NATURAL HAZARDS CENTER

We envision a just and equitable world where knowledge is applied to ensure that humans live in harmony with nature.

CONVERGE

ethical, coordinated, and scientifically rigorous social science, engineering, and interdisciplinary extreme events research

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University of Colorado **Boulder**

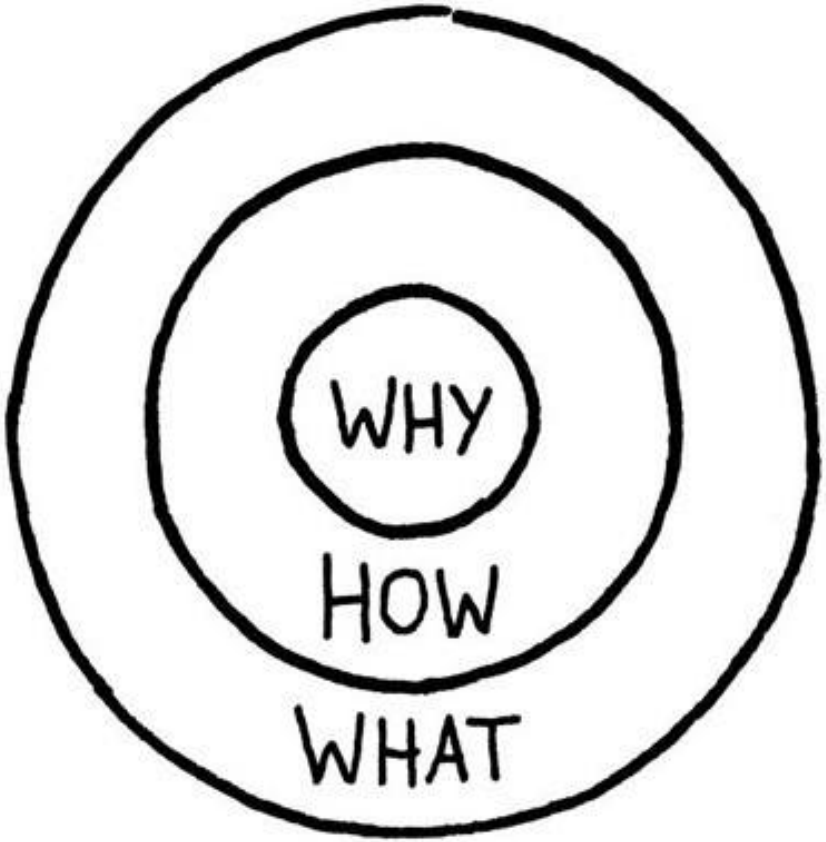
NSF Award #1841338

Session 2: Collecting, Managing, and Archiving Social and Behavioral Science Data

Describe opportunities for *identifying and coordinating social science researchers* so that we can best *share information and publish our data as well as data collection protocols* using DOIs, repositories, etc.

Discuss some of the overarching *challenges and concerns* with sharing social science data, such as privacy, data management plans and related IRB policies, duplication vs. replication, etc.

4 Things



1. NSF has funded the CONVERGE initiative

Why CONVERGE?

Why CONVERGE?

- ***identify*** and ***coordinate*** researchers and research teams;
- ***advance*** hazards and disaster research;
- ***encourage*** the publication of data and data collection instruments and protocols (DesignSafe Cyberinfrastructure + CONVERGE).
- ***support*** and ***accelerate*** training and mentoring;
- ***fund*** virtual reconnaissance, field research, and the development of novel research instruments and data collection protocols;
- ***accelerate*** the development of mobile applications for social science data collection (NHERI RAPID);

Why CONVERGE?

Dorian batters the coast of the Carolinas

About 115,000 people are without power in South Carolina and Georgia as the Category 3 storm moves up the coast

• Track the storm | How to help | CNN's lite site

The wild horses of the Outer Banks won't evacuate. They have a special trick to survive hurricanes

Trump shows apparently altered Dorian trajectory map

Analysis: Where is Trump getting his bogus info about Dorian?

Dorian has strengthened to a Category 3 storm

Bahamas resident: You can smell the death in the air

Hurricane warning issued for South Florida

Conditions in Turks and Caicos deteriorated as deadly Irma continued tracking toward the Sunshine State

Floridians began a mass exodus ahead of Irma

Florida air travel starts to shut down ahead of Irma

Cameraman almost wiped out by Irma's waves

He filmed Irma destruction as a warning to Florida

Mother searches, awaits news of her daughters in Barbuda

Track the storm's path here

Mexico quake

BREAKING **8.1-magnitude quake strikes off southern Mexico coast**

LIVE UPDATES **Parts of Mexico City without power**

News and buzz

Sloane Stephens, Madison Keys reach US Open final 39 m

NFL star sits for national anthem at kickoff game

College football game canceled due to Irma

After 98-0 loss: 'Watch out, we're coming'

Formerly conjoined twins enjoy new life apart

Prince George's first day of school

SpaceX launches mysterious Air Force plane

Source of Jupiter aurora discovered

of n to sell $175K courtside seats

Yep, this really happened

Golfers finish round as massive wildfire rages behind them

Mystery of liger roaming metro Atlanta solved

Student accidentally given $1M in financial aid

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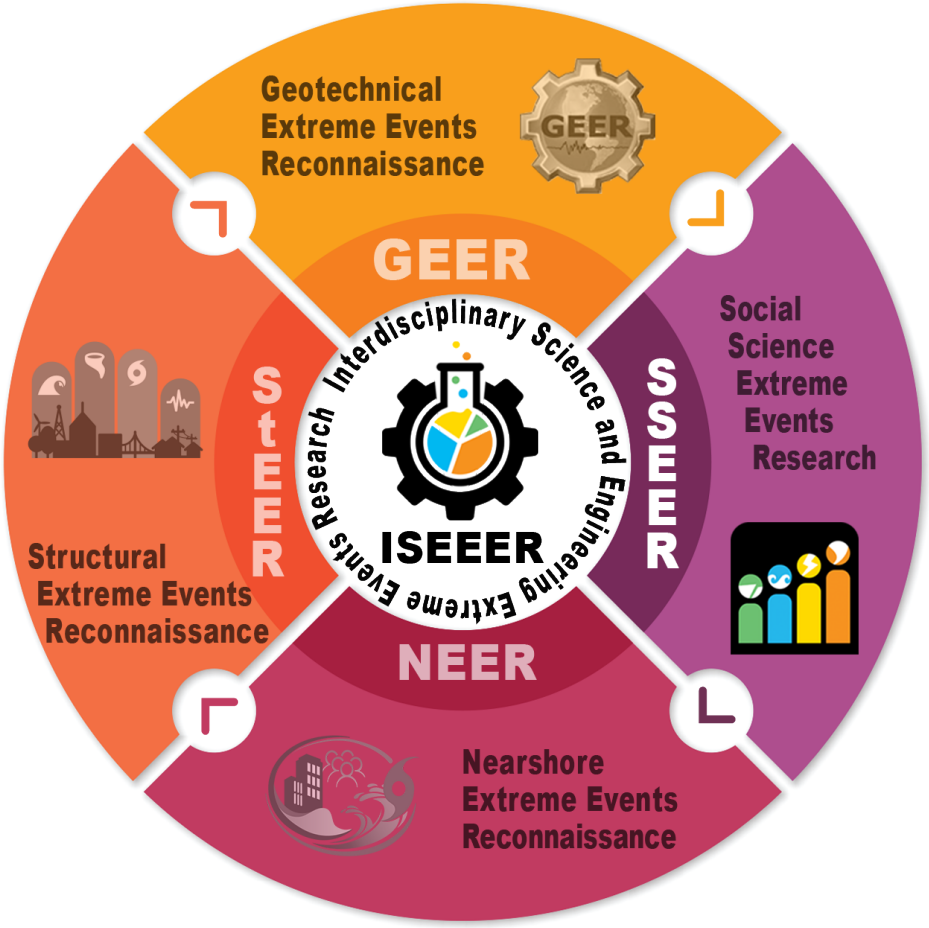
2. NSF Supports Extreme Events Research (EER) Networks

Why the EER's?

