

SSEER Virtual Forum: Puerto Rico Earthquakes Participant Updates, Contact Information, and More

Purpose

The purpose of today's forum is to:

- (1) Learn from SSEER researchers
- (2) Begin a discussion of ethical considerations and possibilities for research coordination
- (3) Identify research questions and the need for perishable or baseline data collection
- (4) Establish whether there is a need for additional social science support in Puerto Rico, and if so, IDENTIFY who may be interested in joining an SSEER field team

Locally-Affected SSEER Researchers in Puerto Rico to Provide Brief Updates for the Network

Jennifer Santos-Hernandez:

Sense of the organization of services for evacuees, the situation of the shelter, and the protective actions after the event, so that's mostly what we have focused on.

Updates on shelter: the ones that have basecamps, the number of evacuees has increased except for one on Guánica.

Drastic change-

A lot of people explained they are moving with relatives to the mainland and leaving shelters. They are staying outside, and they are feeling safer outside because inside the shelter there was concern for health and children with flu-like symptoms.

Services are improving dramatically in terms of having access to showers, toilet, food, clothing, and everything.

Most people do not know what a Presidential declaration of disaster is. Presidential declaration of disaster was actually signed yesterday. Many people are leaving the shelters not knowing this is available.

In terms of logistics, there is a mismatch between donations and needs, distribution, and availability of those resources.

Terms of damage- is disconcerting, houses are empty with houses that are completely destroyed. Guánica is a ghost town.

Decision-making in a more effective and systematic way.

Two updates are posted to the virtual forum page on the CONVERGE website.

Alexa Dietrich:

That I think important- researchers that are not connected strongly to PR, that we think very carefully about evaluating what and when research is need or if it isn't.

Applied research is important but, please be asking yourself if you are the correct person to be doing this research.

PR researchers are concerned about who is coming into Puerto Rico to actually do this work.

People on the Ground in Puerto Rico Now

Heidi Figueroa:

From PR and is coordinating with others who are doing research but is not doing research herself. Trying to support students.

Sara McBride and Lindsay Davis:

We have had, since the M 6.4 on January 7, over 280 M 3 or above earthquakes. These are very shallow earthquakes between 3-8 miles deep. So many people can actually feel these earthquakes. This is part of the complexities we are noting, and we want people to be aware of that.

In terms of response, we have really encouraged FEMA to include mental health information into these components. So important when addressing PTSD and aftershocks are being felt so frequently by the people of PR.

We are getting various reports of the number of survivors in basecamps. It's between 7500-8000 at this point, but we can't really confirm that number because that fluctuates and is highly sensitive. We know that a fair percentage of these people are children, elderly, and those with access and functional needs.

Take into account the vulnerable populations that are impacted by these events.

Kyle Melin:

At the school of pharmacy and interested in community pharmacies are able to support the immediate health needs of community after a disaster based on the broad geographic distribution. Ongoing.

Lori: Are there any other social scientists on the ground in PR?



Adriana Garriga-Lopez:

As for vulnerable populations, the one most evident is the elderly. There is a deep lack of medical services for the elderly, the people that have passed away have been mostly elderly.

Another group that has been affected at the community level and people organizing have been LGBTQ+.

Other need that has very clearly been expressed has need for psychological support for children and adults. These are the three needs based from base observation on the ground.

Leading Puerto Rico Focused Coordination Networks

Marla Perez-Lugo:

Currently working on RISE network, started after Maria.

Move towards local expertise and knowledge- if you do not use this than the recovery and reconstruction process is more costly and takes longer.

Lack of coordination throughout universities efforts. They are becoming first responders; they are the first to see people and do interviews. Provide humanitarian aid.

This motivated us to think about the role of universities in disasters especially as we see them as actors in disasters.

We had over 500 people help and create this new framework. Various cohorts- agency, student, etc....

Right after the earthquakes, we could mobilize several initiatives through the network.

Tagging buildings and structures from the New York brigade. This important for perception of risk. Organize a group from the sector of mental health in disasters. We are hosting a series of workshops addressed to everybody (psychologists, counselors, nurses) anyone who works in this area to provide them with basic support to community members, journalists and emergency managers. NEED to address journalists, as they are a forgotten stakeholder in this work, as they have very high pressure.

Lack of trust in state government is very necessary to address that. The whole emergency management apparatus base for this in the federal system is it supports the state government. But what do you do when the state government is not set up in a strong way where that support fits together well? And on top of that you have the complete lack of trust.

Governmental organization are not addressing the spontaneous refugee camps that are forming. They were telling NGOs that they had to go to formal camps, or they would not get services.

