2018 SSEER CENSUS

The results of the 2018 Social Science Extreme Events Research (SSEER) Census are based on the responses gathered from social scientists who responded to the SSEER survey between its release date on July 8, 2018 and December 31, 2018.

AS OF DECEMBER 31, 2018, **648 RESEARCHERS** SIGNED UP FOR THE SSEER NETWORK.

WHERE ARE SSEER RESEARCHERS LOCATED?

The **SSEER interactive map** is organized by United Nations (UN) regions and subregions, and users can search for researchers by name or by their location (**see Figure 1**).
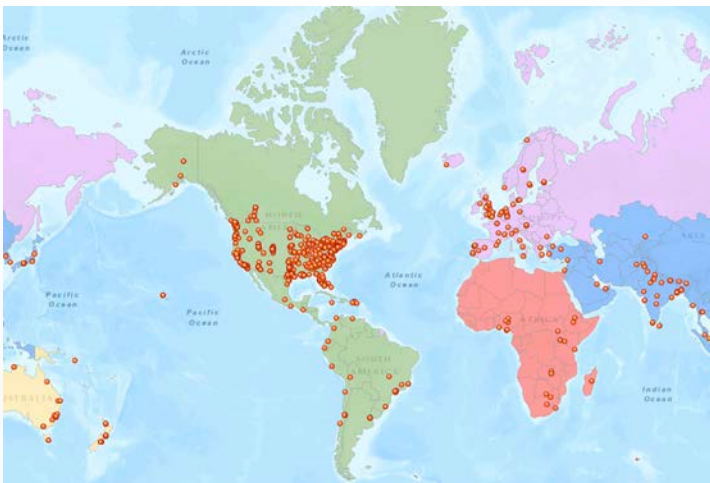

Figure 1. SSEER Interactive Web Map.

The vast majority of SSEER members reside in the Americas (80.40%). Of those who do not live in the Americas, most live in Europe (9.10%), Asia (5.25%), or Oceania (4.01%). Fewer than 1% of members reside in Africa (.93%). Only two SSEER members (.31%) did not provide a region of residence (**see Figure 2**.)
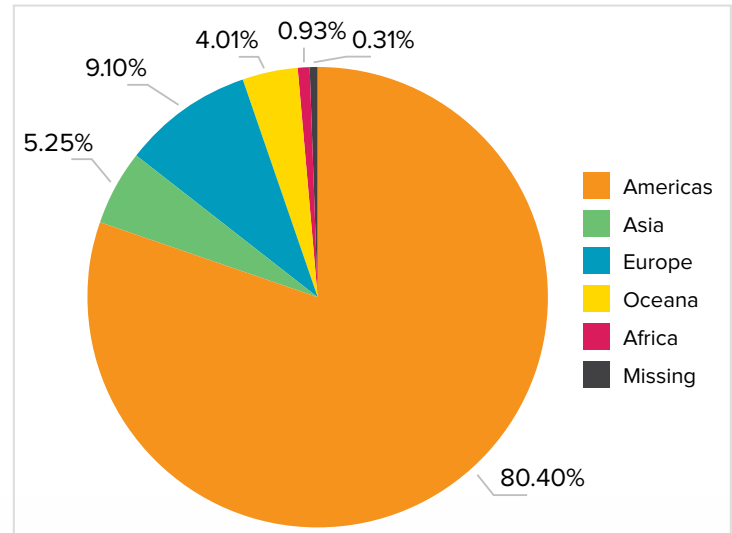

Figure 2. SSEER Researchers by UN Region.

- Americas
- Asia
- Europe
- Oceana
- Africa
- Missing

The table on page 2 shows the number of SSEER members by region, subregion, and country. This closer inspection reveals that SSEER membership is highly concentrated in the Americas, with most researchers located in the North American subregion and the United States specifically. Few members are located in the Caribbean, Central American, or South American subregions. More specific details follow in **Table 1**.