Disciplinary *and* Interdisciplinary
(within and between)

- research coordination
- ethical conduct
- scientific agenda setting
- data sharing and data publication

3. SSEER is for Social and Behavioral Scientists (please join!)



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converge.colorado.edu/join-sseer

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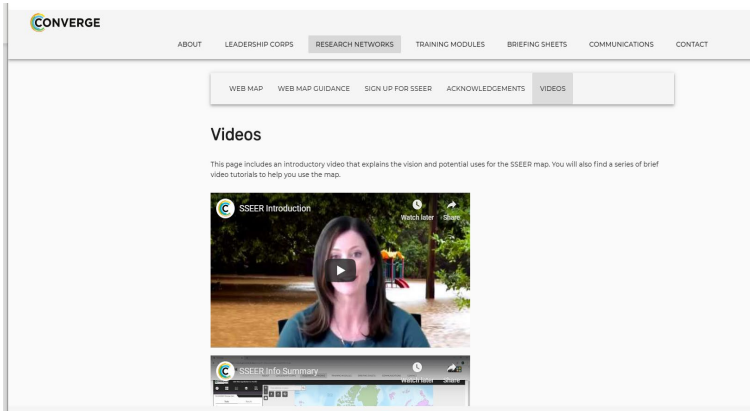
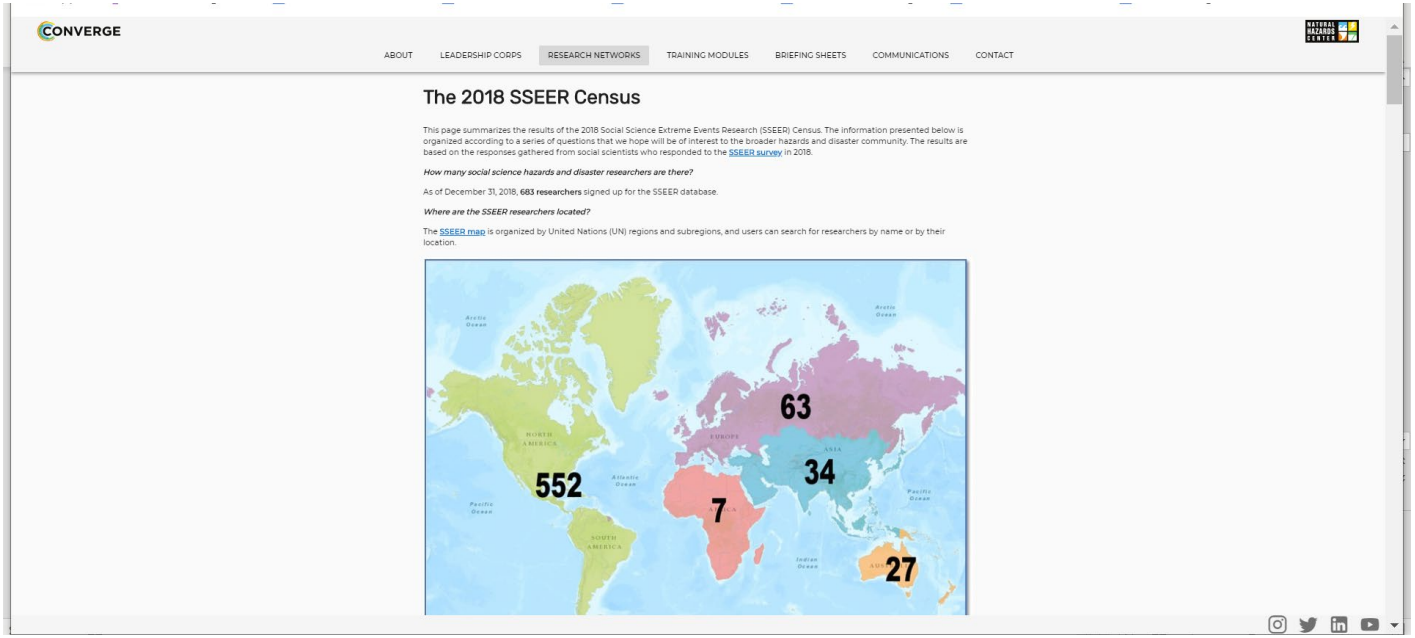
Why SSEER?

- A **network** for social and behavioral scientists who study hazards and disasters

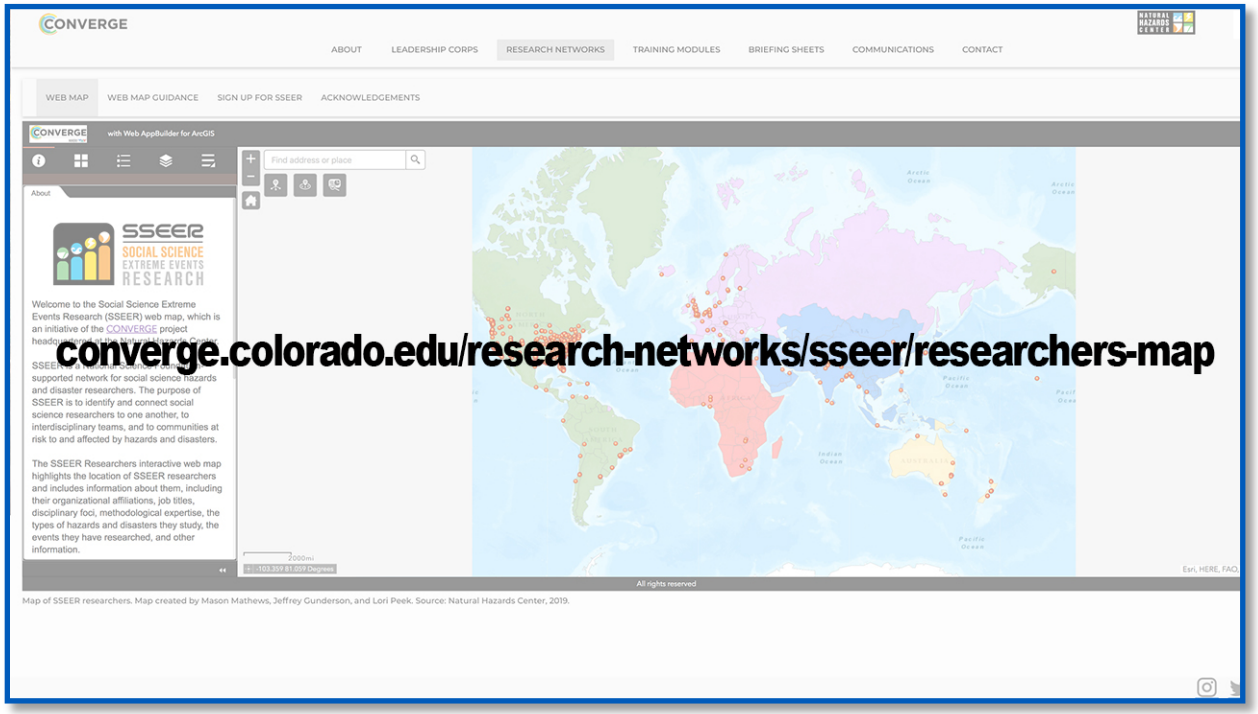


816 researchers



Why SSEER?

- **Learn more about diverse social scientists** who study hazards and disasters
  - discipline
  - professional status
  - methods
  - events
  - etc.

