

Data Matters: Social Services Delivery and Disaster Research

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NHERI 



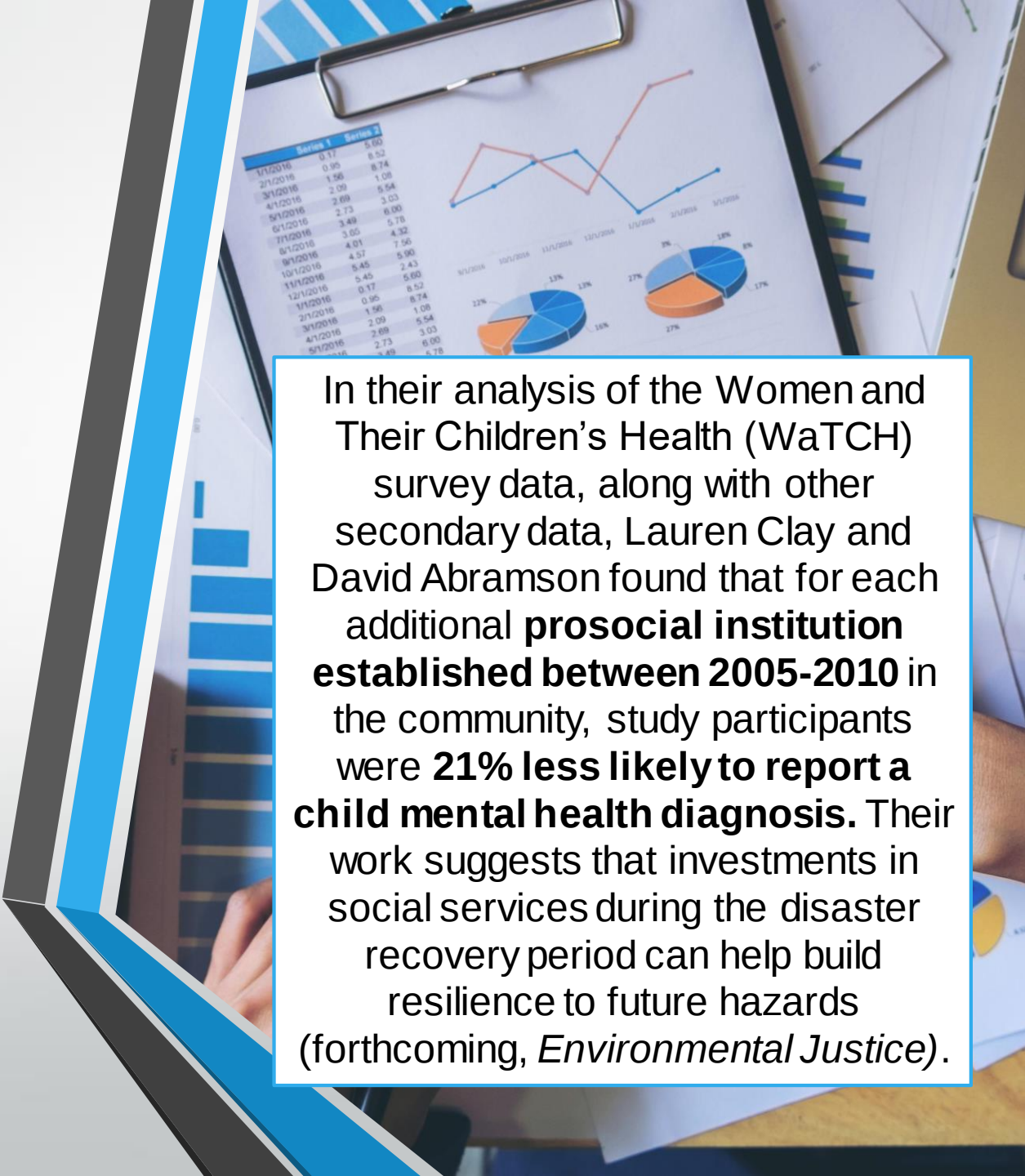
Data Matters

- Data can help us to identify successes, gaps, and challenges
- Longitudinal data helps to measure progress over time
- Data can set the course for where we want to go and inspire change toward a more just and equitable world
- When we are relentlessly empirical, and committed to creating more effective organizations, building stronger communities, and promoting equality in opportunity, we can garner support – financial, political, social – for evidence-informed action in the disaster social services realm



