

Who defines the metrics?

Community-based evaluation in disaster recovery



Initial Participant Poll

Speakers

Laura Gorbea, Lead Researcher Puerto Rico Public and Applied Social Sciences Workshop Damary Pagán Beneficiary and Community Researcher Puerto Rico Recovery Program

Frank Aquino, Community Researcher

Puerto Rico Recovery Program Antonio Fernós, Economist and Professor Interamerican University





Agenda

Topic:	Time
"Who Defines the Metric?" Engaging communtiies in disaster recovery research	10m
Community-driven instrument design	9m
Building Rigor and Confidence in the Results	6m
Reflection on Practice: Why engage the community?	15m
Question and Answer Session	10-15m
Interactive workshop: The role of story-telling across various monitoring and evaluation practices	20m
Question and Answer Session	10m



What does PR PASS Workshop do?





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Evaluation Research





- RAPID Research evaluating impact of the distribution of federal recovery assistance funds on public health, poverty and documented cases of COVID.
- Challenges: How to reach disaffected populations in need? How to share findings?

- Privately funded, multi-faceted housing recovery program
- \$63M budget for a 5 year program
- Task: Evaluation services including impact study
- Challenges: 4 main activity areas with different target populations, programs adapt to cascading disasters and many partners

- NGO wants to understand and communicate their impact after 15 years of entrepreneurship capacity building efforts
- Challenge: How to define the metrics amidst cascading disasters?

#Togethe

On September 2017, Hurricanes Irma and María came within a week of each other.

Estimated damages: 4,000 lives lost 780,000+ damaged 35,000 major or total loss



After the hurricanes, Seismic swarm starting in December 2019 COVID-19 Hurricane Fiona in September 2022

Compounding vulnerabilities 43.4% below poverty level (US Census 2020) Exodus estimated at 168,000 people (CentroPR 2021)



Inside the Puerto Rico context

"Three years after María, a hurricane that still wreaks havoc"

A TRES AÑOS DE MARÍA Un huracán que todavía causa estragos

Unas 4,500 familias siguen viviendo en una residencia con un toldo azul y se estima que 20,000 puertorriqueños no tienen un techo seguro Hasta le fecha, Puerto Rico solo ha recibido el tercio de los fondos federales prometidos por el gobierno de Estados Unidos para la reconstrucción

PUERTO RICO HOY PÁGINIS4-II



September 20, 2020

The impact of unspent disaster aid

"This lack of progress takes a human toll as well as a financial one," Chris Currie in a GAO Report to Congress (Sept. 2022) after finding that a school visited by GAO analysts looked worse years after María than it did right after María struck.

Questions raised about process

Over welfare of 60% of applicants for FEMA aid that were found ineligible (García, 2021)



Literature Review

 Disaster aid distribution has been shown have exacerbate poverty and contribute to a widening socio-economic gap consistently across all 50 states.

(Smiley et al 2018, Howell and Elliot, 2019, Jerollman 2019, Chopel et al 2021)

 Secondary repercussions of disaster Being overlooked or denied assistance during disaster recovery impacts access aid (Jerollman 2019) "the blow to the social fabric of a community caused by inadequate responses to a... hazard event" (Gill 2007) A broader lens reveals opportunities to re-evaluate practice.



Literature Review

A participatory approach is recommended for evaluation of complex problems, large systems, and innovative programs.

(Hertz et al 2021, Fetterman et al 2017, Douthwaite & Hoffecker 2017, Patton et al 2015)

- Communities are key partners in disaster response outreach, why not in evaluation?
- Criticism of extractive research in post-disaster settings.

Puerto Rico Public and Applied Social Sciences Workshop

"If evidence matters, we must care how it gets made."

Chicago Beyond (2019) Guidebook

Community-based & Participant-centered

Our process places disaster affected communities front and center of rapid research and rapid organizational learning

Puerto Rico Public

Sciences Workshon

and Applied

- Make engagements meaningful
- Express openness to unlearn
- Value different sources of knowledge
- Mitigate challenges to participation
- Share knowledge and promote change

Defining community

"Community is a word frequently used in everyday conversations, seldom defined and often misunderstood." (Miles 2017)

- A group of people with one or more things in common or similar experiences.
- Need not be limited to geography, but needs to be defined.
- In practice: Representatives of the population you aim to study or serve
- Risk of "cherry-picking" or filtering out voices.