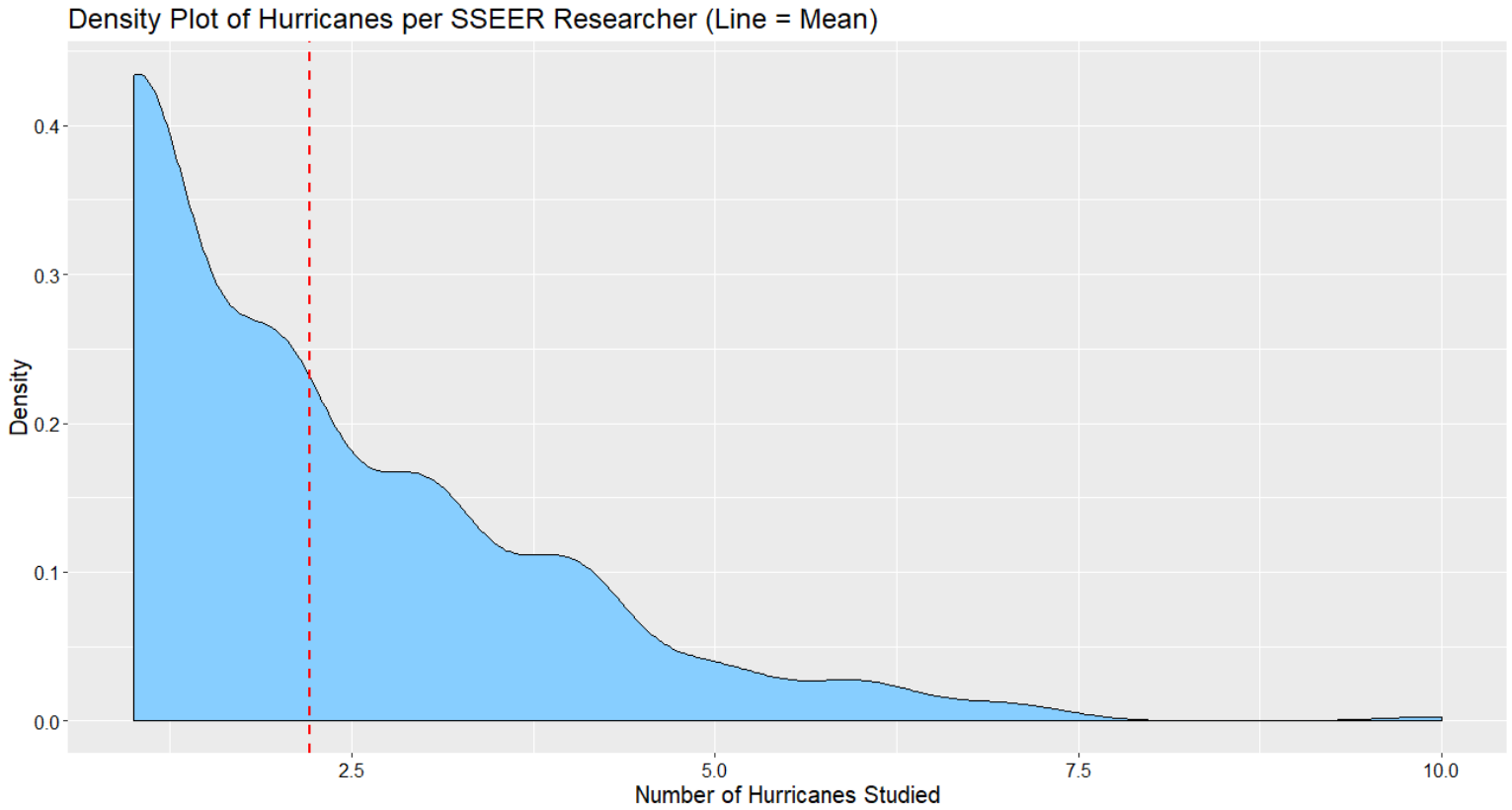


How many SSEER researchers study hurricanes? *349 of 816*

What percentage of SSEER researchers study hurricanes? 43%

How many hurricanes did people study on average?

Mean = 2.2, Median = 2, Mode = 1, Stand. Dev. = 1.5, Min = 1, Max = 10



SSEER researchers studied two hurricanes on average.

A few researchers studied up to ten.

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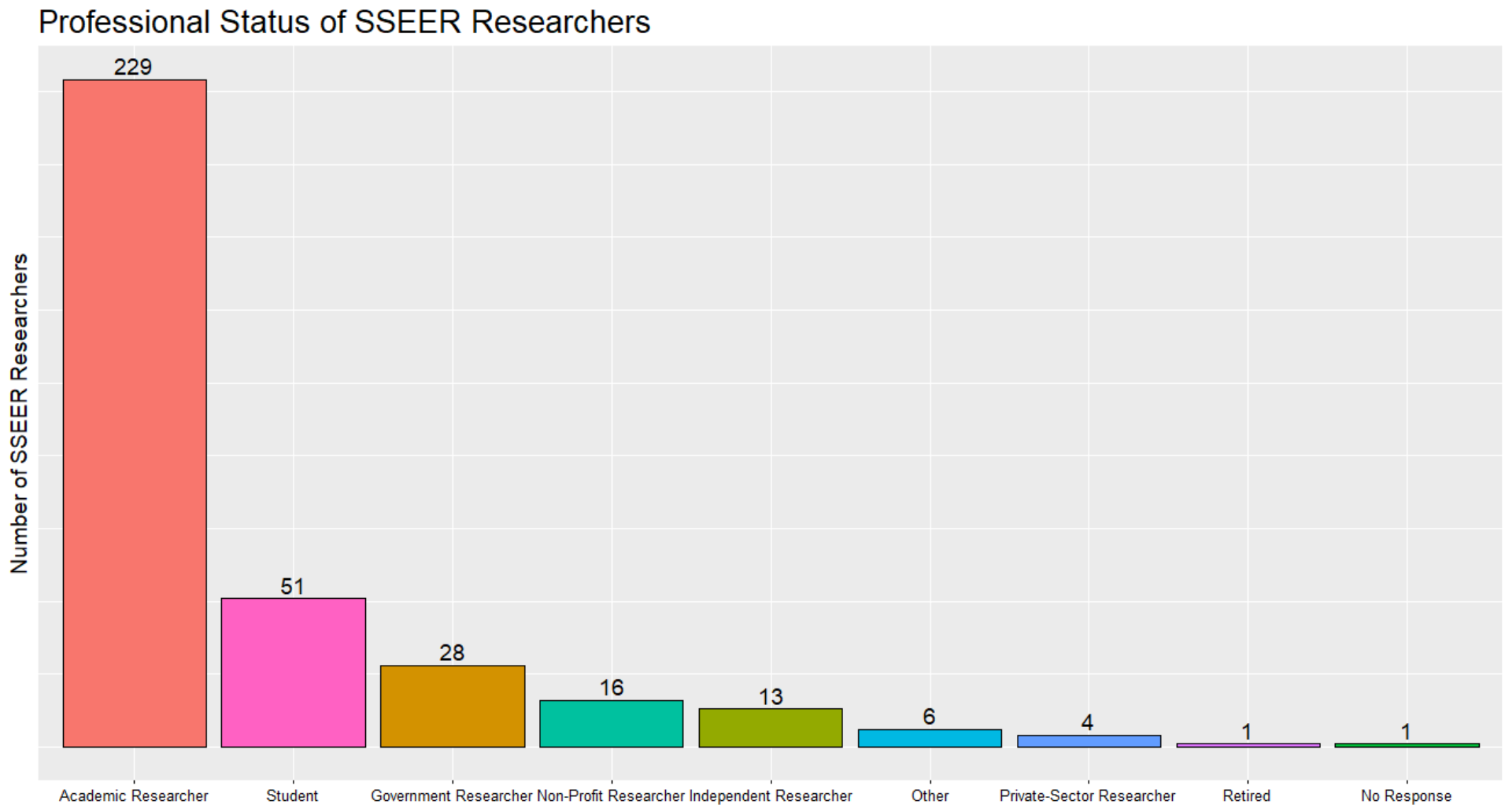
What is the professional status of SSEER researchers who study hurricanes?



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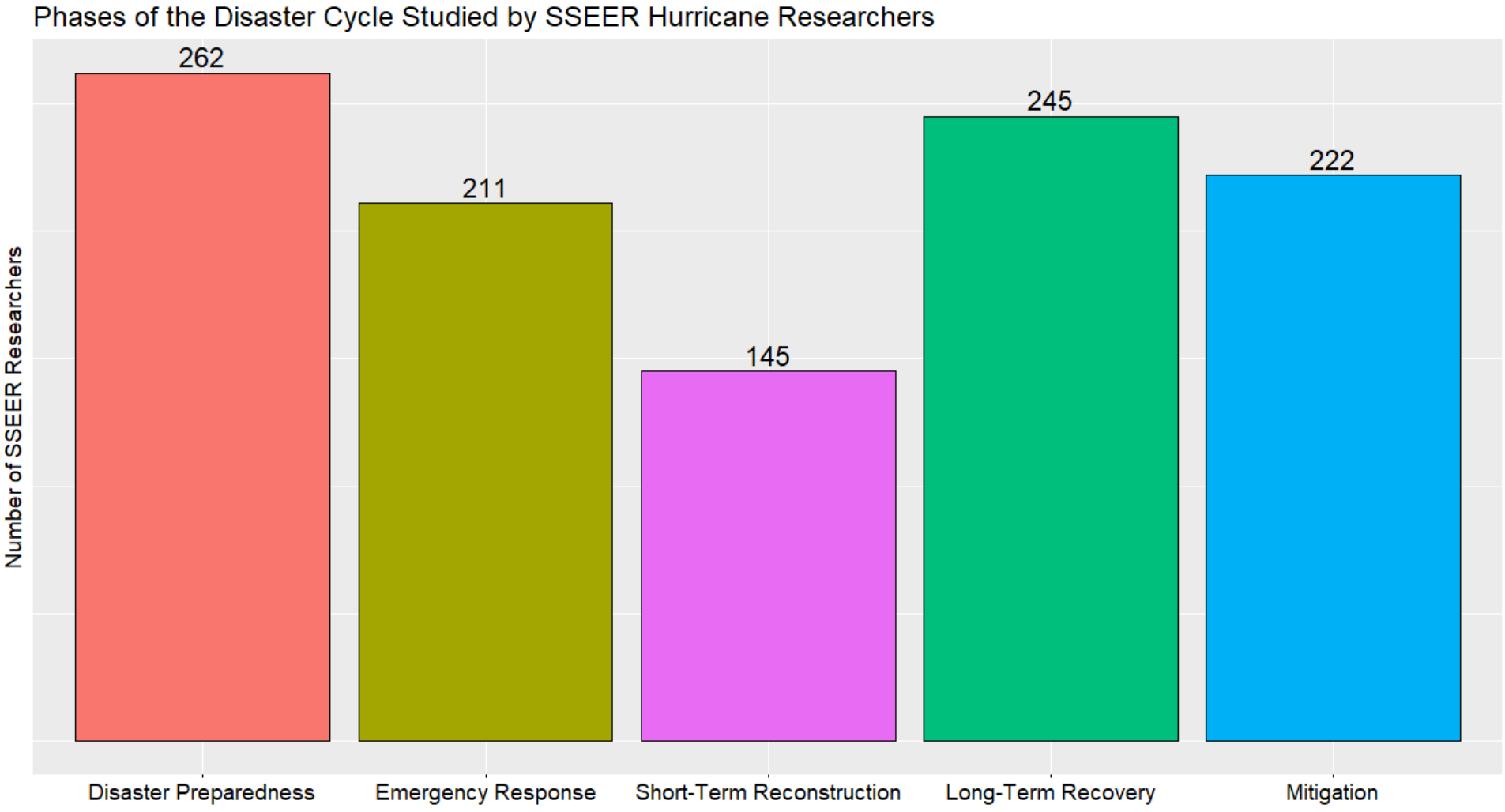
Which phases of the disaster cycle do SSEER hurricane researchers study?