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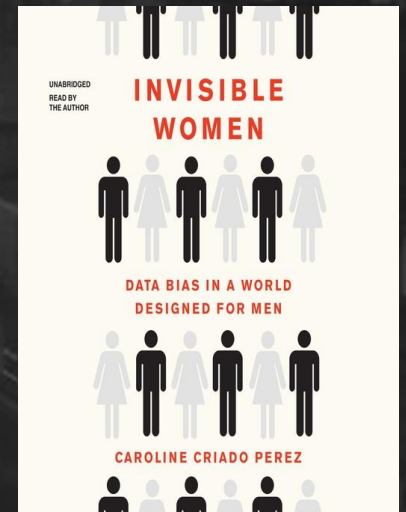
In their analysis of the Women and Their Children's Health (WaTCH) survey data, along with other secondary data, Lauren Clay and David Abramson found that for each additional **prosocial institution established between 2005-2010** in the community, study participants were **21% less likely to report a child mental health diagnosis**. Their work suggests that investments in social services during the disaster recovery period can help build resilience to future hazards (forthcoming, *Environmental Justice*).



CHALLENGES

Data Gaps

- “But when your *big data* is corrupted by *big silences*, the truths you get are half-truths, at best.” —Caroline Criado Perez, *Invisible Women: Data Bias in a World Designed for Men*



Data Limitations

- Can be costly, time consuming, and difficult to collect primary disaster social services data
 - This is true during *non-disaster times*, when social service agencies serving vulnerable populations are already over-taxed
 - During *disasters*, when these agencies switch to response mode, data collection may become more difficult or even impossible



Data Sharing Issues

- Data are often collected in inconsistent ways, making them incomparable across time and place
- Data privacy concerns abound – especially for socially marginalized populations
- Lack of networks, trust, time, resources to share data
- Lack of infrastructure, training, and mechanisms for sharing data