"Improper and irregular use of distinct terms generates confusion... that may negatively impact scientific understanding and development." (Stroud 2015)



In practice: Defining communities





- Researchers selected two neighboring municipalities that suffered similar impact from Hurricane María but had different recovery histories.
- We reached out to the population that suffered hurricane damages and were in need of assistance.



- Communities were not always geographically bound.
- Recovery activities had different requirements for participation.
 - Community of people *needing home title services*
 - Community *interested in* construction efforts

 Participants in an entrepreneurship program across a geographic region

Defining Metrics

Centro

SILA M. CALDERÓN

#Together



Puerto Rico Public and Applied Social Sciences Workshop

Balancing Engagement & Institutional Needs

Community-Based Disaster Research on Public Health

RAPID Research Evaluate disaster recovery policy impacts

HAZARDS

on natural hazard preparedness and public health

NSF

CDC

- Grant for RAPID research had a 4 month window in the field.
- Researchers developed survey instrument, and initial analysis.
- **Community helped** access and conduct interviews.
- Town hall meetings held to discuss findings and gather recommendations.

- Three year research
- Impact evaluation was community-driven.
- Rapid dissemination has been participatory and ongoing starting in 2022.
- Final report is underway.

- Community identified changes and metrics.
- Institution will conduct outreach for survey.
- Researchers conduct preliminary analysis.
- Community and client discuss findings.





#Togethe

How to measure the impact of a disaster recovery program?



Challenges in Instrument Development

- The psychometric soundness of surveys in outcomes research is designed to ensure that they measure what they are designed to measure. (Schwartz and Rapkin 2004)
- Research has shown that within the same population there is shift interpretation of an instrument.
- Post disaster context and compound crises
- Validating measures remains a challenge



Puerto Rico Public and Applied Social Sciences Workshop Response to complexity context: Participatory survey measure validation





Community Workshop

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Invited participants and *non-participants* to share experiences and knowledge



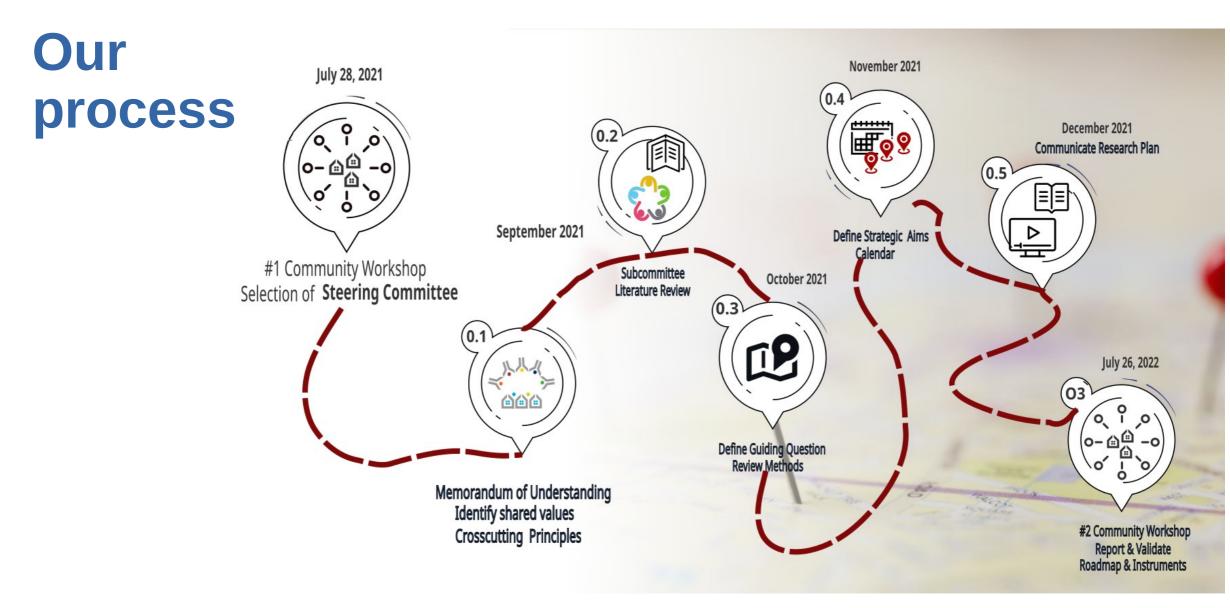
At the Workshop, a Steering Committee was selected

- Organization that designed and ran the program
- External evaluator
- Program participants
- Members of comparison communities that <u>did not</u> participate in the program.

