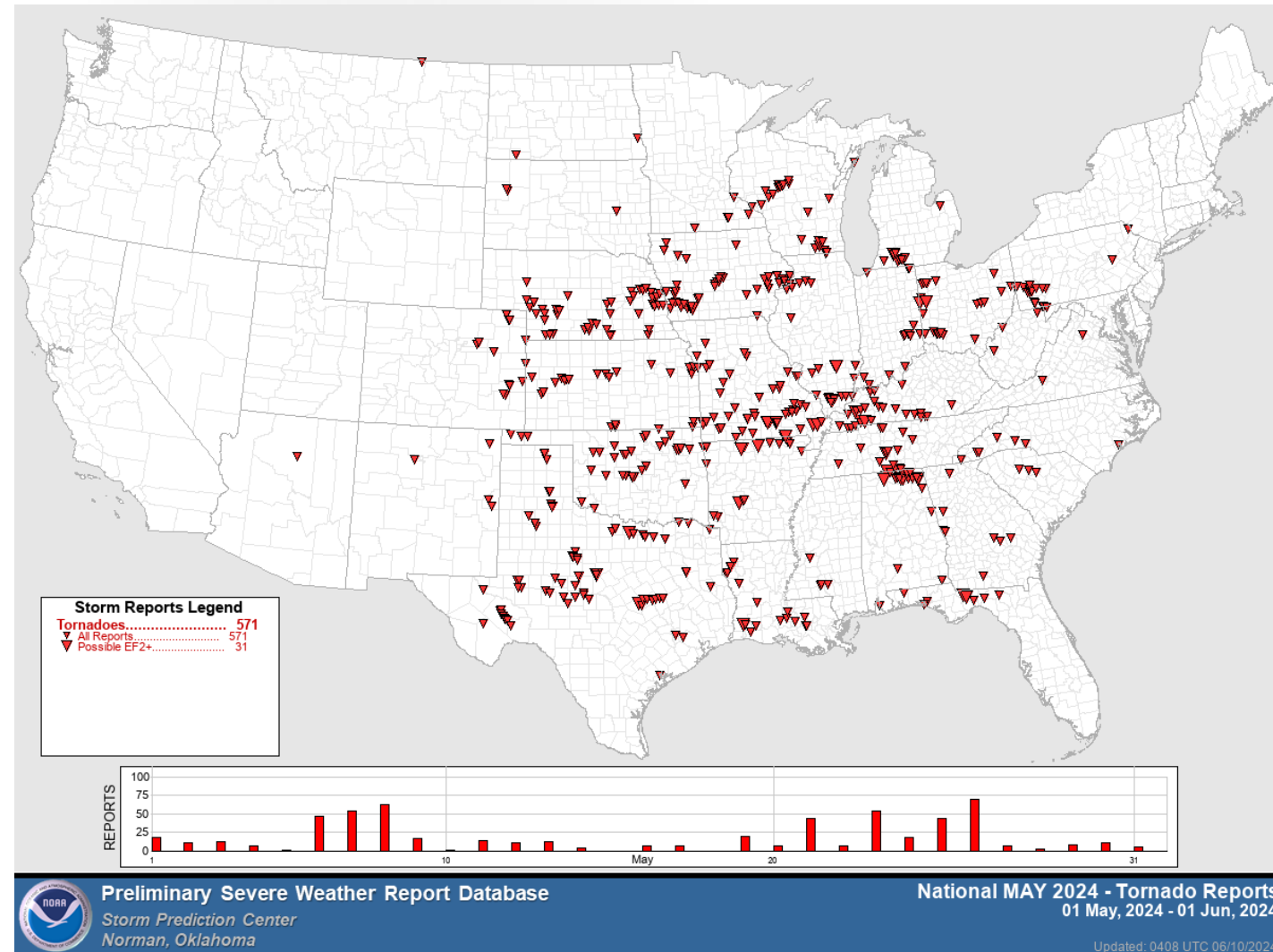
University of Colorado Boulder



Each year, **~1,200 tornadoes** touch down in the United States.