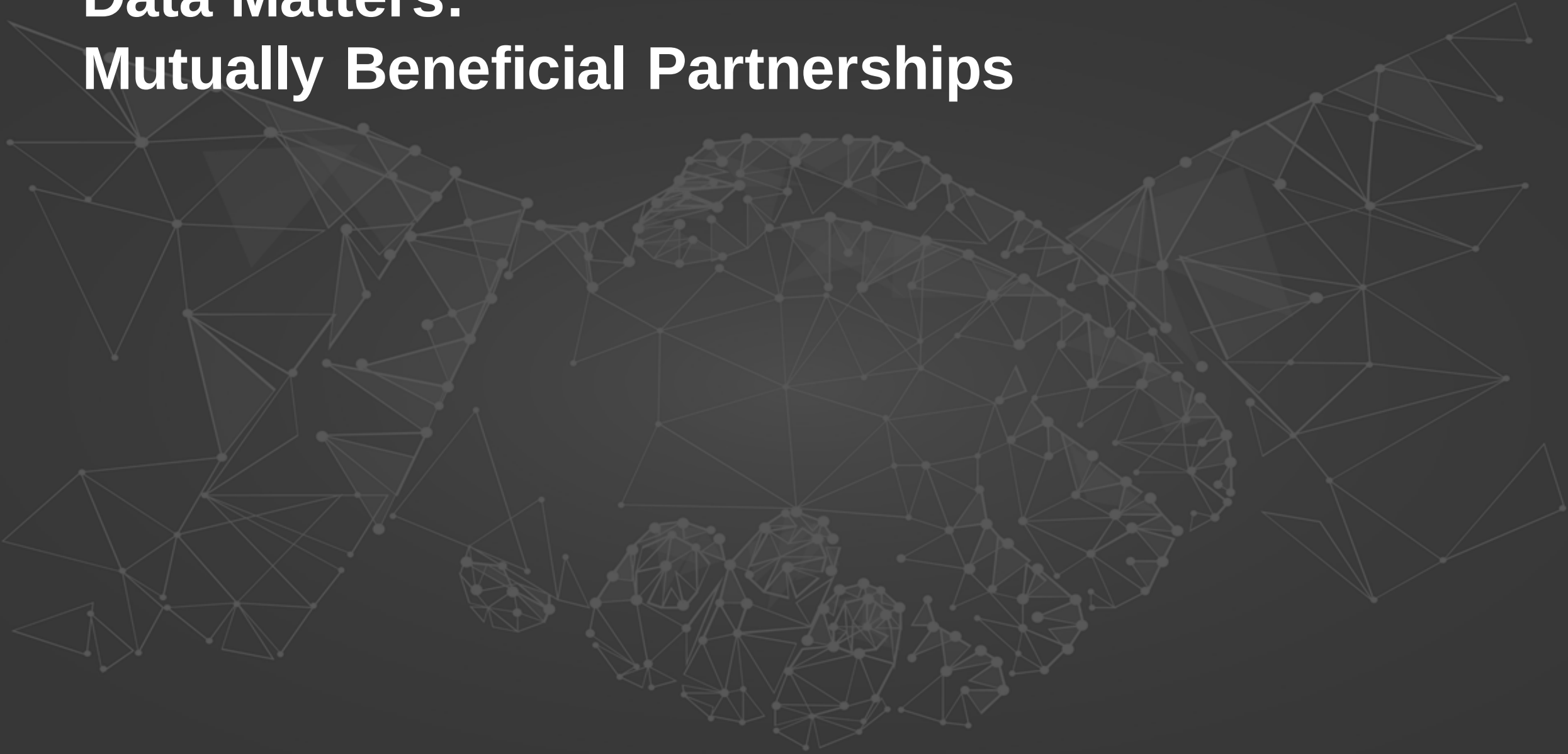




impossible



Data Matters: Mutually Beneficial Partnerships





Building Capacities to Protect Children in Disasters



Arkansas
