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CONVERGE:
NHERI's Social Science Facility

Rachel Adams, PhD, MPH
Research Associate
Natural Hazards Center and CONVERGE
University of Colorado Boulder

NSF Award #1635593 and #1841338

Natural Hazards Center

CONVERGE

NATURAL HAZARDS ENGINEERING RESEARCH INFRASTRUCTURE (NHERI)

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- CONVERGE is a National Science Foundation-funded shared-use facility dedicated to advancing the **ethical conduct** and **scientific rigor** of convergent hazards and disaster research

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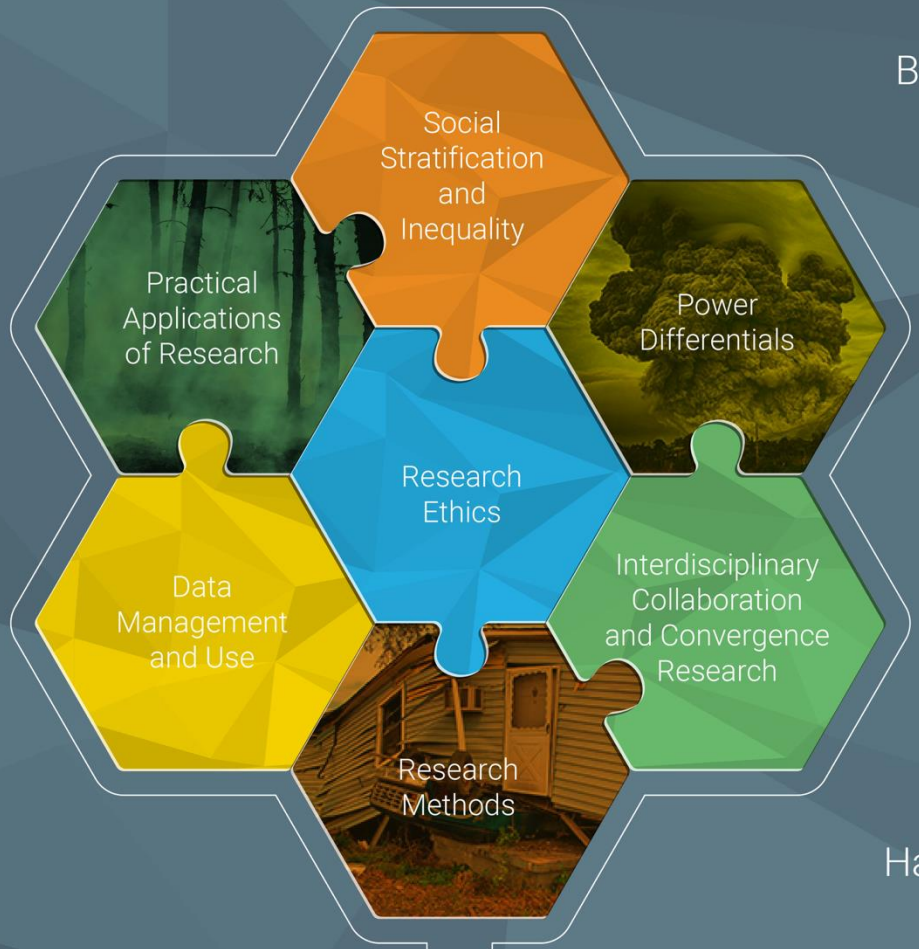
- Collecting and Sharing Perishable Data
- Social Vulnerability and Disasters
- Disaster Mental Health

Shared Themes



Advanced Training Module Topics

- Broader Ethical Considerations
- Indigenous Sovereignty
- Positionality
- Reciprocity
- Understanding and Ending Gender-Based Violence in Fieldwork
- Public Health Implications of Hazards and Disaster Research

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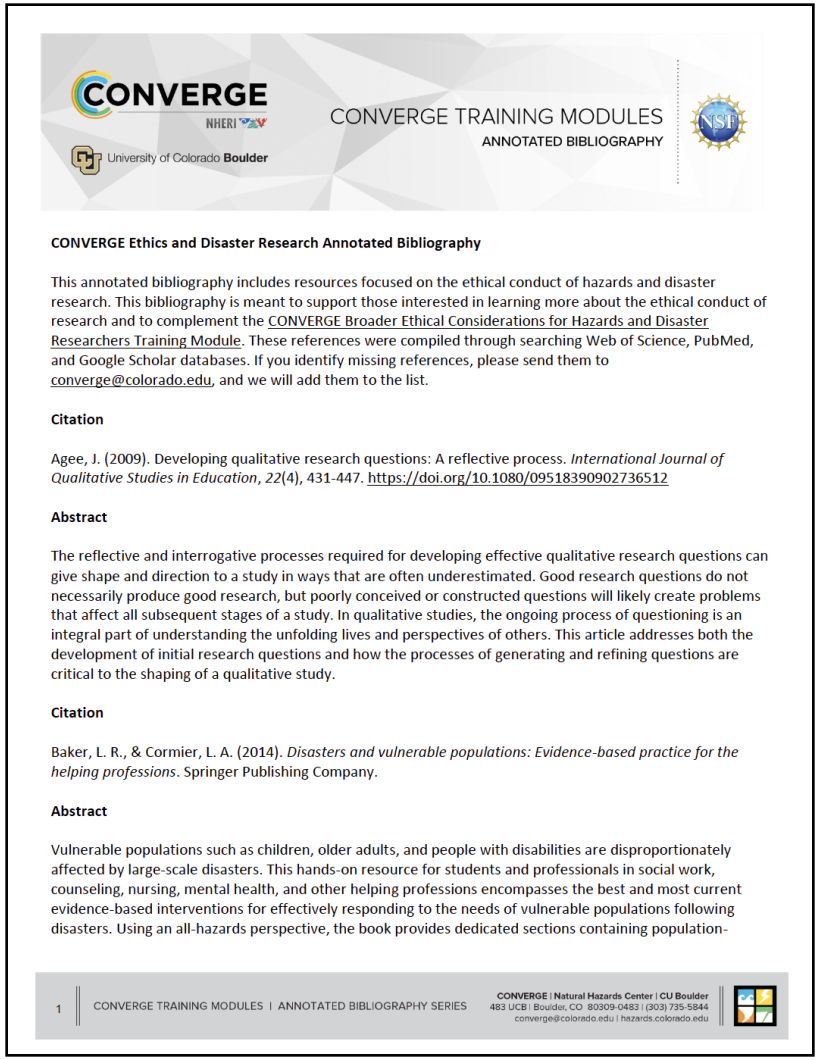

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CONVERGE TRAINING MODULES
ANNOTATED BIBLIOGRAPHY

CONVERGE Ethics and Disaster Research Annotated Bibliography

This annotated bibliography includes resources focused on the ethical conduct of hazards and disaster research. This bibliography is meant to support those interested in learning more about the ethical conduct of research and to complement the CONVERGE Broader Ethical Considerations for Hazards and Disaster Researchers Training Module. These references were compiled through searching Web of Science, PubMed, and Google Scholar databases. If you identify missing references, please send them to converge@colorado.edu, and we will add them to the list.

Citation

Agee, J. (2009). Developing qualitative research questions: A reflective process. *International Journal of Qualitative Studies in Education*, *22*(4), 431-447. https://doi.org/10.1080/09518390902736512

Abstract

The reflective and interrogative processes required for developing effective qualitative research questions can give shape and direction to a study in ways that are often underestimated. Good research questions do not necessarily produce good research, but poorly conceived or constructed questions will likely create problems that affect all subsequent stages of a study. In qualitative studies, the ongoing process of questioning is an integral part of understanding the unfolding lives and perspectives of others. This article addresses both the development of initial research questions and how the processes of generating and refining questions are critical to the shaping of a qualitative study.