This year, according to preliminary data from NOAA's Storm Prediction Center, during May, there were **570 preliminary tornado reports**. This is **more than double** the 1991-2020 average of 268.4 tornadoes for the month of May.

This is also the highest number of tornadoes ever recorded in the U.S. during the month of May.



www.ncei.noaa.gov/access/monitoring/monthly-report/tornadoes/202405

en.wikipedia.org/wiki/Tornadoes_of_2024

AGENDA

1. Learn about the Weather Ready Research Award Program and review the current Tornado Ready Call for Proposals
2. Hear from social science researchers, meteorologists, and others who are planning to conduct or eager to support social science-led, tornado-focused research
3. Review available resources to support proposal writing and research



Weather Ready Research Award Program

- Made possible with the support of the National Oceanic and Atmospheric Administration (NOAA) Weather Program Office (WPO), National Weather Service (NWS), National Severe Storms Laboratory (NSSL), and National Science Foundation (NSF).
- **Six calls** to date:
 - Call 1: Weather Ready Research
 - Call 2: WRR Instrument and Data Publication
 - Call 3: Tornado Ready Quick Response Research
 - Call 4: Wildfire Ready Quick Response Research
 - Call 5: Flood Ready Research and Data Publication
 - Call 6: Tornado Ready Research and Data Publication**
- More information is available at:
hazards.colorado.edu/research/weather-ready-research/index



Call Overview: Tornado Ready Research and Data Publication

hazards.colorado.edu/research/weather-ready-research-tornados



This call will fund new **tornado research** and the **publication of tornado-focused datasets and research instruments.**

We will prioritize proposals focused on places that **house or serve socially marginalized populations**, such as schools, nursing homes, correctional facilities, or manufactured homes.



Tornado Ready Research and Data Publication

hazards.colorado.edu/research/weather-ready-research-tornados

- **Track 1: Up to \$15,000**
 - This track supports research on activities that take place **before a tornado occurs** (e.g., forecasting, risk perception, institutional decision making, preparedness, and mitigation).
- **Track 2: Up to \$15,000**
 - This track supports research that focuses on **a specific tornado event** (e.g., how forecasts and warnings were received and understood, sheltering or evacuation behavior, tornado impacts, displacement, rebuilding, or recovery). **For this track, the tornado event to be studied must have occurred on or after January 1, 2023.**
- **Track 3: \$1,250 or \$2,500**
 - This track will support **tornado research instrument and data publication** on DesignSafe, the NSF-funded cyberinfrastructure for data management.
 - Examples: converge.colorado.edu/data/data-ambassadors/ and hazards.colorado.edu/research/weather-ready/instrument-and-data-publication



Tornado Ready Research and Data Publication

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Proposal Deadline:

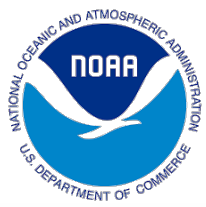
**5:00 p.m. MDT on
Friday, August 9,
2024**



University of Colorado Boulder

SSEER Virtual Forum

Motivation for the Special Call



Proposal Submission

hazards.colorado.edu/research/weather-ready-research-tornados

- **Track 1 & 2 Proposals**
 - Fill in all fields of the online form
 - Download the provided template
 - Submit a 5-page, single-spaced proposal
 - Follow all specifications detailed on the submission page.
- **Track 3 Proposals**
 - Fill in all fields of the online form
- **Due Date for All Proposals**
 - **5:00 p.m. MDT on Friday, August 9, 2024.**



Focus Areas

hazards.colorado.edu/research/weather-ready-research-tornados

This call will prioritize proposals focused on settings that serve or house socially marginalized populations, such as:

- Schools or Childcare Centers
- Hospitals
- Nursing Homes or Other Eldercare Facilities
- Faith-Based Organizations
- Correctional Facilities
- Mobile and Manufactured Homes

See the website for example **research questions** of interest.