WHAT IS THE DISCIPLINARY BACKGROUND AND EXPERTISE OF SSEER RESEARCHERS?

There is no single, universal **definition for which disciplines are included in the social sciences** and related disciplines in the behavioral sciences and humanities. These blurry boundaries are related to what researchers study and the approaches they use in their work. Generally speaking, however, most social scientists are concerned with the connections between individuals, groups, institutions, and society.

Region	Number of People in the Region	Subregion	#of People in the Subregion	Country	# of People in the Country
Africa	6	Eastern Africa	2	Zambia	2
		Southern Africa	3	South Africa	3
		Western Africa	1	Nigeria	1
Americas	521	Caribbean	1	Jamaica	1
		Central America	1	Mexico	1
		North America	499	Canada	28
				United States	471
		South America	20	Argentina	3
				Bolivia	1
				Brazil	11
				Chile	2
				Columbia	1
				Peru	1
				Venezuela	1
Asia	34	Eastern Asia	10	Japan	6
				Republic of China	4
		South-Eastern Asia	6	Indonesia	1
				Philippines	1
				Thailand	3
				Union Republic of Myanmar	1
		Southern Asia	15	Bangladesh	3
				India	8
				Iran	1
				Nepal	1
				Pakistan	1
				Sri Lanka	1
		Western Asia	3	Kingdom of Saudi Arabia	1
				Turkey	1
				United Arab Emirates	1
Europe	59	Eastern Europe	1	Romania	1
		Northern Europe	27	Denmark	2
				Finland	1
				Norway	2
				Scotland	1
				Sweden	3
				United Kingdom	18
		Southern Europe	15	Italy	4
				Portugal	10
				Spain	1
		Western Europe	16	Austria	4
				France	2
				Germany	5
				The Netherlands	5
Oceania	26	Australia and New Zealand	26	Australia	11
				New Zealand	15
				Missing	2
				Total	**648**

Table 1. SSEER Researchers by UN Region, Subregion, and Country.

In the SSEER Census, we asked researchers to identify their primary discipline—or set of disciplines for those with multidisciplinary training—as shown in **Figure 3**. Figure 3 does not sum to 648 because researchers could, and often did, select more than one discipline.

WHAT IS THE EDUCATIONAL AND PROFESSIONAL BACKGROUND OF SSEER RESEARCHERS?

In the SSEER survey, we asked researchers to share information about their highest level of education completed. Most SSEER researchers hold a doctoral degree (66.98%); the second most common degree held by researchers is a master's degree (24.07%). Fewer members indicated a highest level of educational attainment at the bachelor's (4.63%) or associate's level (.62%) or a professional degree (15%) (**see Figure 4**).

In terms of primary professional status, most SSEER researchers self-identified as academic researchers (61.42%), followed by students (15.9%) and government researchers (8.8%). Fewer members identify as independent researchers (4.17%), non-profit researchers (4.01%), or private sector researchers (2.16%). Some members identified as another kind of professional (2.93%) and a few indicated they are retired (.31%) (**see Figure 5**).
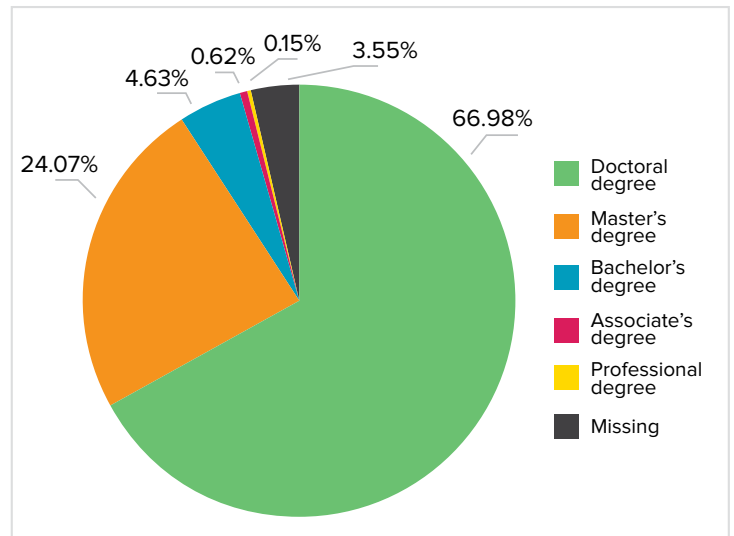