Citation

Baker, L. R., & Cormier, L. A. (2014). *Disasters and vulnerable populations: Evidence-based practice for the helping professions*. Springer Publishing Company.

Abstract

Vulnerable populations such as children, older adults, and people with disabilities are disproportionately affected by large-scale disasters. This hands-on resource for students and professionals in social work, counseling, nursing, mental health, and other helping professions encompasses the best and most current evidence-based interventions for effectively responding to the needs of vulnerable populations following disasters. Using an all-hazards perspective, the book provides dedicated sections containing population-

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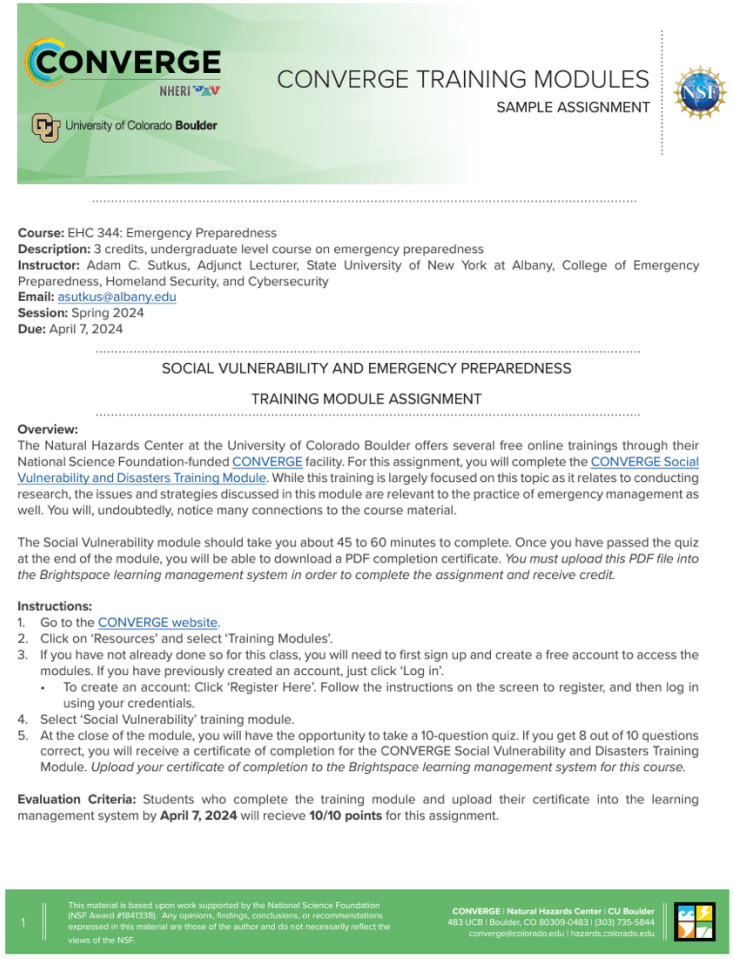
Annotated Bibliographies

We offer annotated bibliographies that summarize the various readings that informed the development of the CONVERGE Training Modules. If you have a reading to contribute as a shared resource for our broader community, please contact us at converge@colorado.edu.

- CONVERGE Cultural Competence Annotated Bibliography
- CONVERGE Disaster Mental Health Annotated Bibliography
- CONVERGE Emotionally Challenging Research Annotated Bibliography
- CONVERGE Ethics and Disaster Research Annotated Bibliography
- CONVERGE Gender-Based Violence in Fieldwork Annotated Bibliography
- CONVERGE Indigenous Sovereignty in Disasters Annotated Bibliography
- CONVERGE Institutional Review Board Annotated Bibliography
- CONVERGE Perishable Data Annotated Bibliography
- CONVERGE Positionality in Hazards and Disaster Research and Practice Annotated Bibliography
- CONVERGE Public Health and Disaster Research Annotated Bibliography
- CONVERGE Reciprocity in Research Annotated Bibliography
- CONVERGE Social Vulnerability and Disasters Annotated Bibliography

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

Assignment Bank



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CONVERGE TRAINING MODULES

SAMPLE ASSIGNMENT

Course: EHC 344: Emergency Preparedness
Description: 3 credits, undergraduate level course on emergency preparedness
Instructor: Adam C. Sutkus, Adjunct Lecturer, State University of New York at Albany, College of Emergency Preparedness, Homeland Security, and Cybersecurity
Email: asutkus@albany.edu
Session: Spring 2024
Due: April 7, 2024

SOCIAL VULNERABILITY AND EMERGENCY PREPAREDNESS

TRAINING MODULE ASSIGNMENT

Overview:
The Natural Hazards Center at the University of Colorado Boulder offers several free online trainings through their National Science Foundation-funded CONVERGE facility. For this assignment, you will complete the CONVERGE Social Vulnerability and Disasters Training Module. While this training is largely focused on this topic as it relates to conducting research, the issues and strategies discussed in this module are relevant to the practice of emergency management as well. You will, undoubtedly, notice many connections to the course material.

The Social Vulnerability module should take you about 45 to 60 minutes to complete. Once you have passed the quiz at the end of the module, you will be able to download a PDF completion certificate. *You must upload this PDF file into the Brightspace learning management system in order to complete the assignment and receive credit.*

Instructions:
1. Go to the CONVERGE website.
2. Click on 'Resources' and select 'Training Modules'.
3. If you have not already done so for this class, you will need to first sign up and create a free account to access the modules. If you have previously created an account, just click 'Log in'.
   - To create an account: Click 'Register Here'. Follow the instructions on the screen to register, and then log in using your credentials.
4. Select 'Social Vulnerability' training module.
5. At the close of the module, you will have the opportunity to take a 10-question quiz. If you get 8 out of 10 questions correct, you will receive a certificate of completion for the CONVERGE Social Vulnerability and Disasters Training Module. *Upload your certificate of completion to the Brightspace learning management system for this course.*

Evaluation Criteria: Students who complete the training module and upload their certificate into the learning management system by **April 7, 2024** will recieve **10/10 points** for this assignment.

This material is based upon work supported by the National Science Foundation (NSF Award #1841338). Any opinions, findings, conclusions, or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the NSF.

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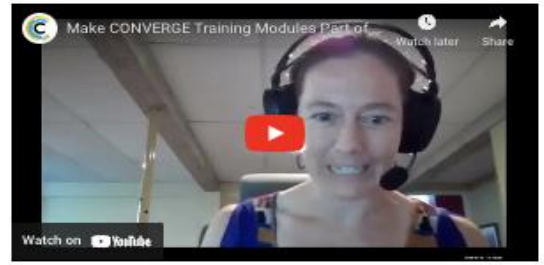
The Assignment Bank contains assignments from a range of courses that have integrated the CONVERGE Training Modules into the learning curriculum. We currently offer assignments for:

- Undergraduate courses
- Graduate courses
- Research labs

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

CONVERGE Training Modules Assignment Bank

This page contains sample assignments from a range of courses that have integrated the CONVERGE Training Modules into the learning curriculum. Please click on the title below for the full text of the assignments. If you have an assignment to contribute as a shared resource for our broader community, please contact us at converge@colorado.edu.