**most respondents chose multiple phases*

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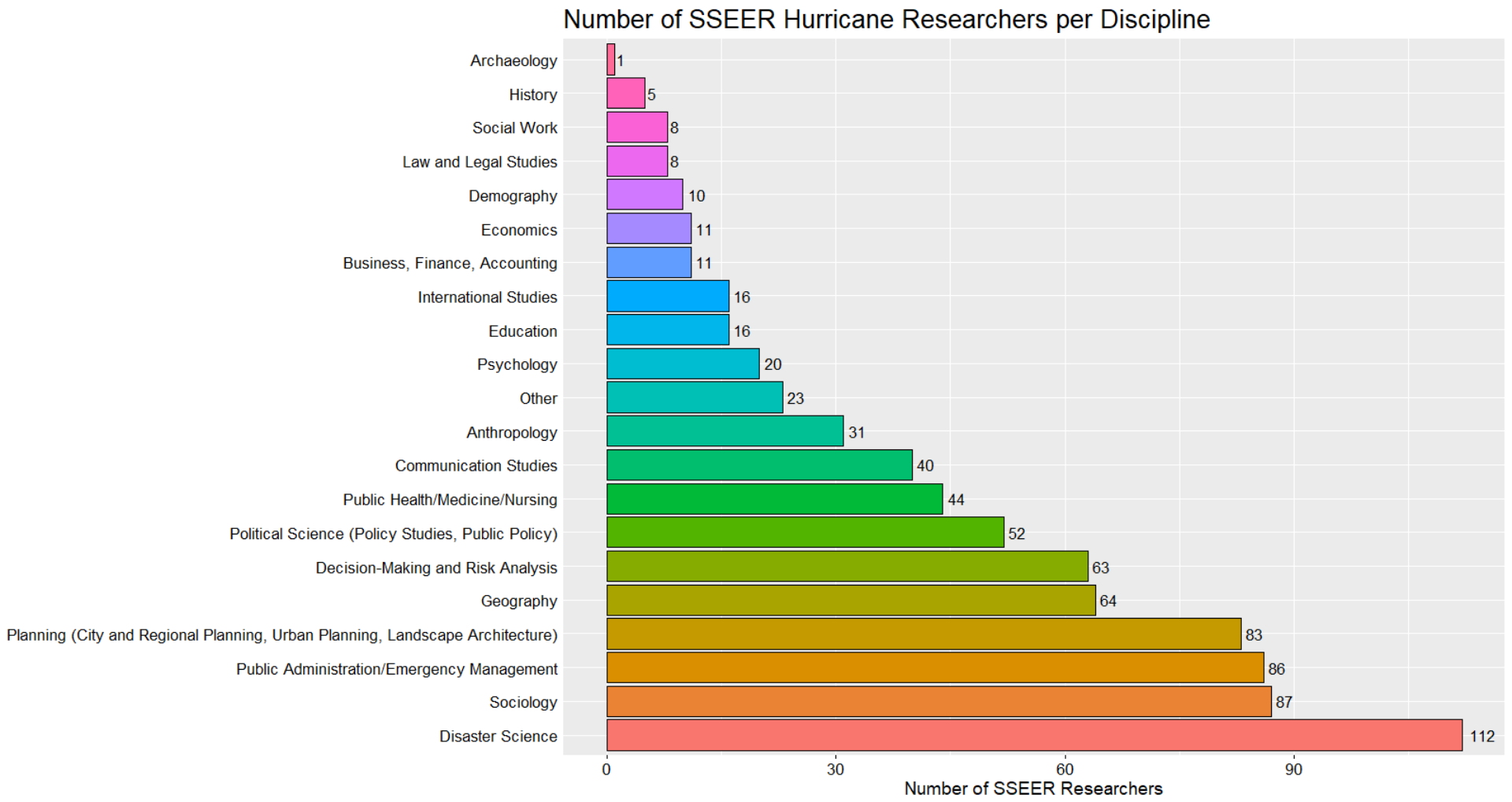
What are the disciplinary backgrounds of the SSEER researchers who study hurricanes?



**respondents often chose more than one discipline*

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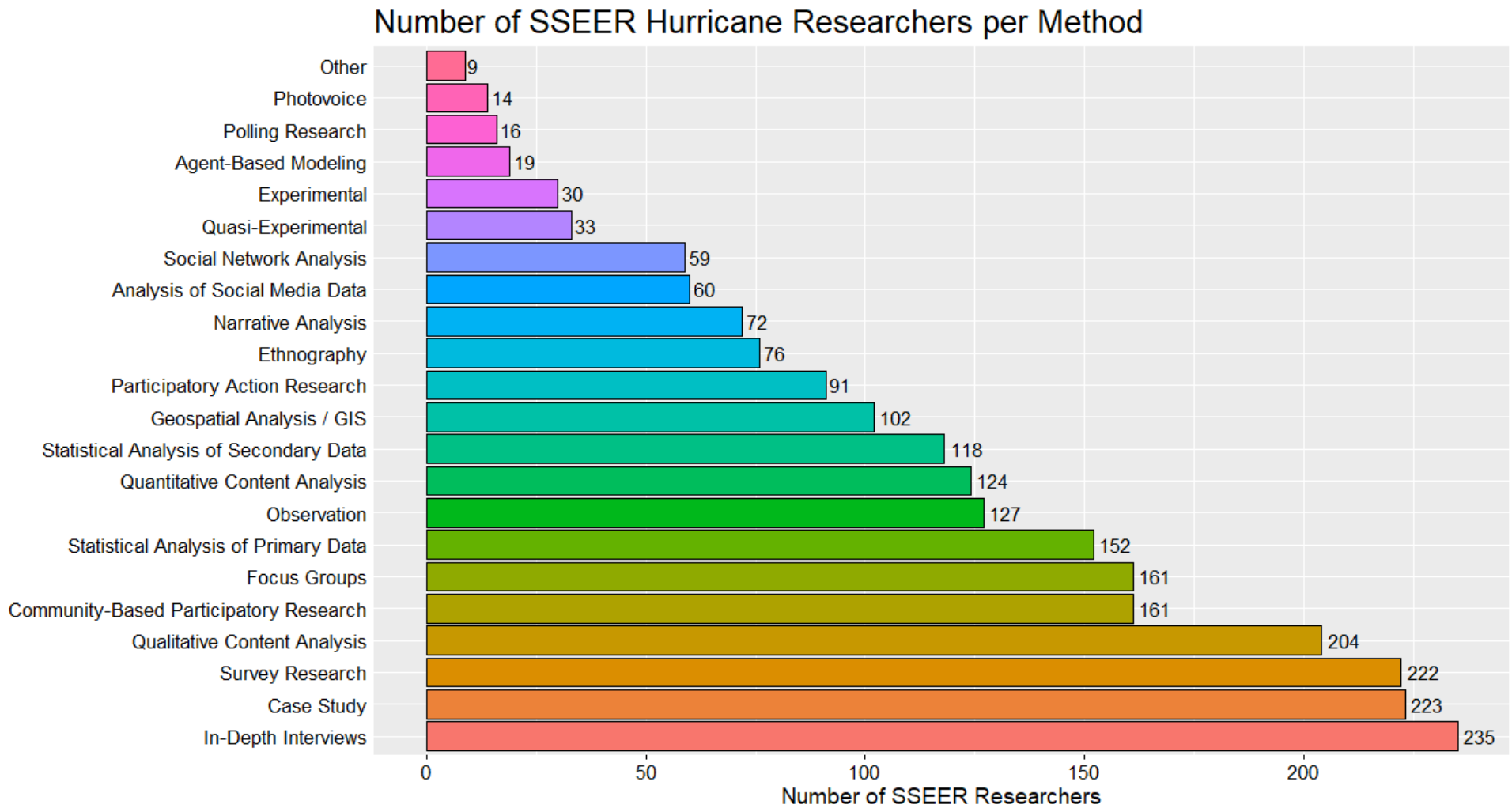
Which methods do the SSEER researchers who study hurricanes use?