Figure 4. SSEER Researchers by Highest Academic Degree Completed.
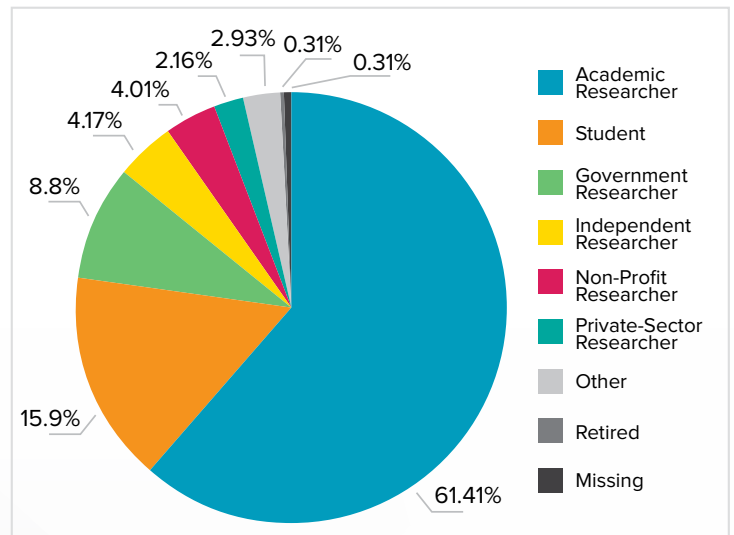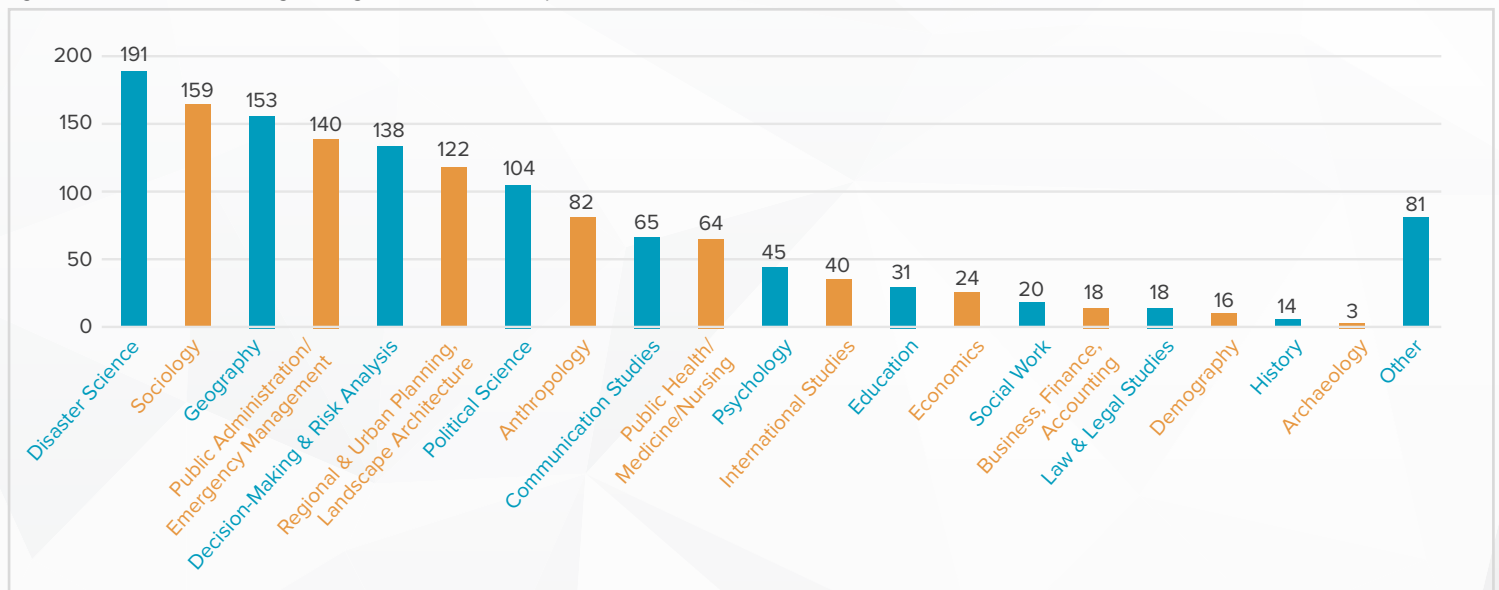