Undergraduate Course Assignments

- Create a Training Module Assignment
- Cultural Competence Training Module Assignment
- Disaster Health Research Assignment
- Pandemic Diaries Project
- Reciprocity Training Module Assignment: Exploring Connections Between Yourself and the Living World
- Research Methods Training Module Assignment: Exploring the IRB And Research Ethics
- Social Dimensions of Natural Hazards Training Module Assignment
- Social Inequalities in Health Training Module Assignment
- Social Vulnerability Training Module Assignment
- Social Vulnerability and Disasters Training Module Assignment
- Social Vulnerability and Emergency Preparedness
- Social Vulnerability and Engineering Training Module Assignment
- Social Vulnerability and Warning Systems Training Module Assignment
- Understanding Mental Health as Public Health Assignment

Graduate Course Assignments

- Disaster Mental Health Training Module Assignment
- Human and Social Factors of Disaster Training Module and Tabletop Exercise
- Research Design and Methods Training Module Assignment

Undergraduate and Graduate Course Assignments

- Disasters and Public Health Assignment
- Puerto Rico Resiliency Lab Training Module Assignment

Authors

- Heather Champeau
- Divya Chandrasekhar
- Nicole Errett
- Jake Fast
- Reggie J. Ferreira
- Eric Krieg
- Ivis Garcia
- Christine Gibb
- Hans M. Louis-Charles
- Rejina Manandhar
- Adenife Modile
- Christi M. Navarro
- Lori Peek
- George Schwartz
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Training Module Publications

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

Social vulnerability and disasters: development and evaluation of a CONVERGE training module for researchers and practitioners

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Natural Hazards Center and CONVERGE, University of Colorado Boulder, Boulder, Colorado, USA and
Department of Sociology, University of Colorado Boulder, Boulder, Colorado, USA

Abstract

Purpose – Social vulnerability in the context of disaster management refers to the sociodemographic characteristics of a population and the physical, social, economic, and environmental factors that increase their susceptibility to adverse disaster outcomes and capacity to anticipate, cope with, resist, and recover from disaster events. Because disasters do not impact people equally, researchers, public health practitioners, and emergency managers need training to meet the complex needs of vulnerable populations.
Design/methodology/approach – To address gaps in current education, the CONVERGE initiative, headquartered at the Natural Hazards Center at the University of Colorado Boulder, developed the Social Vulnerability and Disasters Training Module. This free online course draws on decades of research to examine the factors that influence social vulnerability to disasters. Examples of studies and evidence-based programs are included to illuminate common methods for studying social vulnerability and ways that research can guide practice. To evaluate the module, all trainees completed a pre- and post-training questionnaire.
Findings – Between July 2019 and September 2021, 1,089 people completed the module. Wilcoxon signed rank tests demonstrated a significant perceived increase in self-rated knowledge, skills, and attitudes (KSA). Students, members of historically underrepresented populations, and those new to or less experienced in the field, had the greatest perceived increase.

Technical Note

ASCE

Cultural Competence for Hazards and Disaster Researchers: Framework and Training Module

Haorui Wu, Ph.D.[1]; Lori Peek, Ph.D.[2]; Mason Clay Mathews, Ph.D.[3]; and Nicole Mattson[4]

Abstract: Although the need for cultural competence among healthcare service providers and other practitioners has long been recognized, there has been much less focus on this concept in the field of hazards and disaster research. To help fill this gap, this technical note offers a definitional framework for building cultural competence among hazards and disaster researchers and describes a training module that assists with developing such competency. Drawing on the extant literature, this article conceptualizes *cultural competence* in hazards and disaster research as an ongoing process that contributes to an understanding of the cultural attributes of affected individuals, households, communities, and societies that researchers are attempting to characterize. The four-step process presented here helps researchers move from cultural awareness to cultural knowledge to cultural sensitivity, and ultimately, to cultural competence. This ongoing practice requires reflexivity, respect, and humility. The time and effort involved in developing cultural competence can promote ethical research, improve the research experience for participants, enrich the quality of the data collected, and enhance the overall quality of knowledge creation and mobilization.
DOI: 10.1061/(ASCE)NH.1527-6996.0000536.

Author keywords: Cultural awareness; Cultural knowledge; Cultural sensitivity; Cultural competence; Hazards and disaster researchers; Training and education; Workforce development.

Introduction: Closing the "Culture Gap" in Hazards and Disaster Research

In the early 1960s, Moore (1964) developed the concept of "disaster subculture" to describe the adjustments that survivors make in response to disasters. Yet, despite its significance in shaping the social world, culture has remained largely overlooked and undertheorized in hazards and disaster research (Oliver-Smith and Hoffman 2002; Button 2010; Browne 2015). Moreover, culture remains underutilized as an explanatory variable in the field (VanLandingham 2017). This neglect of culture as a factor to be studied in disasters has had severe consequences for research and practice, ranging from one-dimensional research designs to stalled recovery efforts (Hoffman 2013; Browne 2015).

When researchers enter communities that are at risk of or recently affected by disasters, it is crucial that they remain aware of their cultural surroundings and recognize that their own cultural worldviews, perspectives, and beliefs shape who they study, what they study, and how they conduct research (Goodman and West-Olatunji 2009; Kulich et al. 2020; Wu 2021). Furthermore, dramatic cultural changes—such as movements for racial justice at one end of the spectrum or shifts toward authoritarian and anti-democratic regimes at the other end—can profoundly influence the contexts in which disaster researchers do their work (Cruz et al. 2020; Shanga 2020). Culture matters in hazards and disaster research. But contradictory forces have long complicated the efforts of hazards and disaster researchers to develop cultural competency. On the one hand, perishable disaster data must be collected quickly before it disappears (Wartman et al. 2020). On the other hand, the process of understanding a community's culture and subcultures as well as building rapport and trust with residents is usually slow (Alaniz 2017). In addition, disaster researchers, like researchers of other sensitive topics, often engage with people experiencing or recalling some of the worst moments of their lives. Researchers lacking cultural competence who appear suddenly seeking sensitive information and then vanish once they have acquired it may be seen as unsavory disaster voyeurs or as unethical practitioners betraying professional obligations (Gaillard and Peek 2019; Tierney 2019).

There is a need for additional guidance to help close the culture gap in hazards and disaster research. As a start, this technical note proposes a framework and describes a training module designed to address the unique challenges facing hazards and disaster researchers working in cross-cultural settings. We argue that building cultural competence—including understanding what it is and how to cultivate it—can ultimately promote more just and ethical research, improve the research experiences of participants, enrich the quality of the data collected, and enhance the overall quality of the study.

Defining Culture and Cultural Competence

Culture has long been of interest to social and behavioral scientists. Early efforts conceptualized *culture* as a set of customary beliefs,

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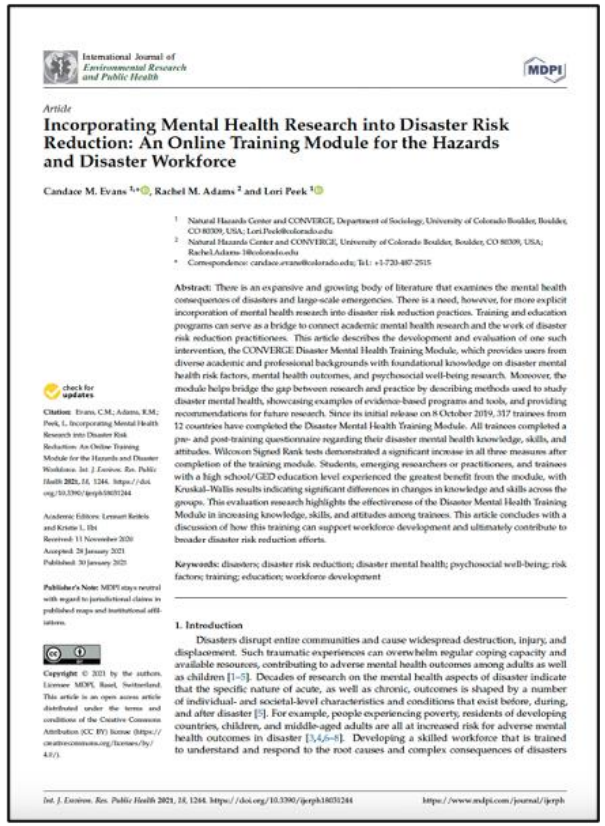
Note. This manuscript was submitted on January 22, 2021; approved on October 2, 2021; published online on November 17, 2021. Discussion period open until April 17, 2022; separate discussions must be submitted for individual papers. This technical note is part of the *Natural Hazards Review*. © ASCE, ISSN 1527-6988.