There are refugee camps that are forming, and there are resources that are starting to say that communities need to adopt to their regulations instead of adapting regulations to the region that people are in.

Strong need for legitimizing local knowledge.

Certification of school structures. Associations of engineers and faculty member pressed for this.



Colleagues from the outside can do a lot to legitimize local knowledge and stress its importance. Can help establish equal relationships. Need to keep in mind the needs of the researchers but also the needs of the community.

Ethics of research: as of today, IRB protocols do not identify disaster survivors as vulnerable population. We need to be careful we aren't doing more harm than good here (paraphrase).

ALSO:

There's going to be a wave of students, of displaced students who are going to be transferring, they are going to ASU.

There are many people on this call that help helped these students help write those guidelines.

Fernando Rivera:

Other side of equation- I'm in central Florida right now. So, I am working to inform the public out here. Massive population movement here? And such is a need for research in this area.

We saw people reacting as if this was a hurricane.

A lot of people are feeling the impact of the earthquakes that are happening right now.

We need to have a better coordination about the efforts that are going on in PR. The more we can have information that is helpful, correct, and on the same page, the better we can help aid in the appropriate ways.

We need a better way to communicate the needs out here in Florida.

There is a network Facebook page.

Better communication system to lessen the panic that is happening. This has become political, and we have to be careful about people that are approaching.

Jennifer Santos-Hernandez:

Everyone is concerned and there is a great deal of stress especially among elders, pre-existing conditions. But this is a localized event. There is widespread stress.

This is an issue that could be a larger Caribbean issue if facing a tsunami.

But the southern region is a focus.

The rest of the island has turned to this region where people have lost their homes.

There is no need for aid in terms of water and clothing. There is a constant supply coming into shelters and the shelters are actually becoming overloaded with this aid and having to throw it out because it rained over the weekend. If you really want to help, people are concerned about the safety of their home.



People are wondering are their houses safe. Who do you call if homeowners see a crack in their house? How do they know if their house is safe to stay in?

Role of military in these events and the impacts this has. There should be a strong caution on this.

The only one shelter that has people registered and logged in four days.

We are supporting building protocol, by validating all the pop-up shelters in a systematic way for a more effective way to try to do this differently than what happened after Maria.

University of PR faculty on this call.

Ongoing Projects in Puerto Rico focused on Hurricane Maria or Other Relevant Disaster Events to Share

Santos Cardona:

We have been doing surveys and interviews after Maria studying vulnerable communities. Surveyed more than 600 people and interviewed more than 60 people.

Vulnerable communities were scared that people were going to be coming in their communities and robbing them, and also facing PTSD characteristics.

Going to start studying how effective has the tsunami ready program been? We want to know if these drills and educational programs are being effective for people to actually respond if that occurs.

People are resilient as an individual.

Getting all the people in a community together is hard- right away it is easy. But a few months down the road, it is almost back to normal and people don't work together.

There is a disconnect with educating the community and become part of their perspective, especially for people over 50. Brochures are not effective.

Social perspective and context for this group is needed to better educate this group and help them respond to disasters.

People on the Ground in Puerto Rico Now

Sara McBride: After-shock forecast

Based on models that the USGS has been running for the last 30 years, it is a more refined model overtime.

This is more active than we would expect for an earthquake of this size.

This is an active aftershock sequence. More details on USGS website.

These are the probabilities for the next week.

Scenario 1:

Mag 5: 54% chance in the next week



Mag 6: 8% chance in the next week

Most probable is we will see a decrease in activity over the next 30 days. A 79% that in the next month we will see a decrease of activity and we're not going to see anything over a M 5.9.

Scenario 2:

An 18% chance that in the next month we will see something similar, a doublet, a M 6.4

Scenario 3:

3% Mag 7 or higher in the next month.

Aftershock is most likely to occur where they are already occurring, we haven't seen them travel over to the Virgin Islands.

This is an automated system that we have released. The aftershocks forecast are released in Anchorage, Ridgecrest in California and nor PR.

Ongoing Projects in Puerto Rico focused on Hurricane Maria or Other Relevant Disaster Events to Share

Leah Laverhals:

She has completed 64 interviews of people in long-term care facilities, VA and nursing homes in PR. Different elderly populations are struggling.

Bruno Takahashi:

Role of journalists and media.

Following up after Maria, have been doing fieldwork

Our plan is to collect after earthquake data and compare it with after Maria data and provide these for workshops, journals

PTSD has been coming up in interviews but has not been dealt with appropriately or discussed in the media organization.