Figure 5. SSEER Researchers by Primary Professional Status.

Figure 3. SSEER Researchers by Primary Social Science Discipline.

WHAT IS THE LEVEL OF INVOLVEMENT OF SSEER MEMBERS IN HAZARDS AND DISASTER RESEARCH?

In the 2006 National Research Council consensus study, *Facing Hazards and Disasters: Understanding Human Dimensions*, the authors raised a number of questions regarding the state of the hazards and disaster research workforce. In response to their calls for a more precise description of the levels of involvement among the members of this community, we asked SSEER researchers to select which of the following categories best describes their current status as a hazards and disaster researcher:

Core Researcher: Strongly self-identifies as a hazards/disaster researcher, has a deep commitment to the field, and has engaged in hazards and disaster research for a sustained amount of time.

Periodic Researcher: Is not primarily engaged in hazards and disaster research but focuses on related topics from time to time throughout one's professional career.

Situational Researcher: Not previously trained or involved in the hazards and disaster field but had the opportunity to study new phenomena or processes based on a situational event; for example, a researcher who undertook a study after his or her community was affected by a major disaster.

Emerging Researcher: Includes students and others who are new to the field and who are still learning about its disciplinary, multidisciplinary, or interdisciplinary histories, theories, methods, and approaches. Emerging researchers may have limited experience or may not have yet conducted their own original empirical research.

As shown in **Figure 6**, most SSEER members self-identify as core researchers (47.99%), followed by emerging researchers (21.6%), periodic researchers (20.22%), and situational researchers (5.25%).
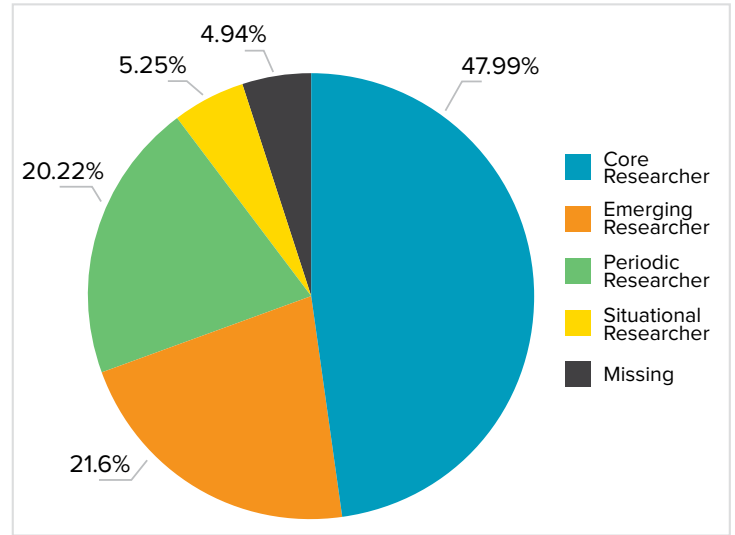

Figure 6. SSEER Researchers by Level of Involvement in the Field.