International Journal of Environmental Research and Public Health

MDPI

Article

Incorporating Mental Health Research into Disaster Risk Reduction: An Online Training Module for the Hazards and Disaster Workforce

Candace M. Evans [1,*], Rachel M. Adams [2] and Lori Peek [1]

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Abstract: There is an expansive and growing body of literature that examines the mental health consequences of disasters and large-scale emergencies. There is a need, however, for more explicit incorporation of mental health research into disaster risk reduction practices. Training and education programs can serve as a bridge to connect academic mental health research and the work of disaster risk reduction practitioners. This article describes the development and evaluation of one such intervention, the CONVERGE Disaster Mental Health Training Module, which provides users from diverse academic and professional backgrounds with foundational knowledge on disaster mental health risk factors, mental health outcomes, and psychosocial well-being research. Moreover, the module helps bridge the gap between research and practice by describing methods used to study disaster mental health, showcasing examples of evidence-based programs and tools, and providing recommendations for future research. Since its initial release on 8 October 2019, 317 trainees from 12 countries have completed the Disaster Mental Health Training Module. All trainees completed a pre- and post-training questionnaire regarding their disaster mental health knowledge, skills, and attitudes. Wilcoxon Signed Rank tests demonstrated a significant increase in all three measures after completion of the training module. Students, emerging researchers or practitioners, and trainees with a high school/GED education level experienced the greatest benefit from the module, with Kruskal–Wallis results indicating significant differences in changes in knowledge and skills across the groups. This evaluation research highlights the effectiveness of the Disaster Mental Health Training Module in increasing knowledge, skills, and attitudes among trainees. This article concludes with a discussion of how this training can support workforce development and ultimately contribute to broader disaster risk reduction efforts.

Keywords: disasters; disaster risk reduction; disaster mental health; psychosocial well-being; risk factors; training; education; workforce development

1. Introduction

Disasters disrupt entire communities and cause widespread destruction, injury, and displacement. Such traumatic experiences can overwhelm regular coping capacity and available resources, contributing to adverse mental health outcomes among adults as well as children [1–5]. Decades of research on the mental health aspects of disaster indicate that the specific nature of acute, as well as chronic, outcomes is shaped by a number of individual- and societal-level characteristics and conditions that exist before, during, and after disaster [5]. For example, people experiencing poverty, residents of developing countries, children, and middle-aged adults are all at increased risk for adverse mental health outcomes in disaster [3,4,6–8]. Developing a skilled workforce that is trained to understand and respond to the root causes and complex consequences of disasters

Citation: Evans, C.M.; Adams, R.M.; Peek, L. Incorporating Mental Health Research into Disaster Risk Reduction: An Online Training Module for the Hazards and Disaster Workforce. *Int. J. Environ. Res. Public Health* **2021**, *18*, 1244. https://doi.org/10.3390/ijerph18031244

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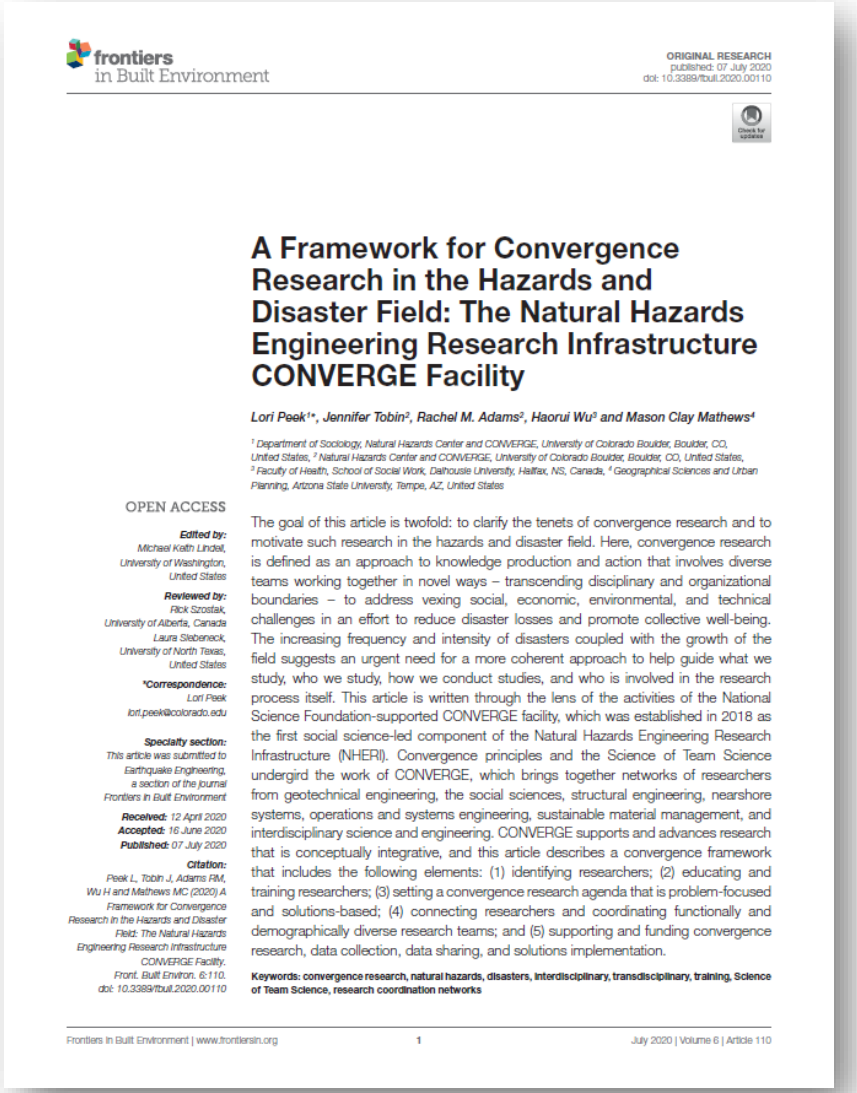
Additional CONVERGE Publications



frontiers in Built Environment

ORIGINAL RESEARCH
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doi: 10.3389/fbuil.2020.00110

A Framework for Convergence Research in the Hazards and Disaster Field: The Natural Hazards Engineering Research Infrastructure CONVERGE Facility

Lori Peek[1], Jennifer Tobin[2], Rachel M. Adams[2], Haorui Wu[3] and Mason Clay Mathews[4]*

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Peek L, Tobin J, Adams RM, Wu H and Mathews MC (2020) A Framework for Convergence Research in the Hazards and Disaster Field: The Natural Hazards Engineering Research Infrastructure CONVERGE Facility. Front. Built Environ. 6:110. doi: 10.3389/fbuil.2020.00110

The goal of this article is twofold: to clarify the tenets of convergence research and to motivate such research in the hazards and disaster field. Here, convergence research is defined as an approach to knowledge production and action that involves diverse teams working together in novel ways – transcending disciplinary and organizational boundaries – to address vexing social, economic, environmental, and technical challenges in an effort to reduce disaster losses and promote collective well-being. The increasing frequency and intensity of disasters coupled with the growth of the field suggests an urgent need for a more coherent approach to help guide what we study, who we study, how we conduct studies, and who is involved in the research process itself. This article is written through the lens of the activities of the National Science Foundation-supported CONVERGE facility, which was established in 2018 as the first social science-led component of the Natural Hazards Engineering Research Infrastructure (NHERI). Convergence principles and the Science of Team Science undergird the work of CONVERGE, which brings together networks of researchers from geotechnical engineering, the social sciences, structural engineering, nearshore systems, operations and systems engineering, sustainable material management, and interdisciplinary science and engineering. CONVERGE supports and advances research that is conceptually integrative, and this article describes a convergence framework that includes the following elements: (1) identifying researchers; (2) educating and training researchers; (3) setting a convergence research agenda that is problem-focused and solutions-based; (4) connecting researchers and coordinating functionally and demographically diverse research teams; and (5) supporting and funding convergence research, data collection, data sharing, and solutions implementation.