Voluntary Organizations
Active in Disaster

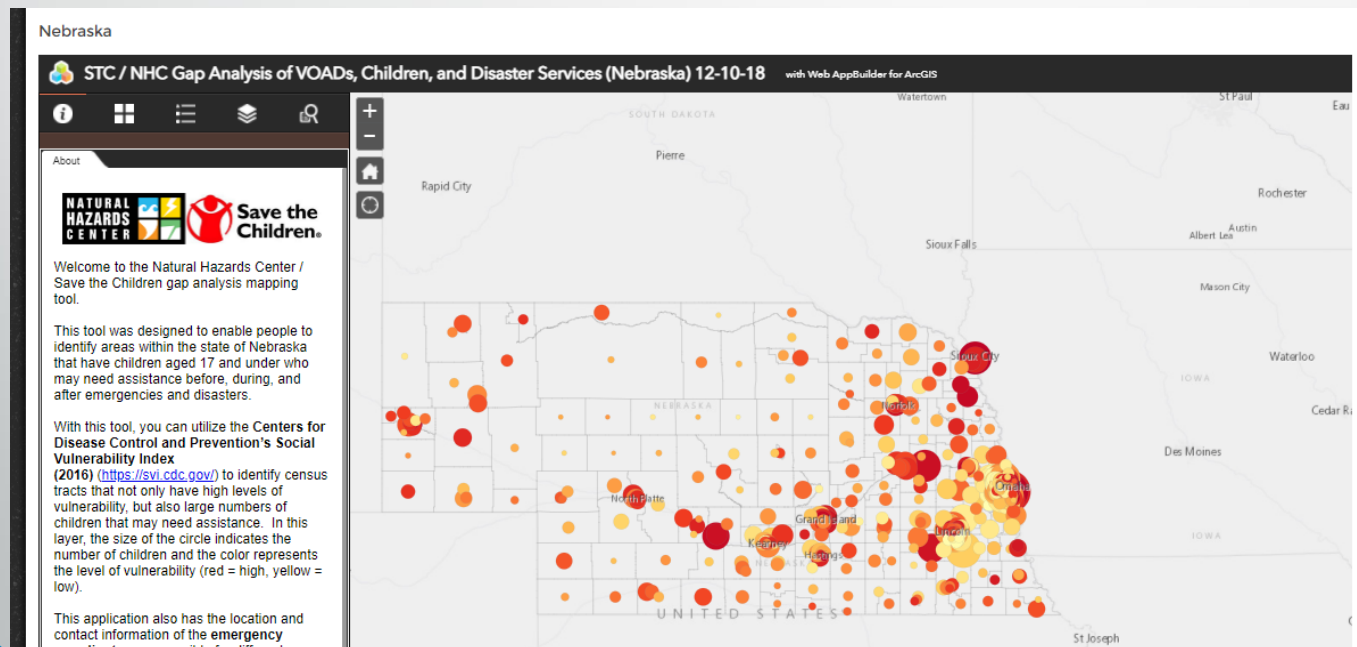
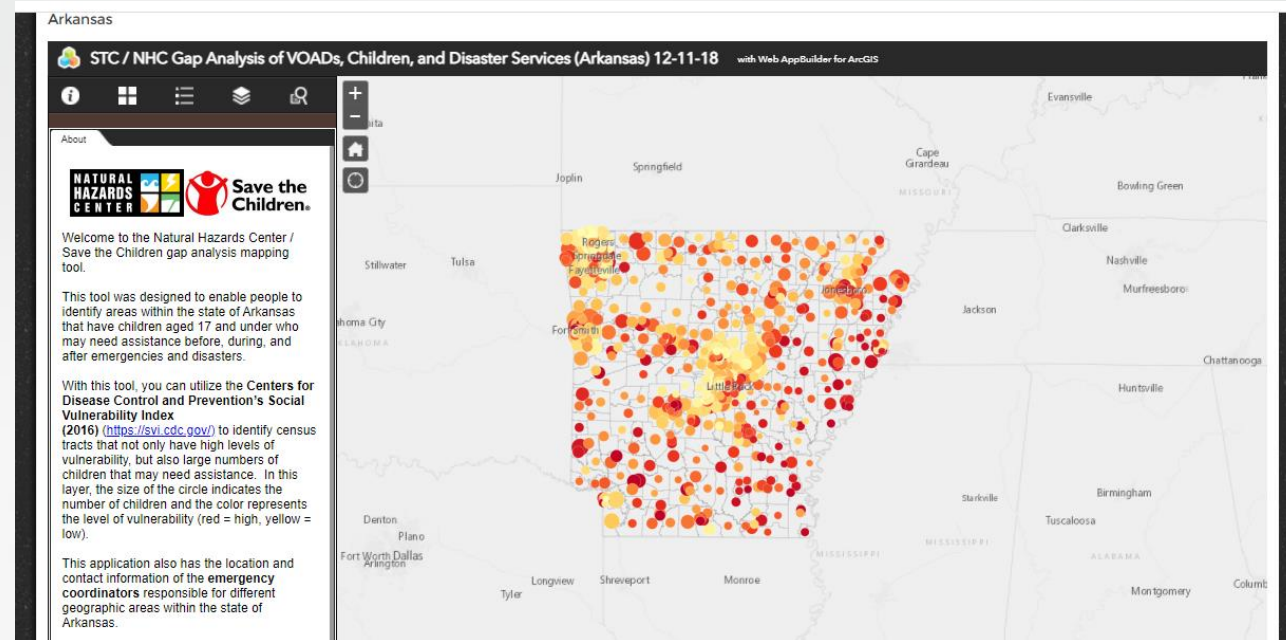
COOPERATION | COMMUNICATION | COORDINATION | COLLABORATION