WHAT METHODS AND APPROACHES DO SSEER RESEARCHERS USE IN THEIR WORK?

Social scientists often use a range of methods and approaches to collect and analyze data. To capture the range of methodological skills among this community, we asked researchers to identify each of their primary approaches to data collection and analysis. As summarized in **Figure 7**, the most popular methodological approaches include in-depth interviews, survey research,

Figure 7. Preferred Methodological Approaches of SSEER Researchers.
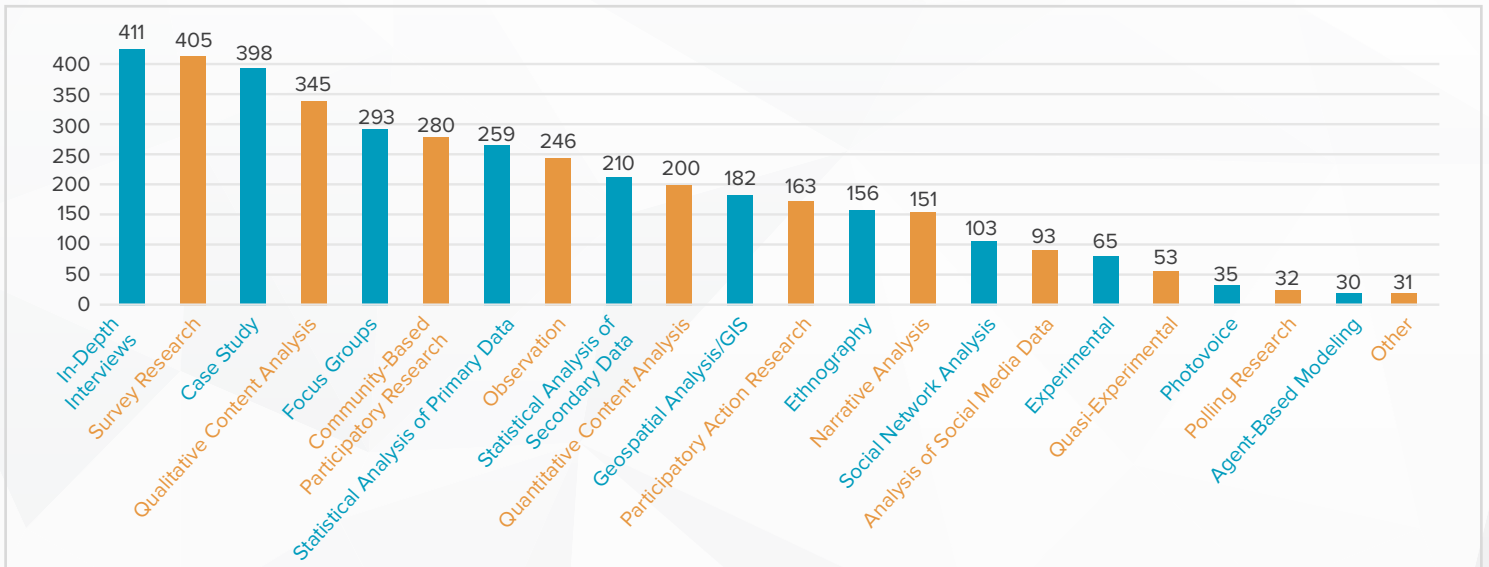
and case studies. The numbers in the figure do not sum to the sample size of 648 because researchers had the option to choose more than one approach, and most did so.

WHAT PHASES OF THE DISASTER LIFECYCLE HAVE SSEER RESEARCHERS STUDIED?

Social scientists who research hazards and disasters often identify themselves by the disaster phases, disaster types, and the disaster events they study. Accordingly, the SSEER survey included a range of questions to better understand the expertise that these researchers possess.