**researchers chose multiple methods*

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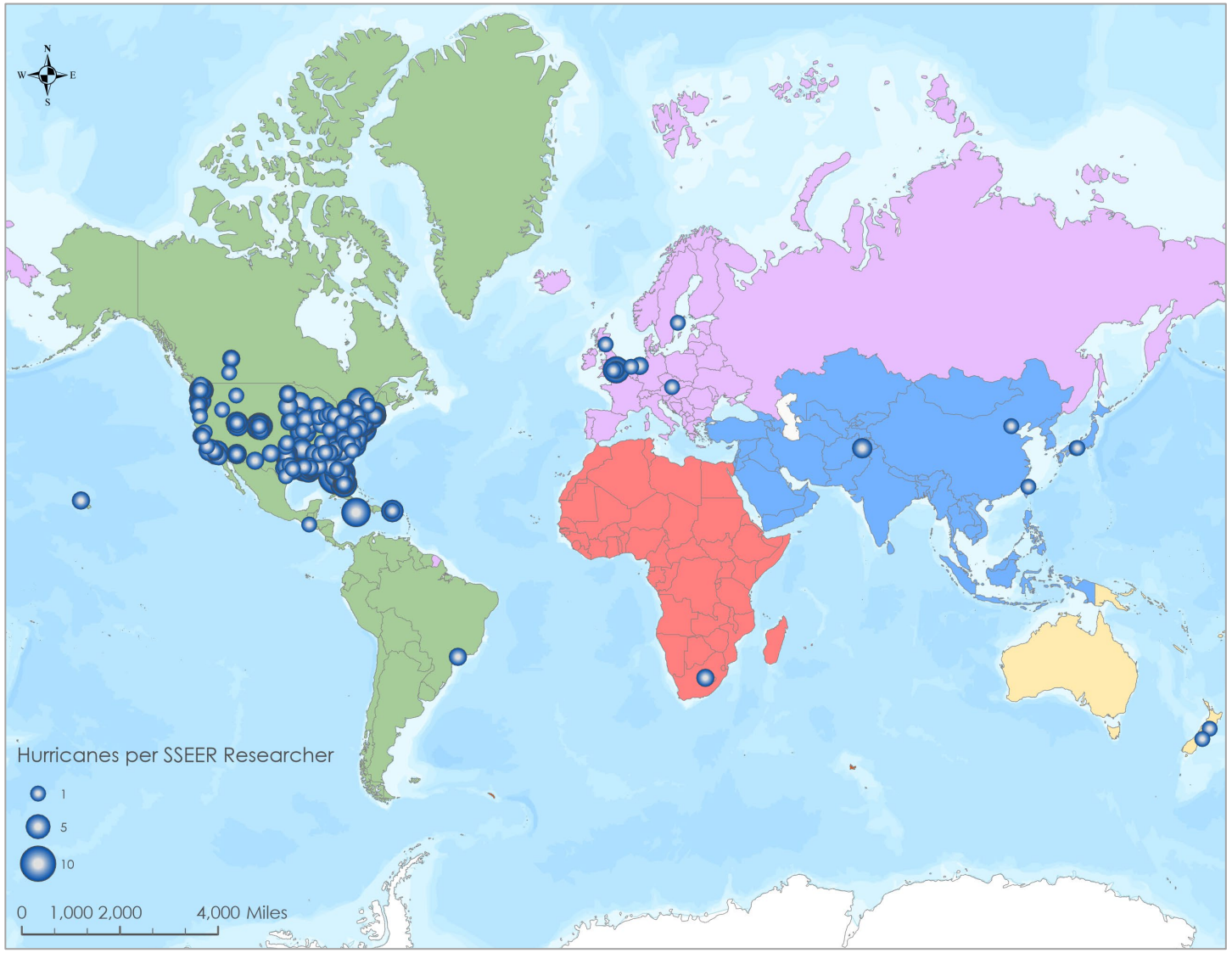
Where are the SSEER researchers who study hurricanes?



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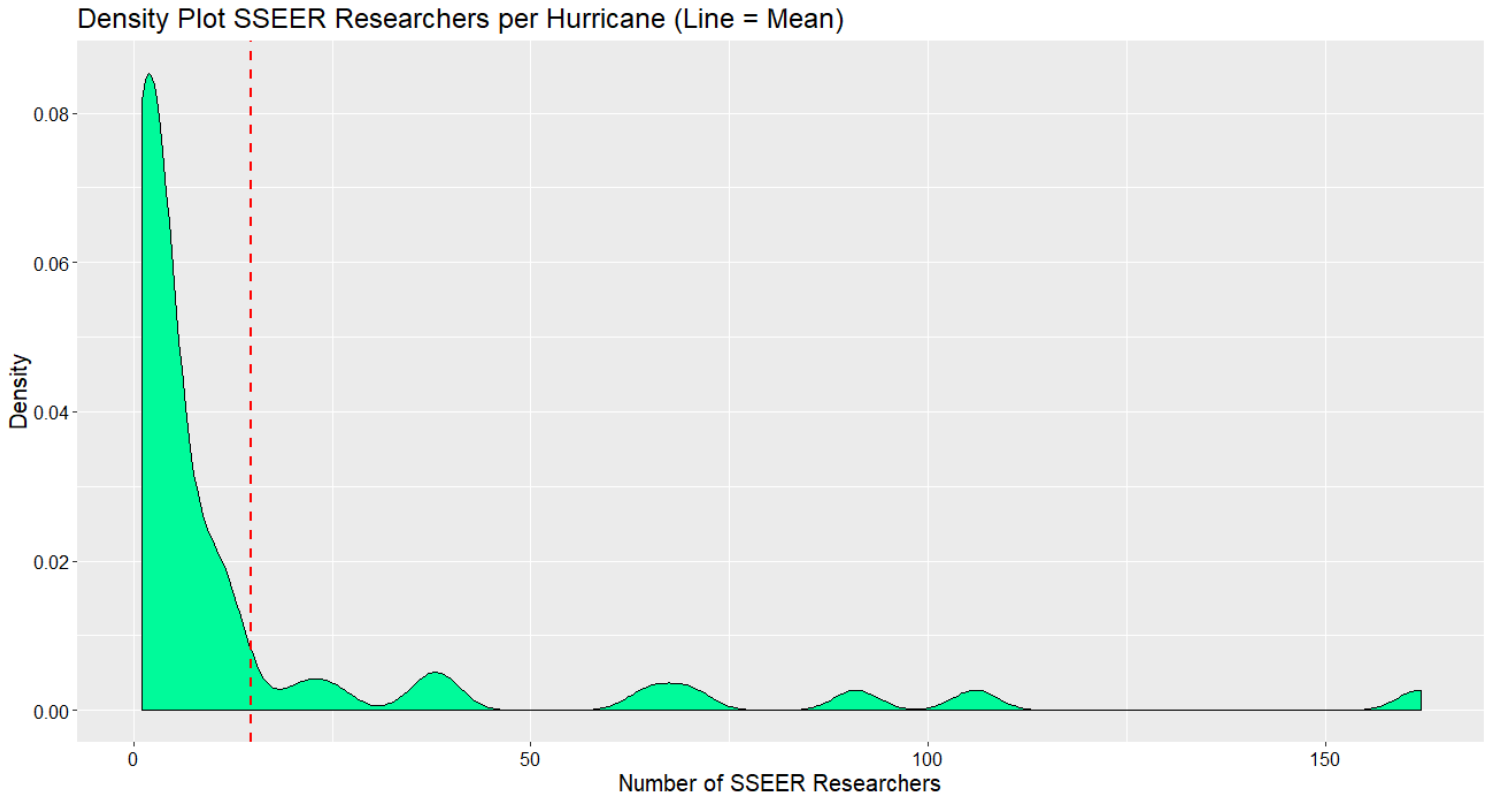
converge.colorado.edu/research-networks/sseer/researchers-map

How many hurricanes were studied by SSEER researchers?

52 of the 1,065 (5%) unique disasters studied by SSEER researchers were hurricanes.

How many SSEER researchers per hurricane on average?

Mean = 14.8, Median = 3, Mode = 1, Stand. Dev. = 30.8, Min = 1, Max = 162



Most hurricanes in the data are studied by only a few researchers.