Nebraska
Voluntary Organizations
Active in Disaster

COOPERATION | COMMUNICATION | COORDINATION | COLLABORATION

Interactive Data Maps: Potentially Vulnerable Children in Arkansas and Nebraska



Data Matters: NSF-Supported Cyberinfrastructure for Disaster Social Science and Public Health Data Sharing



DesignSafe Field Research Publications

A Flexible Data Model for both Engineers and Social Scientists

Authors: Craig Jansen, Maria Esteve, Keith Strmiska, Nathanael Rosenheim, Elaina Sutley

- This publication interface allows two different domains to publish together or independently
- In order to reflect a wide array of different work in the field, users have the flexibility to build their own data structure
- An easy-to-use interface allows the user to organize data and fill-in metadata themselves
- Users can publish incrementally over the lifespan of a project, receive multiple DOIs, and have it all related under a single project

PRU-1234 | Hurricane Michael Structural Damage And Population Resilience

Download Dataset

Project PIs

Peak, Lori; Warman, Joseph

Keywords

Hurricane, Reconnaissance, Damage Assessment, Interviews, Children, Shelters

Publication Type

Field Research | Engineering/Geosciences, Social Sciences

Natural Hazard Event

Hurricane Michael | Florida | 10/7/2018 | Lat 30.455860 Long -87.813780

Event Type

Hurricane, Storm Surge, Flood

Awards

NSF CMMI-1841328
NSF CMMI-1811820

DOI(s) in Dataset

10.17603/6d-ublv-mc8l
10.17603/6d-ublv-mc8l

Related Work

Quick Response Research after Hurricane Katrina: A Study of Families
Rapid Reconnaissance Engineering Investigations after Hurricane Harvey, Irma, and Maria

This interdisciplinary social science and engineering data set includes damage assessment data collected five weeks after Hurricane Michael, as well as survey, interview, and observational data collected with parents and their children. This data may be of special interest to those seeking to understand the connections between damage to the built environment and associated social disruptions.

Documents Collection | Virtual Reconnaissance

Mission | Mexico Beach - RAPID

Date(s) of Mission

11/11/2018 - 11/15/2018

Author(s)

Hensel, Sara; Huang, Shih-Kai; Sutley, Elaine; Fischer, Enay; Enay, Ann-Margaret; Lytle, Ward; Mendonça, Kevin; Myers, Michelle

Site Location

North Lake Estates | Lat 30.455860 Long -87.813780

Date of Publication

11/20/2018

DOI

10.17603/6d-ublv-mc8l

License

CC0 Public Domain Dedication and License

During this initial week, the research team collected damage assessment data in two neighborhoods, as well as surveyed and interviewed parents and children who were displaced from those neighborhoods. The intent is for the team to return for two to three more weeks of data collection over the coming year.

Research Planning Collection | RAPID Team Preparation

Engineering/Geosciences Collection | Water Tower

Engineering/Geosciences Collection | Blue Beach Area

Engineering/Geosciences Collection | Panama City to Mexico Beach

Research Planning Collection | Interviewer Preparation

Social Sciences Collection | Interviews & Observations at the Shelter - Children

Social Sciences Collection | Interviews, Surveys, & Observations at the Shelter - Parents

Collections are related inside a mission. Missions are related inside a project. A user can publish one or more missions over the lifespan of their project. Each mission receives its own DOI.

Research Planning Collection | Interviewer Preparation

Data Collection(s)

Hensel, Sara

This section includes the approved university-required Institutional Review Board (IRB) documents for the social science component of this study.