Figure 8 shows the different phases across the disaster lifecycle that SSEER researchers have studied. Most SSEER researchers have focused on disaster preparedness (N = 498), followed by mitigation (N = 399), long-term recovery (N = 382), emergency response (N = 375), and short-term reconstruction (N = 228). The numbers here and in the figure below do not sum to the sample size of 648 because researchers had the option to choose more than one phase.
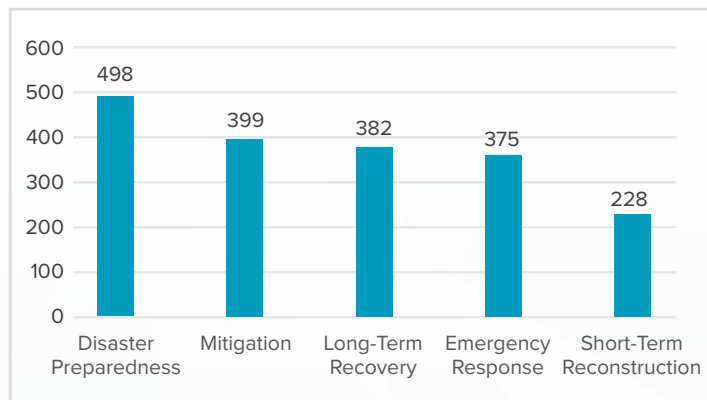

Figure 8. Disaster Phases Studied by SSEER Researchers.

WHAT DISASTER TYPES AND DISASTERS HAVE SSEER RESEARCHERS STUDIED?

Figure 9 includes a summary of all disaster types that SSEER members indicated having studied. As shown below, the majority of SSEER researchers study natural hazards (N = 609; 93.98%), which includes geophysical, meteorological, hydrological, climatological, biological, and extraterrestrial events. In addition, some of the respondents indicated that they also study technological hazards (N = 184; 28.4%) such as industrial accidents,

transport accidents, and toxic exposures. The smallest portion of SSEER respondents indicated that they focus on terrorism or other willful acts of violence (N = 122; 18.83%). The numbers in the figure below do not sum to the sample size of 648 because researchers had the option to choose more than one disaster type that they study.
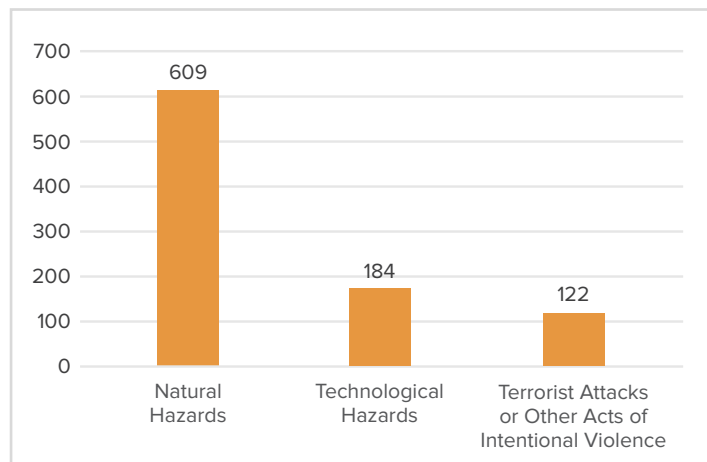

Figure 9. Disaster Types Studied by SSEER Researchers.

To gain more specific information, we asked the SSEER researchers to identify up to 10 specific disaster events that they have studied during their career (as described in more detail below, a few researchers identified more than 10 events). In the end, we received over 700 unique responses to this question, which are also viewable along with keywords characterizing research expertise through each **researcher's profile in the SSEER map.**