Keywords: convergence research, natural hazards, disasters, interdisciplinary, transdisciplinary, training, Science of Team Science, research coordination networks

Risk Analysis, Vol. 41, No. 7, 2021 DOI: 10.1111/risa.13777

Interdisciplinary Theory, Methods, and Approaches for Hazards and Disaster Research: An Introduction to the Special Issue

Lori Peek[1,*] and Seth Guikema[2]

What is interdisciplinary research? Why is it vital to the advancement of the field of hazards and disaster research? What theory, methods, and approaches are fundamental to interdisciplinary research projects and their applications? This article addresses these and other pressing questions by taking stock of recent advancements in interdisciplinary studies of hazards and disasters. It also introduces the special issue of *Risk Analysis*, which includes this introductory article and 25 original perspectives papers meant to highlight new trends and applications in the field. The papers were written following two National Science Foundation-supported workshops that were organized in response to the growing interest in interdisciplinary hazards and disaster research, the increasing number of interdisciplinary funding opportunities and collaborations in the field, and the need for more rigorous guidance for interdisciplinary researchers and research teams. This introductory article and the special collection are organized around the cross-cutting themes of theory, methods, approaches, interdisciplinary research projects, and applications to advance interdisciplinarity in hazards and disaster research.

KEY WORDS: Disasters; hazards; interdisciplinary research; methods; theory

1. INTRODUCTION

Interdisciplinarity in hazards and disaster research is growing. Interdisciplinary research has made major contributions to the field. Interdisciplinarity figures prominently in the research needs of the field. While unanswered disciplinary questions remain, all of the priority research needs identified by the committee involve multiple disciplines and are in part, if not fundamentally, interdisciplinary (National Research Council, 2006, p. 212).

What is interdisciplinary research? Why is it so important to the advancement of the field of hazards and disaster research? What theory, methods, and approaches are fundamental to interdisciplinary research and its applications?

This special issue of *Risk Analysis* tackles these and other pressing questions with the publication of this introductory article and 25 original perspectives papers focused on interdisciplinary theory, methods, approaches, and applications for hazards and disaster research. At least one of the authors of each of the papers participated in two National Science Foundation-supported workshops, which were held in Arlington, Virginia, in March of 2017 and Boulder, Colorado, in February of 2018. The workshops were organized in response to the growing interest in interdisciplinary hazards and disaster research, the increasing number of interdisciplinary funding

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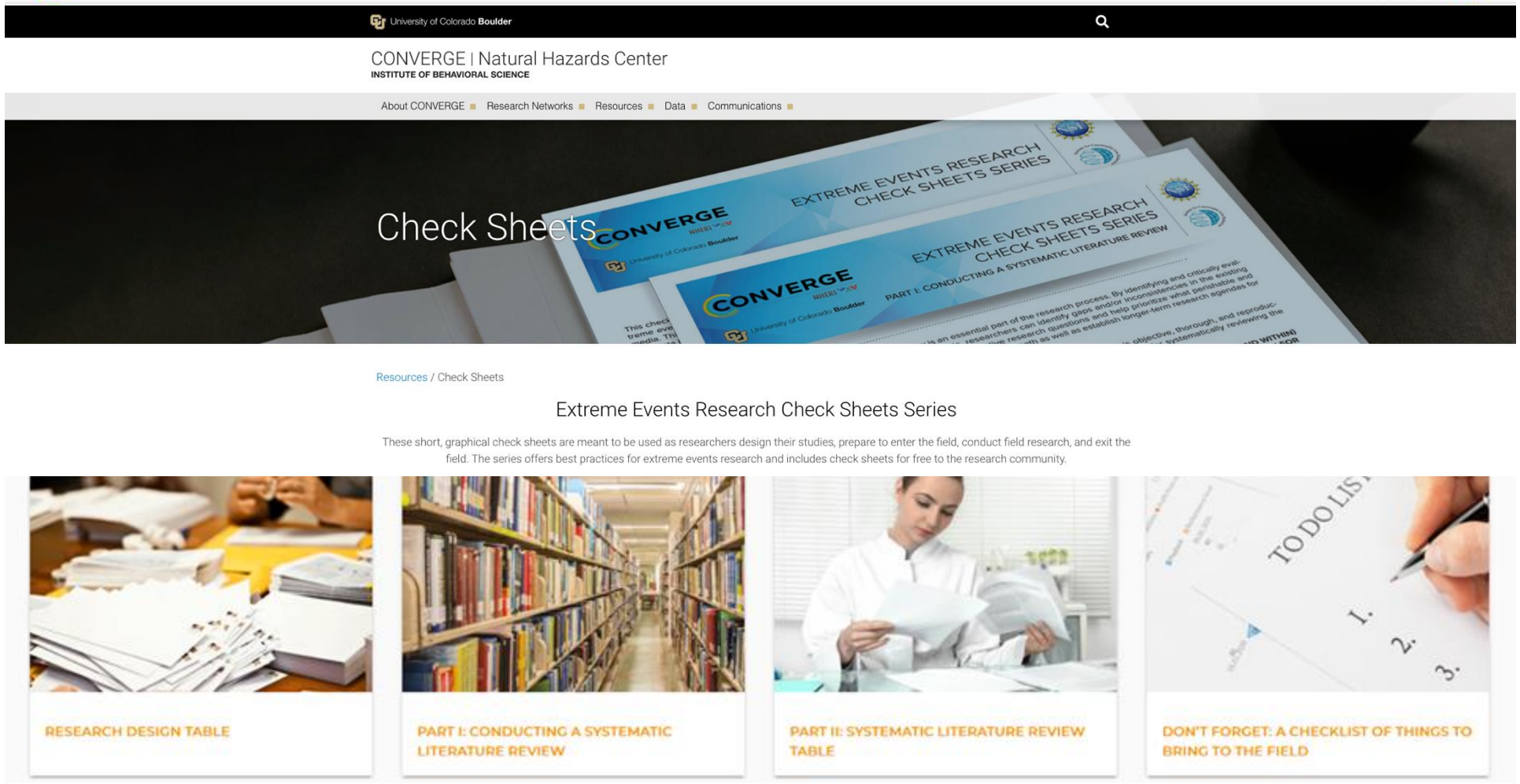
Check Sheets