There are a few very popular hurricanes.

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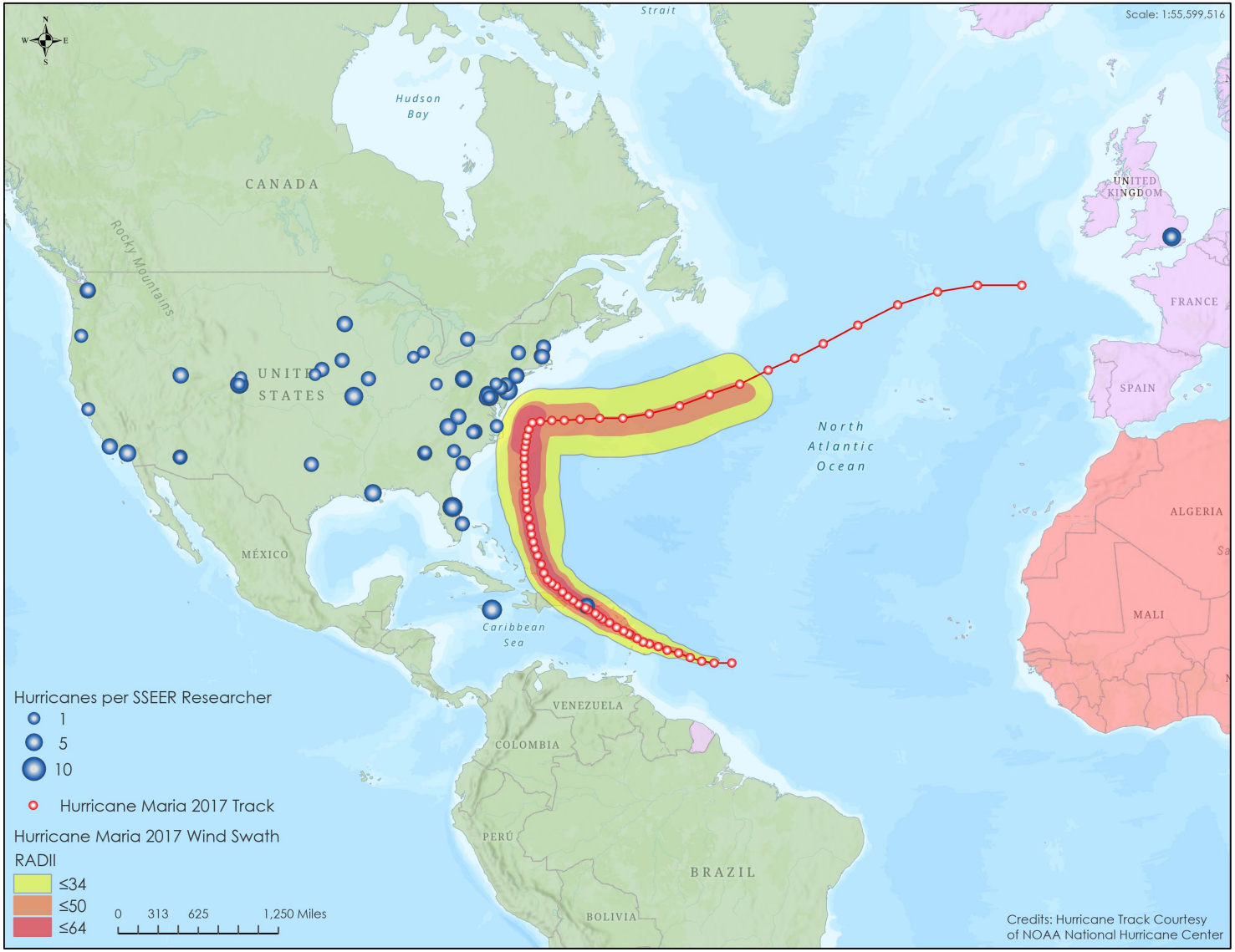
What are the top 20 most studied hurricanes by SSEER researchers?

How many SSEER researchers studied each hurricane?

Rank	Hurricane	Number of SSEER Researchers
1	Hurricane Katrina, 2005	162
2	Hurricane Harvey, 2017	106
3	Hurricane Sandy, 2012	91
4	Hurricane Maria, 2017	70
5	Hurricane Irma, 2017	65
6	Hurricane Matthew, 2016	39
7	Hurricane Ike, 2008	37
8	Hurricane Rita, 2005	25
9	Hurricane Florence, 2018	21
10	Hurricane Irene, 2011	13
11	Hurricane Andrew, 1992	12
12	Hurricane Gustav, 2008	11
13	Hurricane Ivan, 2004	11
14	Hurricane Isaac, 2012	10
15	Hurricane Michael, 2018	10
16	Hurricane Mitch, 1998	9
17	Hurricane Hugo, 1989	7
18	Florida Hurricane Season, 2004	5
19	Hurricane Frances, 2004	5
20	Hurricane Georges, 1998	5

Where are the researchers in relation to the hurricanes they study?

Locations of the SSEER researchers who studied Hurricane Maria, 2017



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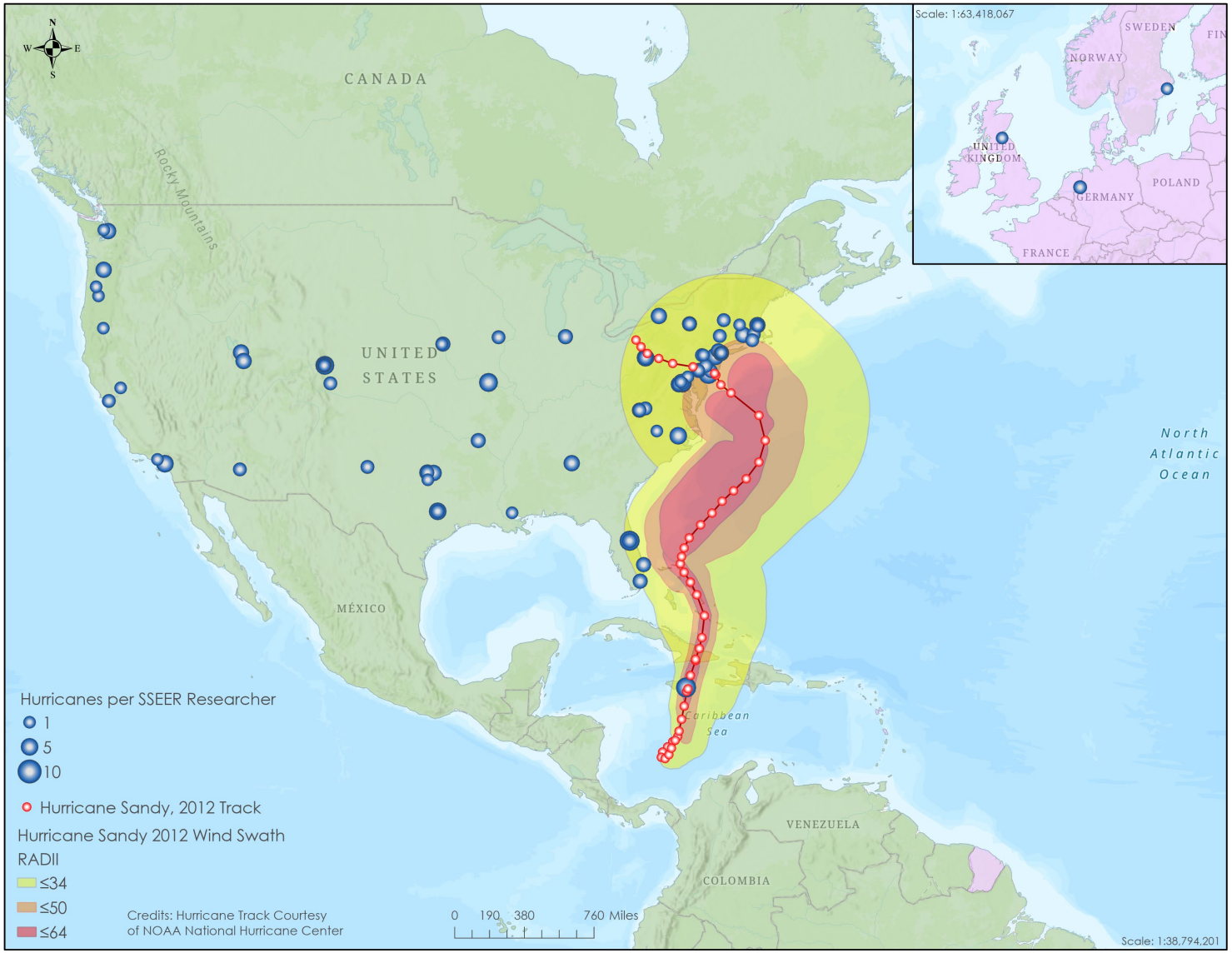
Locations of the SSEER researchers who studied Hurricane Sandy, 2012