Based on replies detailing disasters studied by name of event and year, 24.07% of SSEER members either refrained from responding to the question or had not studied any disasters (N = 156). However, from here, a nearly linear pattern emerged in the data such that, for the most part, SSEER members were more likely to respond that they had studied fewer events than more events. Specifically, nearly as many respondents had studied one disaster event (N = 85; 13.12%) as had studied two (N = 84; 12.96%) or three (N = 75; 11.57%) disaster events. A moderate amount of SSEER members studied four (N = 56; 8.64%), five (N = 49; 7.56%), or six events (N = 43; 6.64%). Less than 5% of SSEER members had researched seven (N = 27; 4.17%), eight (N = 15; 2.31%), or nine events (N = 13; 2.01%), respectively, though just over 5% of members had researched 10 events (5.09%). Few SSEER members indicated they had studied 11 disaster events (N = 8; 1.23%), and less than 1% of members studied 12 or 13 events (N = 3; .46% and N = 1; .15%) (**see Figure 10**).
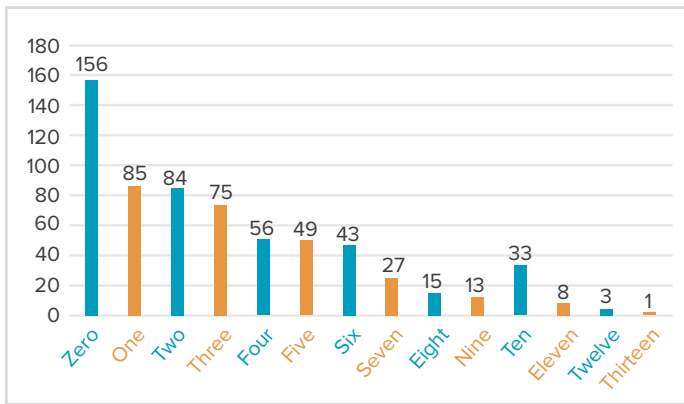
Figure 10. Number of Disaster Events Studied by SSEER Members.

It is interesting to note that among SSEER researchers, the top 10 most frequently studied disasters have all occurred in the 21st century and most of these events happened in the United States (**see Figure 11**). Again, these results should be interpreted with care since this is not yet a complete census of the entire social science community, and SSEER membership is heavily concentrated in the United States. These results are, however, suggestive of which events receive the most attention and in which parts of the world. At the same time, it is important to underscore that SSEER researchers offered over 700 unique responses to the question of which disasters they have studied, and their responses spanned centuries and represented disasters in all of the UN regions.
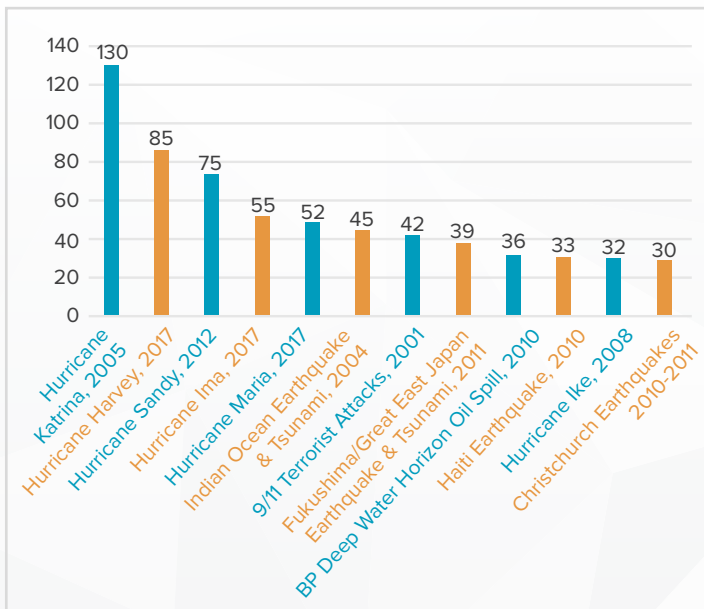

Figure 11. Most Commonly Researched Disaster Events by SSEER Members.

WHAT IS THE DEMOGRAPHIC COMPOSITION OF SSEER RESEARCH WORKFORCE?

The demographic composition of the hazards and disaster research workforce has long been of interest to leaders within the field. One area of special concern is whether or not those studying disasters reflect the demographics of the populations being studied.

With this in mind, we closed the SSEER survey by asking a series of questions regarding respondent age and years of experience, race and ethnicity, and gender identity.