Key Considerations

Clear Timeframe

- Make sure your plans for data collection, analysis, publication, and report writing are feasible and included in **clear timeline** in your proposal.

Award Funding

- Researchers may need to **begin collecting data prior to funding being issued**. We cannot extend deliverable deadlines for delays due to funding.
- IRB approval or exemption must be submitted **before data collection** can begin.
- The **lead investigator**, as designated in the proposal, must be from an **academic institution** based in a **U.S. state, U.S. territory, or a Tribal Nation**.
- Award funding can be distributed to **up to three people**, including the lead investigator, co-leads, project assistants, or other collaborators.
- Payments will be sent **directly to the award recipients** (NOT their university).
- Awardees will be solely **responsible for all tax reporting and ramifications**. The University of Colorado Boulder will report payments to taxing jurisdictions.



Project Deliverables

- **Track 1 & 2 Awardees:**

- Submit a **20-page, double-spaced report** summarizing research findings by no later than **February 23, 2025**.
- Prior to submission, please download the **report template** and closely follow the **submission guidelines**:
hazards.colorado.edu/research/weather-ready-research/report-guidelines

- **Track 3 Awardees:**

- Publish data and/or research instrument on DesignSafe and submit a [Data Publication Checklist](#) and a [Publication Template](#) to the Natural Hazards Center by no later than **November 23, 2024**.

Weather Ready Research Reports

The Weather Ready Research Award program supports social science and interdisciplinary innovation in disaster research, prioritizes novel areas of study that require the collection of ephemeral data, and provides training and mentoring for conducting ethical and rigorous hazards and disaster research. Weather Ready Research reports capture perishable data on recent events. All analysis is preliminary.

WR10 | Sheltering Behavior During the December 2021 Tornado in Mayfield, Kentucky (2023)

John Mathias, Brandi Skipalis, Sanoop Valappanandi, Tisha Holmes, David Lafontant, Eren Erman Ozguven, Onur Alisan, Mehmet Kaya, Tyler McCreary, Efraim Roxas, Austin Bush

WR9 | Risk Messaging During Syndemics: Hurricane Ida (2023)
Lauren Clay, Alex Greer, Haley Murphy, and Hao

WR8 | The Effect of Experiencing Disaster Losses on Preparedness Behaviors (2023)
Rowena Rowie Kirby-Straker and Leslie Straker

WR7 | Burned Area Emergency Response Team Effectiveness During Southwestern Monsoon Seasons (2023)
Catrin Edgeley, Noah Haarmann, and Anna Jarman

WR6 | The Role of 360-Degree Videos in Wildfire Risk Assessment
Na Yu and Lucy Atkinson

WR5 | Risk Communication Planning: Learning From Homelessness (2022)
Jamie Vickery, Nicole Errett, Ann Bostrom, William

WR4 | Learning From Hurricane Laura's Near-Miss: Implications for Uncertainty (2022)
David Retchless and Ashley Ross

Report Submission Guidelines: Weather Ready Research



These guidelines are for use by researchers who were funded as part of a [Special Call for Weather Ready Research](#).

Overview

Weather Ready Awardees will submit a 20-page (5,000 word) report that will be published on the Natural Hazards Center [Weather Ready Research Reports](#) page. Your report should concisely summarize your research and include an abstract, introduction, literature review, research design, results or findings, discussion, and conclusion.

Report Due Date

The reports for the Weather Ready Research Award Program are **due no later than six months following award activation**. Submit your report as a Word document (with photos submitted as separate JPG or PNG files) to the Natural Hazards Center at haz.research.awards@colorado.edu. Please **do not submit your report before reading the submission guidelines in full**.

Style Guide

Before you start writing, please review our [Natural Hazards Center Publication Style Guide](#). The style guide answers frequently asked questions about our writing style and how to format headings, tables, figures, block quotes, appendices, and more. Reports that do not follow the style guide will be returned to the author for further revision.