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Webinars and Virtual Forums

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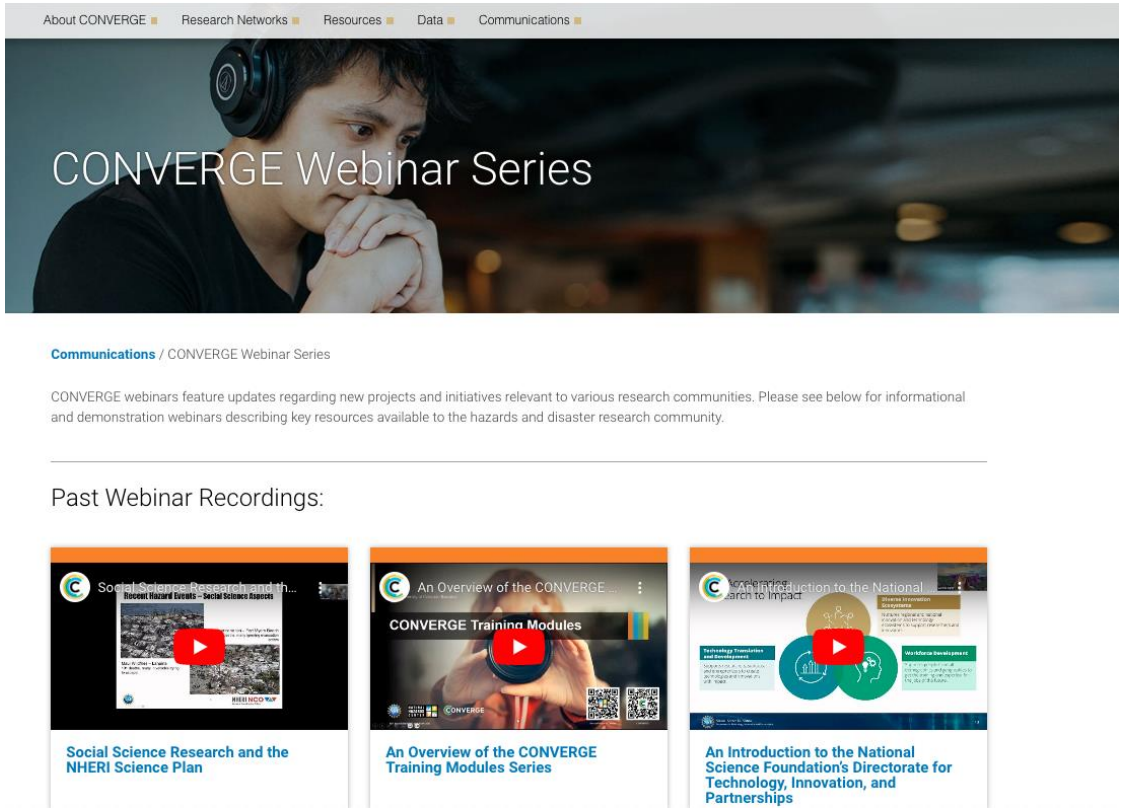
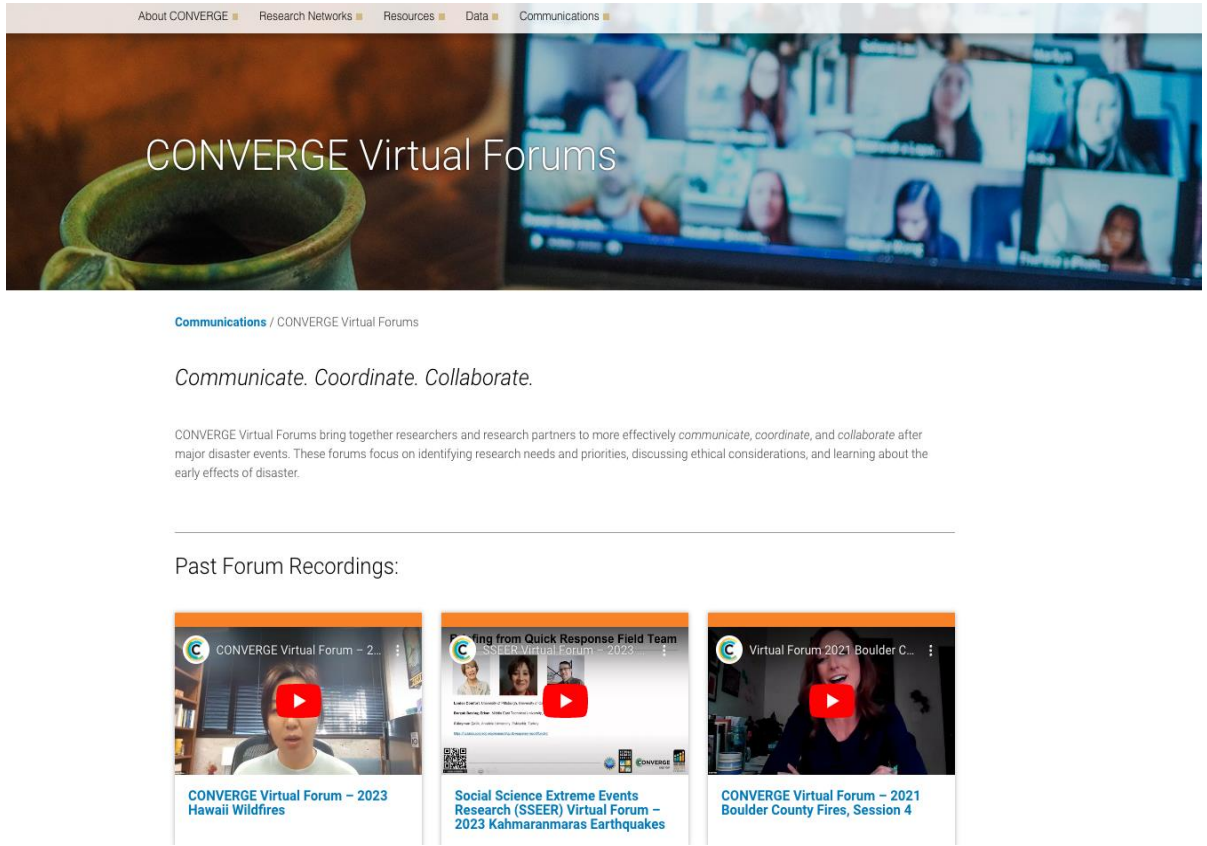
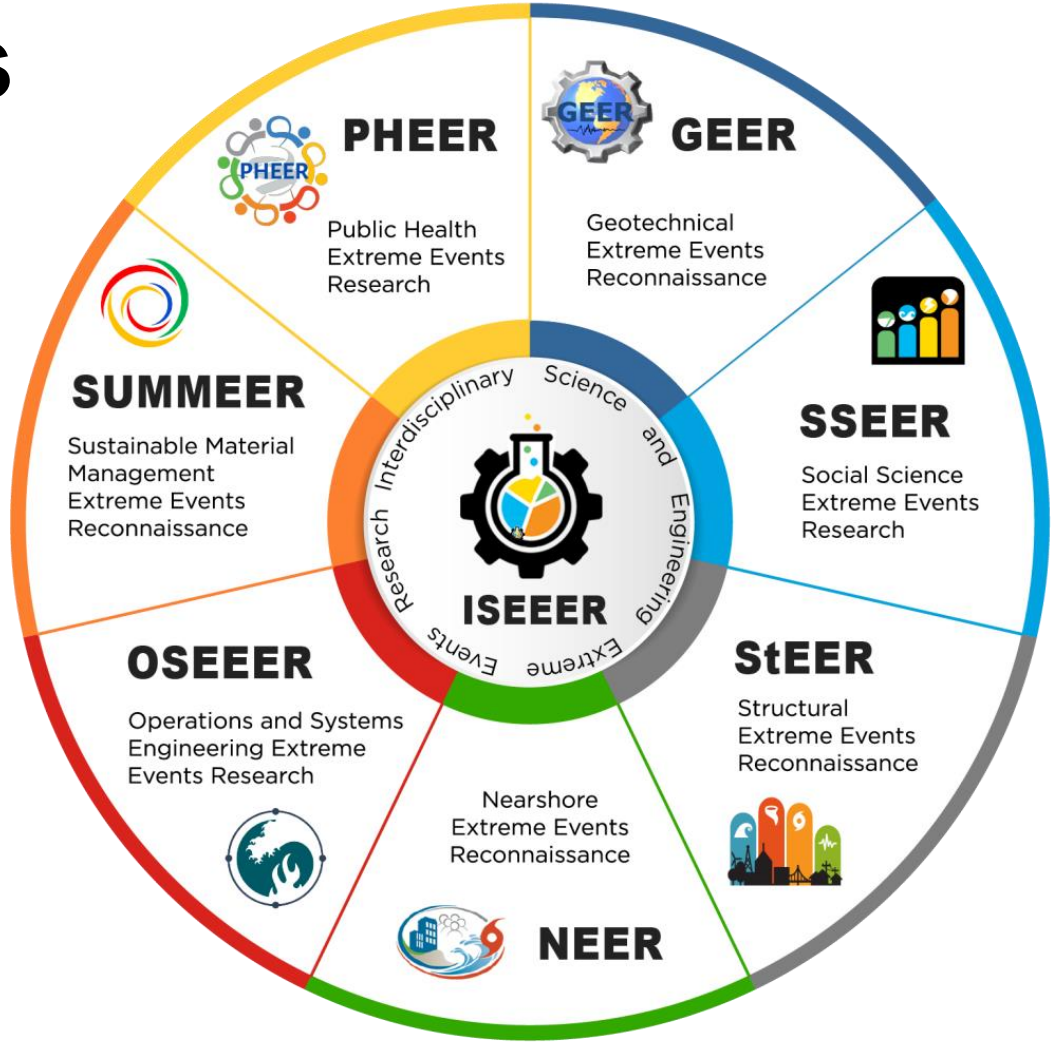




