The purpose of this research project is to explore the pipeline of Social Science Extreme Events Researchers (SSEER) by studying Hurricane Harvey and comparing the training of emerging researchers. Specifically, this project analyzes the knowledge, skills, and training characteristics of social science researchers. Using Hurricane Harvey as a case study, this project explores the disciplinary training, level of involvement in hazards and disaster (H&D) research, and geographic location of social science researchers using data from the SSEER network.

Introduction and Background

The effects of climate change impact societies and individuals in unequal ways, increasing the need for trained and multifaceted social scientists. However, few analyses focus on the social science researcher workforce and their capabilities (Peek, Champeau et al., 2020). As human-centered challenges like environmental justice and disaster preparedness become more prominent, social science researchers are needed to guide technical and policy recommendations; future researchers may need more and different skills to tackle these challenges. Moreover, it is unclear how many social science researchers are active in the H&D field, particularly regarding hurricanes.

Simultaneously, due to their growing threat, more research on hurricanes is needed. Studies consistently show that millions of people have their lives impacted or destroyed by such extreme events (GRID, 2017). As a singular event, Hurricane Harvey is well positioned to serve as a case study because it became the costliest disaster in United States history. It is also the second-most studied event by (SSEER) members, after Hurricane Katrina.

Data Retrieval

- Data is obtained from the SSEER network, which seeks to be the first census for H&D researchers.
- Derived from a survey that is designed to take less than 10 minutes, these data reveal information such as geographic location, researchers’ levels of involvement in H&D studies, and the specific disaster events studied by SSEER members.
- Includes 1,230 members from August 2018 to December 2020

Focus Areas

- Geographic Location
- Disciplinary Background
- Emerging Researchers
- Hurricane Harvey Researchers
- Number of hurricane researchers
- Number of Hurricane Harvey researchers
- Geographical Location of Hurricane Harvey Researchers
- Count of Disciplinary Identification by Researcher (all members)

Preliminary x2 Results

Discipline X Researcher Involvement
- Does not identify with disaster discipline
- Identifies with disaster discipline

Number of Hurricane Harvey researchers
565
149

Self-Reported Level of Researcher Involvement in H&D (N=1,230)

22.11%
24.15%
3.82%
7.72%
42.20%

Core Researcher
Emerging Researcher
Periodic Researcher
Situational Researcher
Missing

Pearson’s χ2 (10) = 16.2867
Pr = 0.001*

Discussion

As depicted in the map, large events like Hurricane Harvey can generate global research interest. However, the vast majority of hurricane researchers are located in the United States, as evidenced. There is a statistically significant relationship between researcher involvement and identification with the selected disaster disciplines; involvement in the H&D field varies for researchers with these disciplinary backgrounds.

There may be a connection between studying hurricanes and identifying with the selected disciplines. There is a distinct relationship between studying hurricanes and researcher involvement. Finally, there is a significant relationship between studying Harvey and researcher involvement. Those who were core and emerging researchers were more likely to study Harvey, signifying the importance of the event to these groups.

Future Directions

In the future, I would like to continue studying the level of researcher involvement and how it relates to policy recommendations and other academic and applied work.

References


Acknowledgements

I would like to extend a special thanks to all my mentors. This research was funded by a grant from the National Science Foundation, during the Natural Hazards Engineering Research Infrastructure-Research Experience for Undergraduates (REU) program (NSF Award: #1612144). I would also like to thank CONVERGE at the University of Colorado Boulder (NSF Award: #1841338).