Template

Download the Report Template below and save it as a Word document. The template has pre-formatted headings and instructions that will help you create your report. Scroll to the end of the document for a checklist of all our style requirements. Please **review this checklist prior to submitting your final report** to ensure it complies with our guidelines.

[Download Weather Ready Report Template and Checklist here.](#)

We Can Answer Your Questions!

We are here to support you at every stage of the writing process. Not sure how to format a reference? Torn by word choice, or acceptable acronyms, or any other sort of writing quandary? Please [contact the Natural Hazards Center editing team](#) with any questions.





Questions?





Open Discussion

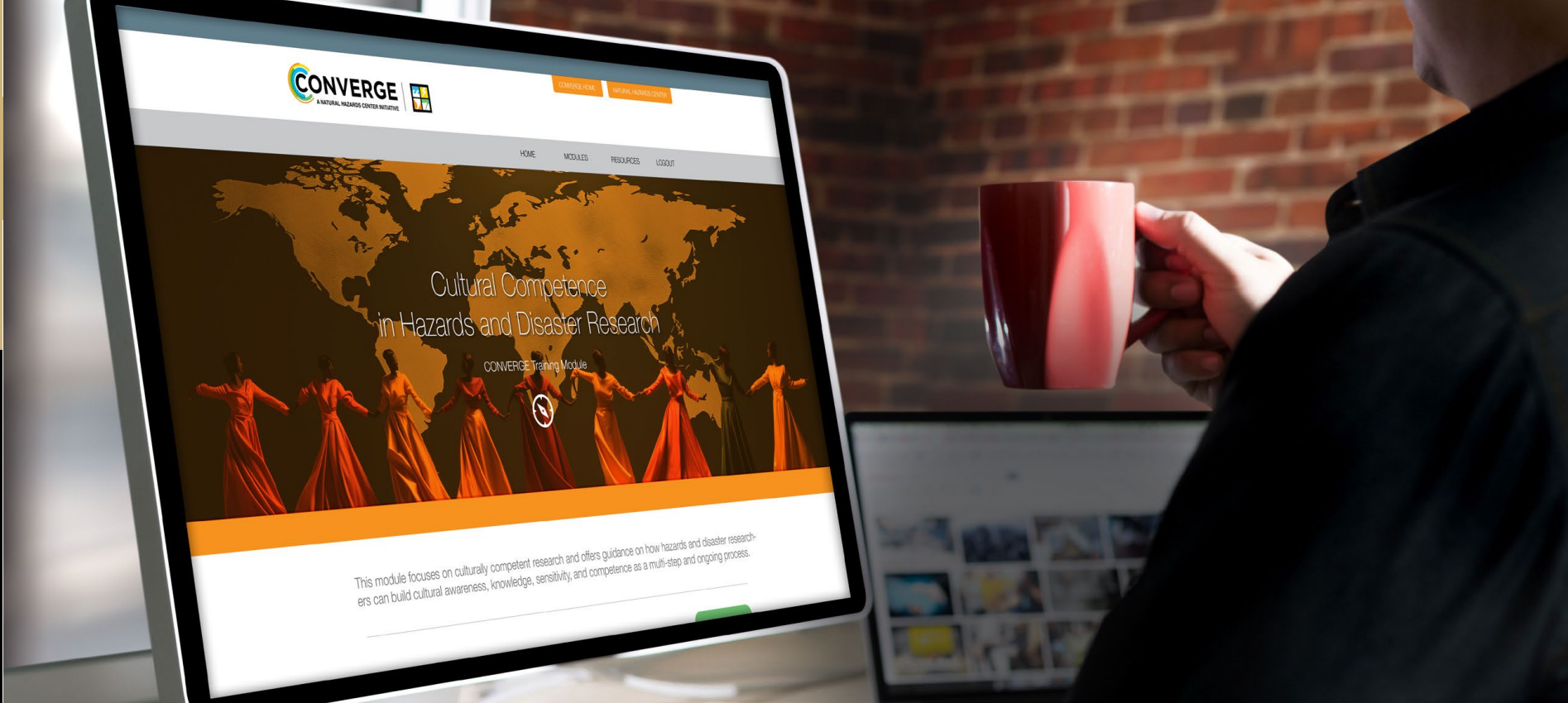
- Desire to Support or Partner w/ Social Science Researchers
- Launched Research
- Planned Research
- Other Ethical, Cultural, Logistical Considerations