Additional Contacts, Resources, and Research Ideas:

Contact Information

Edwin Asencio, University of Puerto Rico, edwin.asencio@upr.edu

Heidi Figueroa Sarriera, University of Puerto Rico, heidi.figueroa@upr.edu

Adriana Garriga-Lopez, adrianagarrigalopez@gmail.com

Marla Perez-Lugo, The RISE Network, marla@ncseglobal.org



Santos Rivera Cardona, University of Puerto Rico, santos.rivera@upr.edu
Fernando Rivera, University of Central Florida, fernando.rivera@ucf.edu
Jenniffer M Santos-Hernandez, University of Puerto Rico, jenniffer.santos1@upr.edu
Bruno Takahashi, Michigan State University, btakahas@msu.edu

Research Ideas

From R. J. Briggs: Economist, RAND : I imagine we will collect project/researcher info and share amongst everyone? Glad to see so many active not just to understand the situation and needs in PR but actually help. Personally: very interested in any trends that will significantly impact the labor market for my work. Working to help FEMA understand on the ground changes to forecast construction costs for public assistance. Lots of other efforts at my institution that I can share later. Happy to say more via whatever online forum/tool we create. Thank you all and cheers. rjbriggs@rand.org

From Kyle Melin : Hi my name is Kyle Melin. I'm faculty at UPR MSC School of Pharmacy. I'm interested in how community pharmacies were/are affected in PR following natural disasters, patient medications needs, and how pharmacies can help support the immediate health needs of their communities following a disaster given their broad geographic distribution. kyle.melin@upr.edu

From Mirelsa Modestti : My name is Mirelsa Modestti and am also interested in the perception of tsunami threat research. I started working on an investigation in that subject last year, but the university, which I was working for closed our research center. I am also a psychologist and have developed a workshop for dealing with stress fatigue. It is mainly for help professionals, social science researchers and first responders dealing with the Puerto Rico earthquakes situation. mmodestti@gmail.com

From Fernando Rivera : For collaborations with the PR population in Florida please contact me:
Fernando.Rivera@ucf.edu

From Christa von Hillebrandt-Andrade : My name is Christa von Hillebrandt-Andrade. I work with NOAA NWS Caribbean Tsunami Warning Program in Mayaguez. I am a Physical Scientist. I am interested in the response to the perceived potential threat of tsunami from the 6.4 event - given the natural signs and the tsunami advisory was issued. I am interested in knowing if there are others interested or planning to evaluate this particular issue. christa.vonh@noaa.gov

Resources

- From Glorynel Ojeda-Matos : [Guidelines for the Effective Relocation of Displaced Students](#)
- From Bruno Takahashi : Nieves-Pizarro, Y., Takahashi, B., & Chavez, M. (2019). [When Everything Else Fails: Radio Journalism During Hurricane Maria in Puerto Rico](#). Journalism (Please email Bruno for the pdf)
- From Bruno Takahashi : Takahashi, B., Zhang, Q., & Chavez, M. (2019). [Preparing for the Worst: Lessons for News Media After Hurricane Maria in Puerto Rico](#). Journalism Practice, 1-19. (Please email Bruno for the pdf)
- From Sara McBride : [About aftershock forecasts](#). Note: the forecast communication is based on social science research conducted in n.z. and media analysis in the US
- From Jocelyn West : Sign up for [CONVERGE updates](#)



- From Camila Young : Hi - My name is Camila Espina Young, from NIST (like Maria Dillard). I don't have a microphone, but for the folks interested in learning more about the Hurricane Maria project, you can access [our website](#).
- A group including Fernando Rivera (University of Central Florida), Jeannette Altarriba (SUNY Albany), Melissa Morales (Texas A&M San Antonio), Victor Ruiz (graduate student, Arizona State University), Glorynell Ojeda (graduate student, Arizona State University) and Adriana Castillo (recent graduate, Arizona State University) designed a [guide for the interuniversity transfer of displaced students](#). Although the speed of the document's development was motivated by the Puerto Rico earthquakes, the document can be used for any type of disaster event that triggers relocation of students.
- Lori Peek, Director, Natural Hazards Center, University of Colorado Boulder, is offering is offering two recorded webinars:
 - [Ethics of disaster research](#)
 - [Mental health and disasters](#): This prerecorded webinar includes input from Marla Perez-Lugo.
- [Please consider filling out this form](#) if you or your university are involved in relief and/or research efforts in Puerto Rico. This information will be used to provide a record of the work and interventions by universities in Puerto Rico after the earthquakes.
- [Current Relief Efforts Underway in Puerto Rico](#) is a spreadsheet that describes the relief efforts and is open for common use. It includes needs identified on the ground and contact information for local organizations and community leaders.