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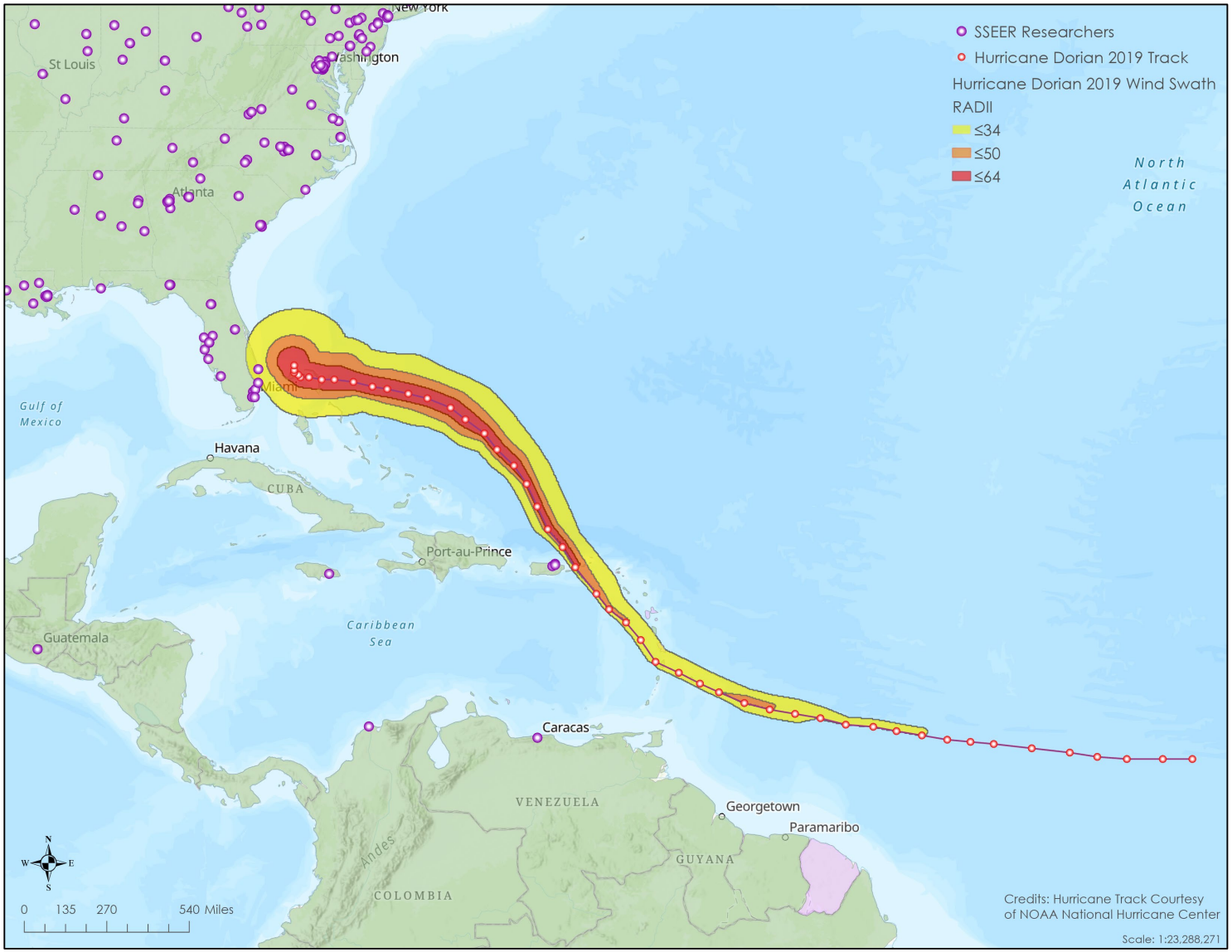
SSEER and locally affected hazards and disaster researchers

How can the platform be used to identify researchers affected by hazard and disaster events?

SSEER researchers potentially affected by Hurricane Dorian, 2019



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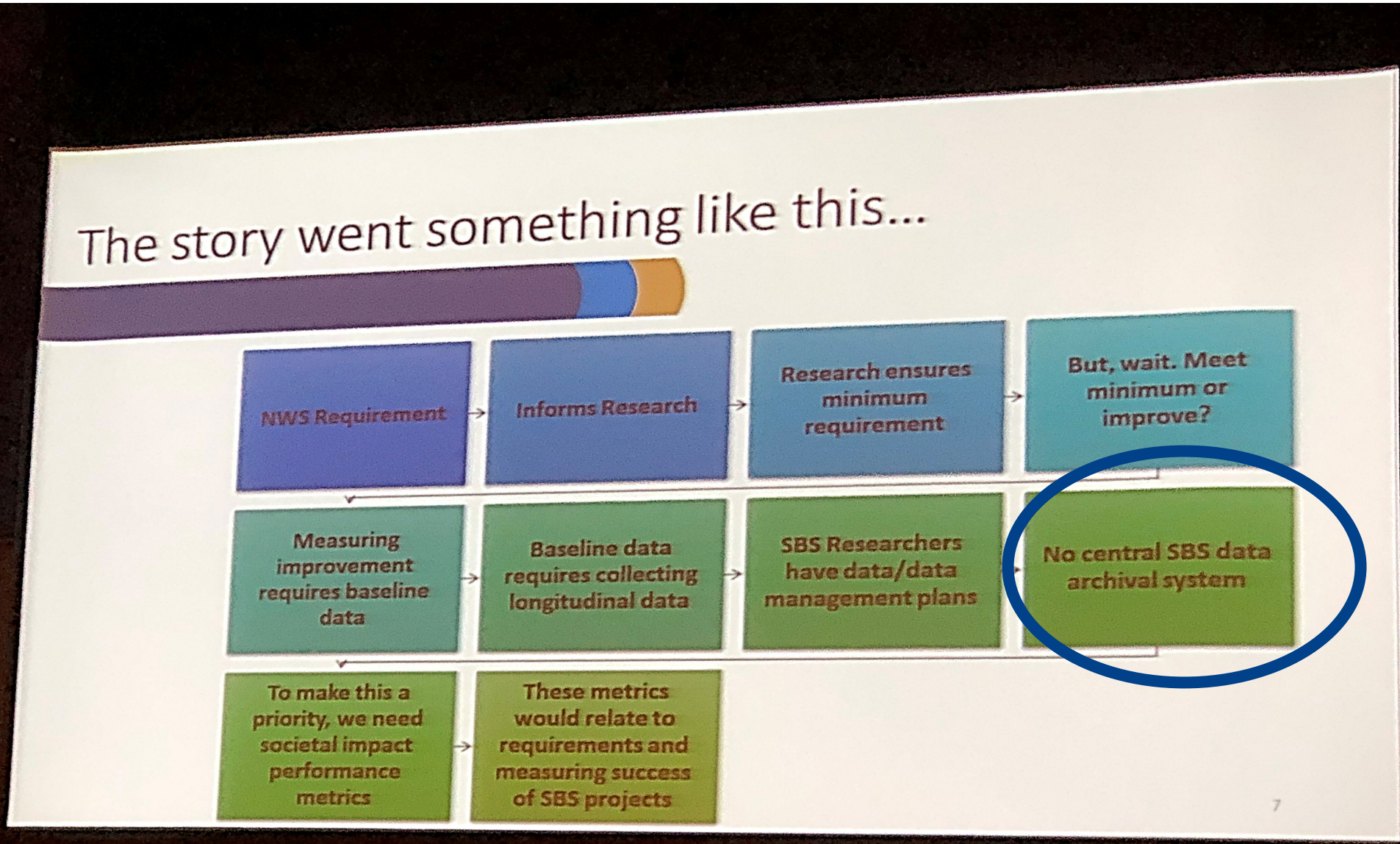
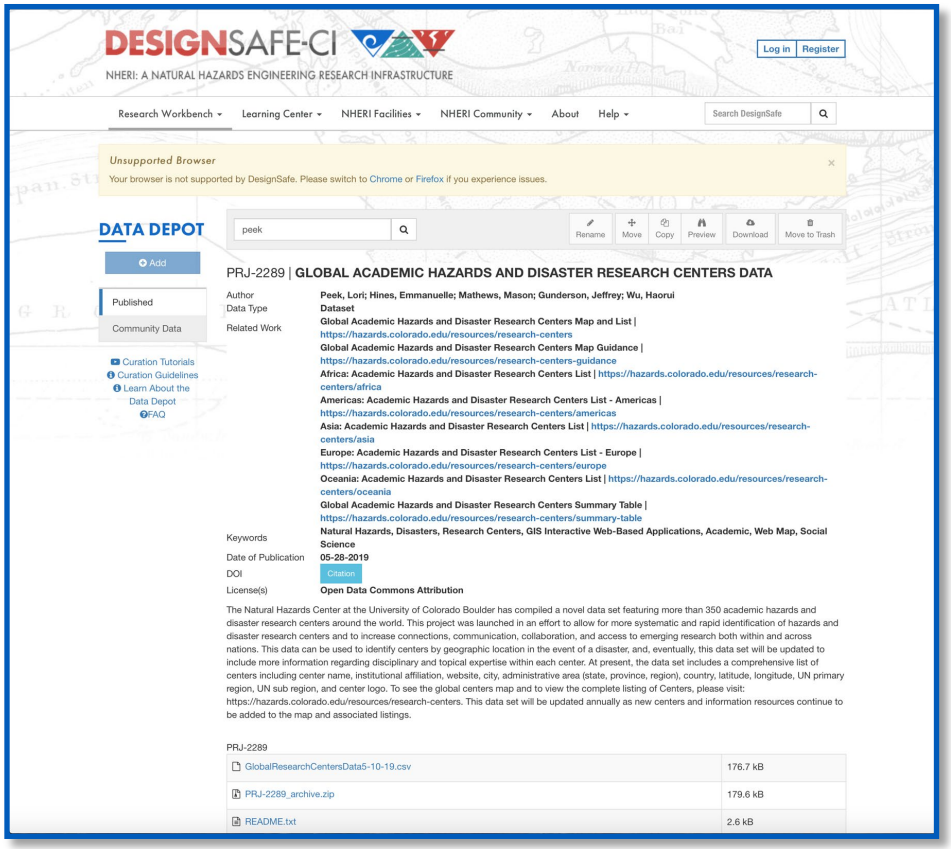
4. Data Publication Opportunities