Resources





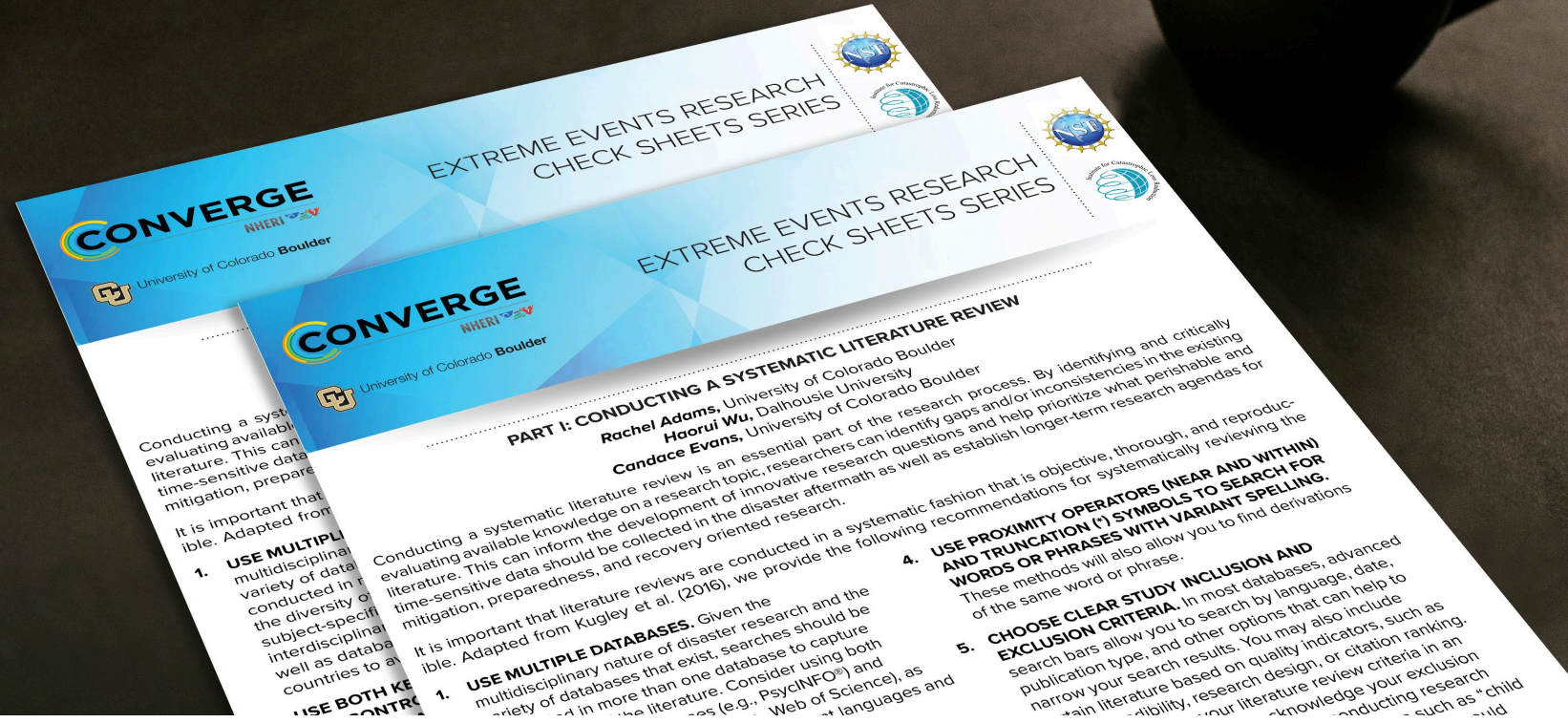
- Broader Ethical Considerations for Hazards and Disaster Researchers
- Collecting and Sharing Perishable Data
- Conducting Emotionally Challenging Research
- Cultural Competence in Hazards and Disaster Research
- Disaster Mental Health
- Indigenous Sovereignty in Disaster Research
- Institutional Review Board (IRB) Procedures and Extreme Events Research
- Positionality in Hazards and Disaster Research and Practice
- Public Health Implications of Hazards and Disaster Research
- Reciprocity in Hazards and Disaster Research
- Social Vulnerability and Disasters
- Understanding and Ending Gender-Based Violence in Fieldwork