IRB Application

Protocol

IRB Consent Form - Parents

Protocol

Assent Form - Children

Protocol

Letters of Support

Protocol

Additional Resources for Participants

Protocol

Sampling Frame - Parents

Planning Document

Research planning collections allow the user to set apart files that assisted with gathering their data. Many users from both domains find lots of value in reusing these documents.

Documents Collection | Virtual Reconnaissance

Author(s)

Hensel, Sara

Date of Publication

11/20/2018

DOI

10.17603/6d-ublv-mc8l

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This section of the data publication includes the virtual reconnaissance materials that were collected in advance of the project and informed the study design.

Engineering/Geosciences Collection | Water Tower

Observation Types

Wind, Structural, Geotechnical

Date(s) of Collection

11/11/2018

Date Collection(s)

Fischer, Enay

Collection Site Location(s)

Mexico Beach Water Tower | Lat 29.0001 Long 90.3888

Equipment

DSLR Camera | Canon
360 Degree Camera | Luma 4K360
GPS | Phantom 4
Damage Assessments Brookview Neighborhood
Damage Assessments Longview Neighborhood

Referenced Data

The geotechnical and structural engineering team collected observational data at the Mexico Beach Water Tower during Week 1.

10.17603/6d-ublv-mc8l

Water Tower, Collapse, Scan, Mexico Beach Water Tower, Lat 29.0001 Long 90.3888

Canon Phantom

Structural Observation, Cracked, Image, Mexico Beach Water Tower, Lat 29.7804 Long 90.3888

GPS

Geotechnical Observation, Erosion, Area, Mexico Beach Water Tower, Lat 29.0001 Long 90.3888

The engineering/geosciences collection contains data and metadata from the engineering domain. The engineering community helped determine the metadata and it was also tested with social scientists to make sure they could understand the language. Some social scientists expressed interest in using this data to help their research.

Social Sciences Collection | Interviews & Observations at the Shelter - Children

Line of Analysis

Children

Method(s) of Collection

In-depth Interviews
Observations

Method(s) of Collection

Open-ended Interview Guide
Drawing Prompts
Protocols

Sampling Approach

Stratified

Sample Size

12

Date Collection(s)

Hensel, Ann-Margaret; Lytle, Ward

Date(s) of Collection

11/10/2018

Collection Site Location(s)

Family Protective Shelter | Lat 29.0861 Long 90.3888

Equipment

Kenexa
Audio Recorder

Restriction

Restricted

Referenced Data

Qualitative Interview Transcripts - Children and Parents
Observational Protocols - Shelter

These materials were used in the collection of data from children between the ages of 6 to 14 who were interviewed in the Family Protective Shelter. This section includes the instruments, as well as the audio files and visual drawings that were

Child Interview Guide

Instrument

Child Demographic Information Questionnaire

Instrument

Drawing Prompts

Instrument

Child Observation Guide

Instrument

Child Participant 100 Recording

Audio

Child Participant 104 Recording

Audio

Child Participant 100 Disaster Drawing

Image

Child Participant 104 Recovery Needs Drawing

Image

The social sciences collection contains data and metadata from the social sciences domain. This metadata was determined by a small group of social scientists, then validated by testing it with 82 researchers from both domains. It was found that engineers could understand the metadata and some had interest in using the data.

If you would like to publish your data on DesignSafe using this data model, contact Maria Esteve at maria@tacc.utexas.edu, Craig Jansen at cjansen@tacc.utexas.edu, or attend virtual office hours at designsafe-ci.org/learning-center/training

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Data Matters

- Quantitative data often drive policy change – but these data are most effective when coupled with stories grounded in lived reality
- The richest data on social services are often at the local level, but without additional resources, these data can be difficult to scale-up and scale-out
- We need support for local, state, and national efforts to support disaster research on social service delivery



**Thank you! Please sign up for updates and
information for the
Natural Hazards Center and CONVERGE:**
hazards.colorado.edu/signup
converge.colorado.edu/signup