4. NSF Supports Cyberinfrastructure for Hazards and Disaster Data Publication!



DESIGNSAFE-CI
A NATURAL HAZARDS ENGINEERING COMMUNITY

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RAPID NHERI
Post-disaster Rapid Response Research Facility

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Social Science and Interdisciplinary Data Model

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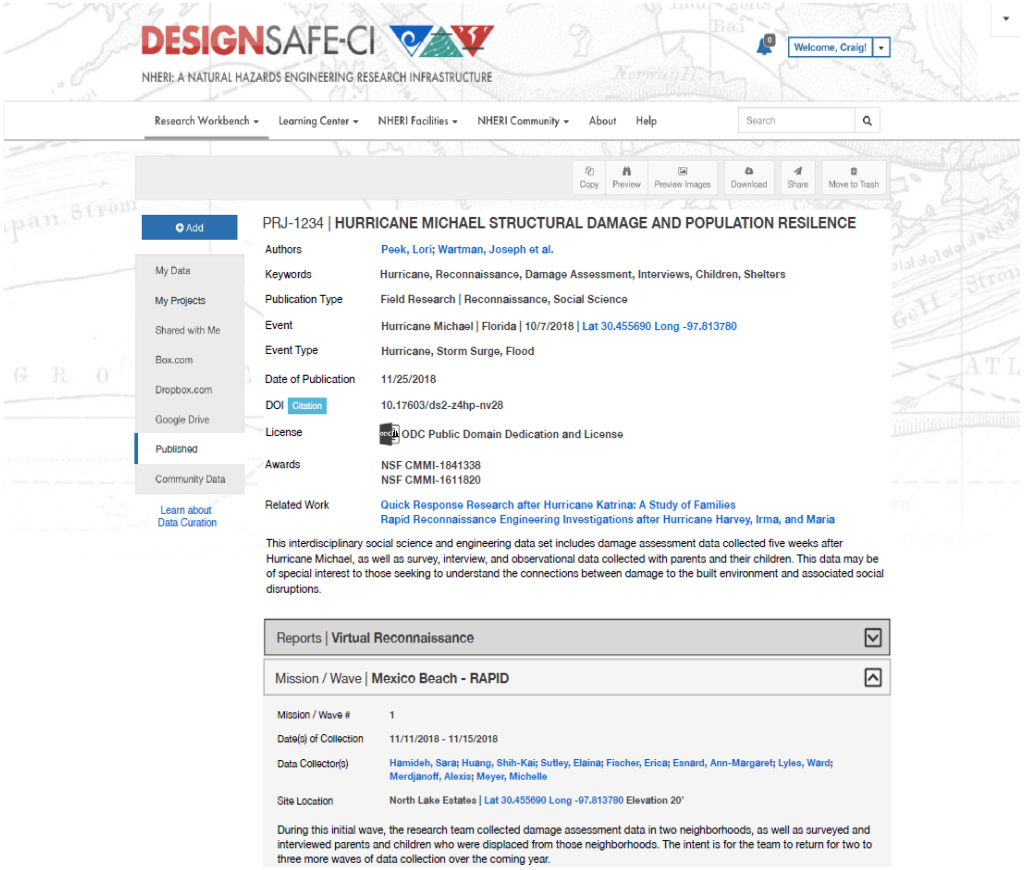
Social Science and Interdisciplinary Data Model



- Planning Documents and Research Protocols
- Interview Guides, Questionnaires
- Audio Recordings
- Photos
- Data

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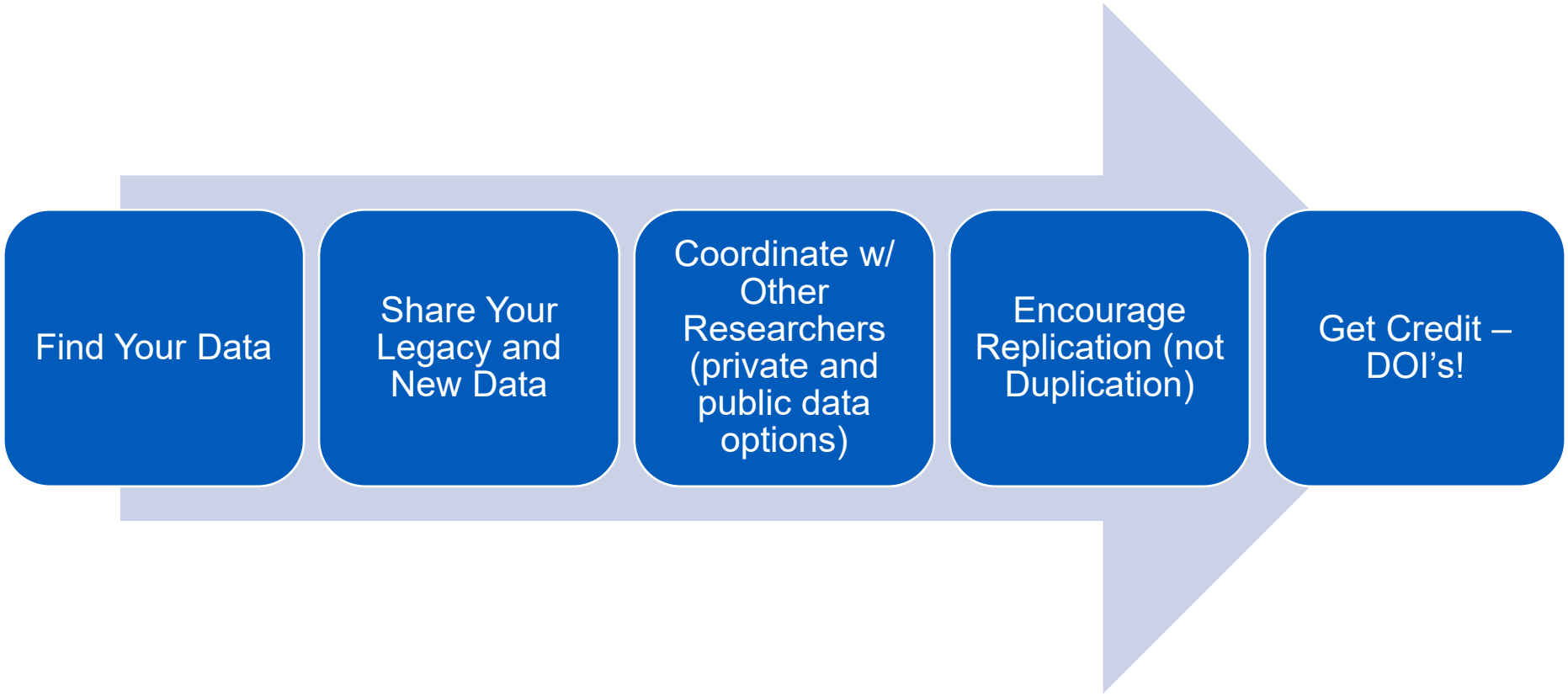
Why Publish?

Why Publish?



Identify Gaps + Advance Science

Thank you so very much!

converge.colorado.edu

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