CONVERGE Training Modules

converge.colorado.edu/resources/training-modules/



CONVERGE Extreme Events Research Check Sheets Series



converge.colorado.edu/resources/check-sheets/



Defining, collecting, and sharing perishable disaster data

Rachel M. Adams Research Associate, Natural Hazards Center, University of Colorado Boulder, United States, **Candace M. Evans** Doctoral Candidate, Department of Sociology, and Graduate Research Assistant, Natural Hazards Center, University of Colorado Boulder, United States, and **Lori Peek** Professor, Department of Sociology, and Director, Natural Hazards Center, University of Colorado Boulder, United States

Researchers across disciplines have long sought to collect 'perishable data' in the context of disasters. Yet, this data type is neither consistently defined nor discussed in specific detail in the literature. To address this gap, this paper defines perishable data and provides guidance on ways to improve both how it is collected and shared. Here, perishable data is conceptualised as highly transient data that may degrade in quality, be irrevocably altered, or be permanently lost if not gathered soon after it is generated. Perishable data may include ephemeral information that must be collected to characterise pre-existing hazardous conditions, near-miss events, actual disasters, and longer-term recovery processes. This data may need to be gathered at multiple points in time across varying geographic scales to accurately characterise exposure, susceptibility to harm, or coping capacity. The paper considers ethical and logistical challenges and discusses opportunities to advance equitable perishable data collection and dissemination.

Keywords: data collection, data publication, perishable data, quick response, reconnaissance, research ethics, research coordination

Introduction

The rapid collection of data immediately prior to, during, and in the direct aftermath of a disaster is a cornerstone of the multidisciplinary field of hazards and disaster studies (Tierney, 2019). Yet, to date, very little has been written about what is often referred to as 'perishable data', including what distinguishes it and what challenges are associated with its collection and dissemination.

Considering this gap in the literature, the goal of this paper is twofold: (i) to clarify the attributes of perishable data; and (ii) to offer recommendations to improve how it is collected and shared. We begin with an overview of how the collection of perishable data has been approached in the hazards and disaster field by both researchers and funders. We then review available literature to synthesise and advance a definition that encompasses the distinctive qualities of perishable data. In our search for available definitions of perishable data, we reviewed relevant peer reviewed and grey literature from the past 50 years and read more than 300 reports of studies funded through the Natural Hazards


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A Resource for Those Planning to Collect Perishable Data

Adams, R. M., C. M. Evans, and L. Peek. (2023). "Defining, Collecting, and Sharing Perishable Disaster Data." *Disasters* 48(1): e12592.

<https://doi.org/10.1111/disa.12592>





Access a Bibliography for Those Interested in Learning More About Social Science Research and Tornado Safe Rooms / Sheltering

Contact Carson MacPherson-
Krutsky, Research Associate at
the Natural Hazards Center:
Carson.M-K@colorado.edu





University of Colorado **Boulder**

THANK YOU



Questions? Contact:

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