NSF Extreme Events Reconnaissance / Research (EER) Networks



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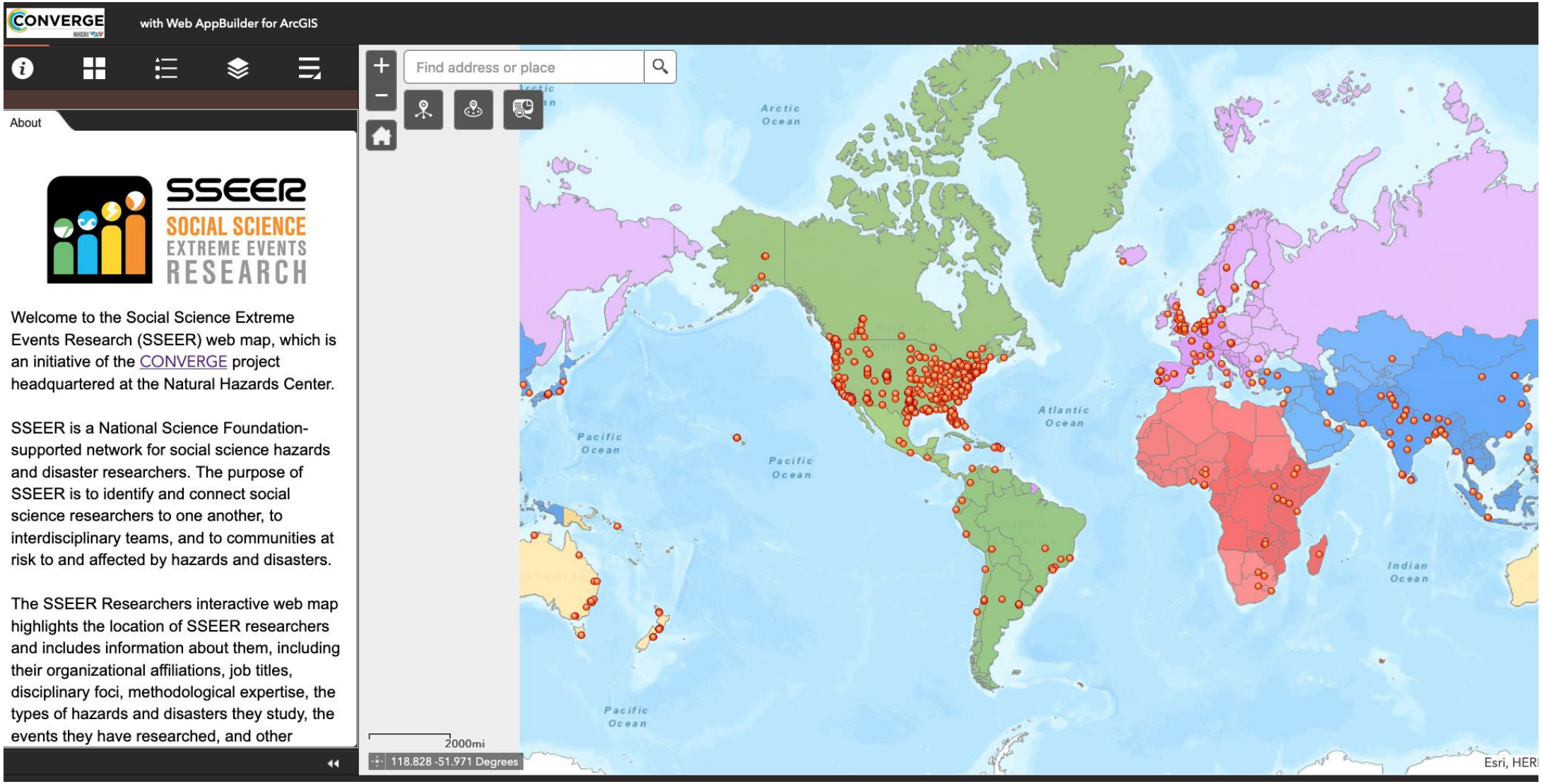
SSEER Web Map



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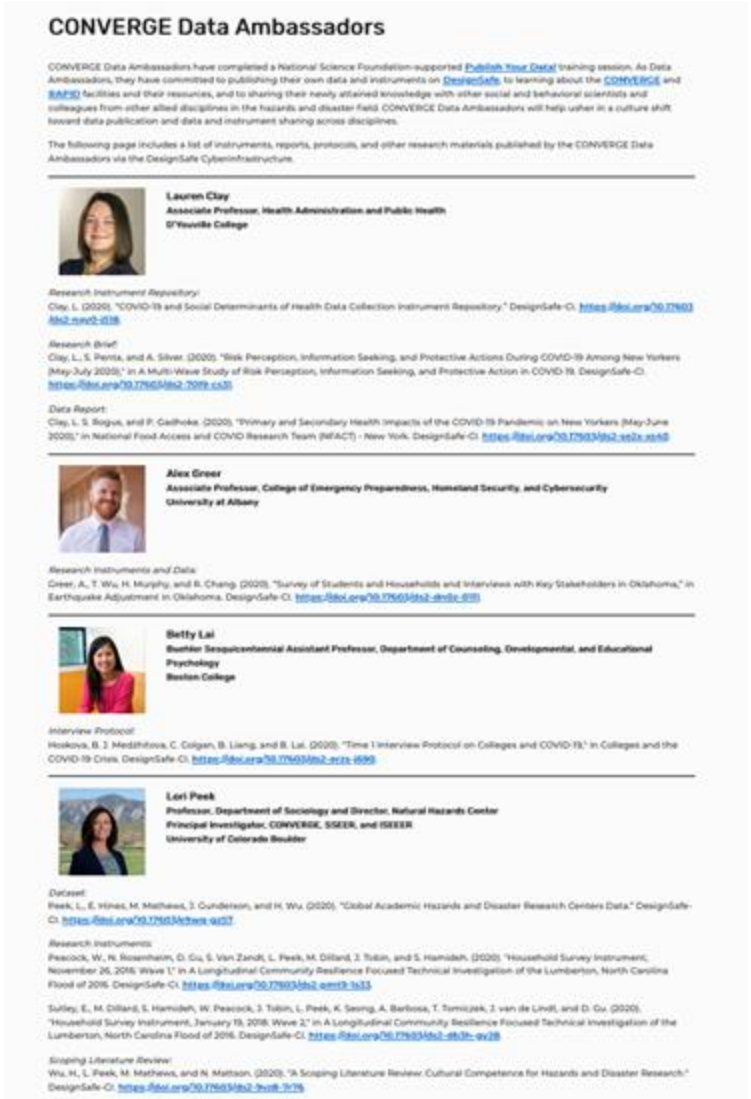
Data Ambassadors



CONVERGE Data Ambassadors

CONVERGE Data Ambassadors have completed a National Science Foundation-supported Publish Your Data! training session. As Data Ambassadors, they have committed to publishing their own data and instruments on DesignSafe, to learning about the CONVERGE and RAPID facilities and their resources, and to sharing their newly attained knowledge with other social and behavioral scientists and colleagues from other allied disciplines in the hazards and disaster field. CONVERGE Data Ambassadors will help usher in a culture shift toward data publication and data and instrument sharing across disciplines.