In the 2018 Census, SSEER researchers ranged in age from 21 to 78 years. The average age of the SSEER researchers is 41.68 years, and 10.1 years is the average length of research experience in the hazards and disaster field. Of all respondents, 16.82% did not provide their age.

SSEER survey respondents were asked to select which racial and ethnic categories best describe their identity. When prompted, most SSEER respondents said they identified as White (61.73%). Fewer SSEER members identified as Asian/Asian American (13.73%), Hispanic/Latino (5.40%), or Black/African American (4.32%). A small percentage of respondents selected two or more racial or ethnic categories (2.01%) or some other provided identity option (.62%) such as Indigenous, Native Hawaiian/Pacific Islander, or Arab/Arab American/Middle Eastern. We included "prefer not to answer" and "prefer to self-describe" response options, in recognition that some respondents both inside and outside the United States may be uncomfortable with available fixed identity categories. A sizable minority (12.19%) of SSEER respondents were coded as "missing" because they did not respond to the race/ethnicity question, chose "prefer not to answer," or selected "prefer to self-describe" (**see Table 2**).

	Frequency	Percentage
White	400	61.73%
Asian/Asian American	89	13.73%
Hispanic/Latino	35	5.40%
Black/African American	28	4.32%
Two or more racial/ethnic identities	13	2.01%
Some other provided racial/ethnic identity	4	0.62%
Missing	79	12.19%
Total	**648**	**100%**

Table 2. Racial/Ethnic Identity of SSEER Researchers.

More women than men or non-binary/non-conforming persons responded to the 2018 SSEER survey, as shown in **Table 3**.

	Frequency	Percentage
Woman	340	52.47%
Man	274	42.28%
Some other answer	34	5.25%
Total	**648**	**100%**

Table 3. Gender Identity of SSEER Researchers.

CONCLUSION

Teams of social scientists first began systematically studying disasters in the late 1940s and early 1950s. In the decades since, there have been several calls to learn more about the composition of this research workforce to ensure that it is prepared to meet the challenges posed by a highly unequal social world and an ever more turbulent natural world. In their report on the status of the field, the Committee on Disaster Research in the Social Sciences acknowledged, however, that "it is difficult to be very precise about the demographic structure of hazards and disaster research due to the absence of good data" (NRC, 2006, pp. 322-323). This report responds to that gap by summarizing the results of the first census of social scientists who study hazards and disasters. Our analysis of the SSEER network data has allowed us to characterize the demographic composition, methods and approaches, and other attributes among this dynamic research community.

We will release the SSEER Census results annually via the **CONVERGE website** so that we can continue to monitor the status of the social science hazards and disaster research field. We will also continue to update the interactive **SSEER map** regularly, so if you are a social scientist who studies extreme events and have not yet joined, you are invited to do so by completing the **SSEER membership survey**.

RECOMMENDED CITATION

FURTHER WORK

For further interpretation and analyses of this data, please see: Peek, Lori, Heather Champeau, Jessica Austin, Mason Mathews, and Haorui Wu. 2020. "What Methods Do Social Scientists Use to Study Disasters? An Analysis of the Social Science Extreme Events Research (SSEER) Network." *American Behavioral Scientist* 64(8): 1066-1094.

ACKNOWLEDGMENTS

The Social Science Extreme Events Research—SSEER—network identifies and maps social scientists involved in hazards and disaster research in order to highlight their expertise and connect social science researchers to one another, to interdisciplinary teams, and to communities at risk to hazards and affected by disasters. The goals of SSEER are to amplify the contributions of social scientists, to advance the field through expanding the available social science evidence base, and to enhance collective well-being. SSEER is part of a larger ecosystem of National Science Foundation-funded extreme events research and reconnaissance networks designed to help coordinate disciplinary communities in engineering and the sciences, while also encouraging cross-disciplinary information sharing and interdisciplinary integration. More information on SSEER and the other networks is available on the **CONVERGE website**.