The following page includes a list of instruments, reports, protocols, and other research materials published by the CONVERGE Data Ambassadors via the DesignSafe Cyberinfrastructure.

Lauren Clay
Associate Professor, Health Administration and Public Health
D'Youville College

Research Instrument Repository:
Clay, L. (2020). "COVID-19 and Social Determinants of Health Data Collection Instrument Repository." DesignSafe-CI. https://doi.org/10.17603/ds2-nwv0-d38.

Research Brief:
Clay, L., S. Perita, and A. Silver. (2020). "Risk Perception, Information Seeking, and Protective Actions During COVID-19 Among New Yorkers (May-July 2020)." in A Multi-Wave Study of Risk Perception, Information Seeking, and Protective Action in COVID-19. DesignSafe-CI. https://doi.org/10.17603/ds2-7099-cs31.

Data Report:
Clay, L. S. Rogus, and P. Gadhoke. (2020). "Primary and Secondary Health Impacts of the COVID-19 Pandemic on New Yorkers (May-June 2020)." in National Food Access and COVID Research Team (NFACT) - New York. DesignSafe-CI. https://doi.org/10.17603/ds2-ss2x-xs40.

Alex Greer
Associate Professor, College of Emergency Preparedness, Homeland Security, and Cybersecurity
University at Albany

Research Instruments and Data:
Greer, A., T. Wu, H. Murphy, and R. Chang. (2020). "Survey of Students and Households and Interviews with Key Stakeholders in Oklahoma," in Earthquake Adjustment in Oklahoma. DesignSafe-CI. https://doi.org/10.17603/ds2-dnds-6111.

Betty Lai
Buehler Sesquicentennial Assistant Professor, Department of Counseling, Developmental, and Educational Psychology
Boston College

Interview Protocol:
Hoskova, B. J. Medzhitova, C. Colgan, B. Liang, and B. Lai. (2020). "Time 1 Interview Protocol on Colleges and COVID-19." in Colleges and the COVID-19 Crisis. DesignSafe-CI. https://doi.org/10.17603/ds2-wzrx-t690.

Lori Peek
Professor, Department of Sociology and Director, Natural Hazards Center
Principal Investigator, CONVERGE, SSEER, and ISEEER
University of Colorado Boulder

Dataset:
Peek, L., E. Hines, M. Mathews, J. Gunderson, and H. Wu. (2020). "Global Academic Hazards and Disaster Research Centers Data." DesignSafe-CI. https://doi.org/10.17603/ds2wa-qz57.

Research Instruments:
Peacock, W., N. Rosenheim, D. Gu, S. Van Zandt, L. Peek, M. Dillard, J. Tobin, and S. Hamideh. (2020). "Household Survey Instrument, November 26, 2016. Wave 1." in A Longitudinal Community Resilience Focused Technical Investigation of the Lumberton, North Carolina Flood of 2016. DesignSafe-CI. https://doi.org/10.17603/ds2-pmt9-1s33.

Sutley, E., M. Dillard, S. Hamideh, W. Peacock, J. Tobin, L. Peek, K. Seong, A. Barbosa, T. Tomiczek, J. van de Lindt, and D. Gu. (2020). "Household Survey Instrument, January 19, 2018: Wave 2." in A Longitudinal Community Resilience Focused Technical Investigation of the Lumberton, North Carolina Flood of 2016. DesignSafe-CI. https://doi.org/10.17603/ds2-dk3h-gv28.

Scoping Literature Review:
Wu, H., L. Peek, M. Mathews, and N. Mattson. (2020). "A Scoping Literature Review: Cultural Competence for Hazards and Disaster Research." DesignSafe-CI. https://doi.org/10.17603/ds2-9vz8-7r76.

Nathanael Rosenheim
Associate Research Scientist and Director of Research, Hazard Reduction & Recovery Center
Texas A&M University

Research Instruments:
Peacock, W., N. Rosenheim, D. Gu, S. Van Zandt, L. Peek, M. Dillard, J. Tobin, and S. Hamideh. (2020). "Household Survey Instrument, November 26, 2016. Wave 1." in A Longitudinal Community Resilience Focused Technical Investigation of the Lumberton, North Carolina Flood of 2016. DesignSafe-CI. https://doi.org/10.17603/ds2-pmt9-1s33.

Rosenheim, N., W. Peacock, M. Perez, and G. Lane. (2020). "Food Retail Survey Instrument." in Food Access Impact Survey for Southeast Texas and Harris County, Texas after Hurricane Harvey. DesignSafe-CI. https://doi.org/10.17603/ds2-aq2k-dv92.

Toolkit:
Rosenheim, N., M. Stanley, C. Goodman, A. Berd, S. Hayes, E. Millard, J. Korukonda, and M. Watson. (2020). "Systematic Literature Review Toolkit." DesignSafe-CI. https://doi.org/10.17603/ds2-3fn5-sb44.

Gavin Smith
Professor, Department of Landscape Architecture and Environmental Planning
North Carolina State University

Research Instrument:
Smith, G., O. Vila, and G. Caverly. (2020). "A National Evaluation of State Roles in Hazard Mitigation: Building Local Capacity to Implement FEMA Hazard Mitigation Assistance Grants." DesignSafe-CI. https://doi.org/10.17603/ds2-xjbv-ea87.

Maria Watson
Research Assistant Professor, Department of Landscape Architecture and Urban Planning
Texas A&M University

Research Instruments:
Sutley, E., M. Dillard, S. Hamideh, W. Peacock, J. Tobin, L. Peek, K. Seong, A. Barbosa, T. Tomiczek, J. van de Lindt, and D. Gu. (2020). "Household Survey Instrument, January 19, 2018: Wave 2." in A Longitudinal Community Resilience Focused Technical Investigation of the Lumberton, North Carolina Flood of 2016. DesignSafe-CI. https://doi.org/10.17603/ds2-dk3h-gv28.

Xiao, Y., M. Watson, J. Helgeson, K. Farokhnia, J. van de Lindt, J. Mitrani-Reiser, E. Sutley, D. Deniz, T. Tomiczek, A. Barbosa, J. Fung, O. Nofal, and M. Kolliou. (2020). "Business Survey Instrument, January 19, 2018: Wave 2." in A Longitudinal Community Resilience Focused Technical Investigation of the Lumberton, North Carolina Flood of 2016. DesignSafe-CI. https://doi.org/10.17603/ds2-f9k1-fm93.

Haorui Wu
Assistant Professor, School of Social Work
Dalhousie University

Dataset:
Peek, L., E. Hines, M. Mathews, J. Gunderson, and H. Wu. (2020). "Global Academic Hazards and Disaster Research Centers Data." DesignSafe-CI. https://doi.org/10.17603/ds2wa-qz57.

Scoping Literature Review:
Wu, H., L. Peek, M. Mathews, and N. Mattson. (2020). "A Scoping Literature Review: Cultural Competence for Hazards and Disaster Research." DesignSafe-CI. https://doi.org/10.17603/ds2-9vz8-7r76.

H. Tristan Wu
Associate Professor, Department of Emergency Management and Disaster Science
University of North Texas

Research Instrument:
Wu, T., S. Huang, and M. Lindell. (2020). "Household Mail Survey." in 2011 New Zealand and Japan Earthquake Household Response Survey. DesignSafe-CI. https://doi.org/10.17603/ds2-sn58-4b43.

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