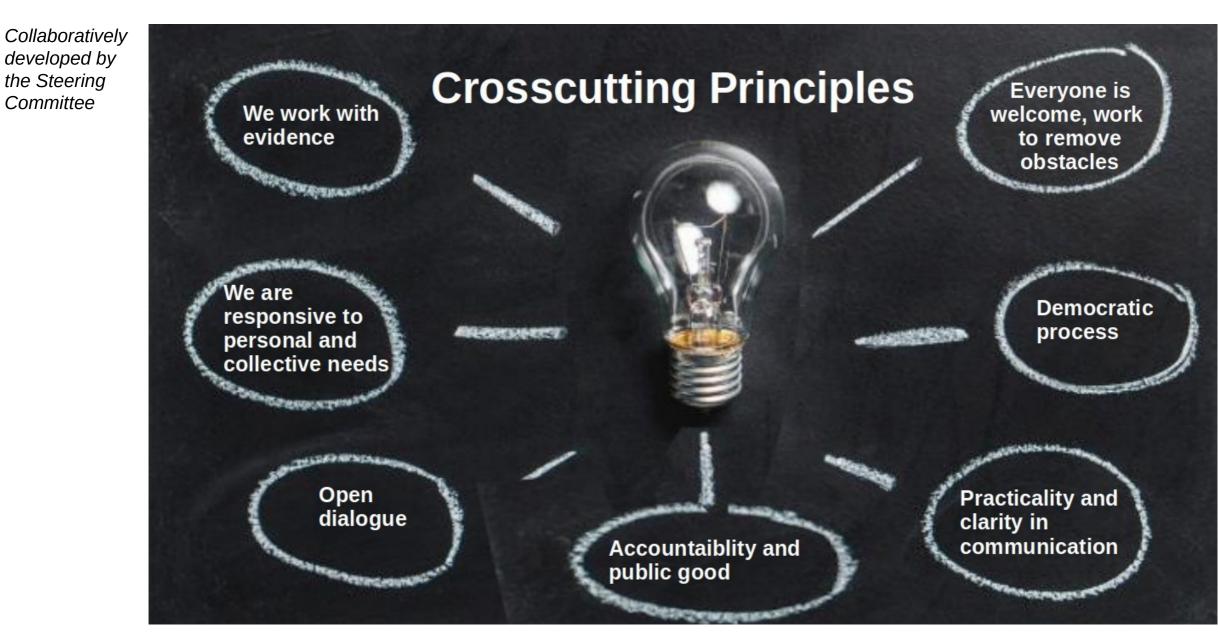
Impact Evaluation Steering Committee













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Collaboratively developed by the Steering Committee

Impact Evaluation - Guiding Question



How did the Puerto Rico Recovery Program improve access to safe and secure housing and how did this change the lives of participants, their families and communities?



How did participation in the PRRP impact the social capital and the sense of empowerment of the participants and their communities?



What was the impact generated on factors that contribute to social, economic and emotional health?









Collaboratively defined by the Steering Committee

> Puerto Rico Public and Applied Social Sciences Workshop

Physical Health

Well-being of the body

- Optimal performance
- Access to health services, medical offices, therapies
- Reduction of risk of accident in the home
- Accessibility improvements to spaces (e.g. ramps)

Mental Health

Though mental health includes our emotional, social, and psychological wellbeing, we are limiting the reference to conditions that may or may not have been diagnosed and are aggravated during an emergency - such as, depression, anxiety, PTSD, among others

Emotional Health

Focuses on feelings and manifestations of emotion that are temporary and respond to context.

We look to the participant's statements of how they feel and reactions to events, such as frustration, sadness, sense of vulnerability.

Empowerment

Participants communicate an active role in mapping life's course. We look for indications that move from interest to action, adopting life-long learning.

> Variables of Study

Social Capital

The ability to collaborate with others, Awareness of, ready access to, and trust of services and programs that provide benefit to individuals.

We look for level or awareness, levels of trust. Has social capital been activated, used? Also, perception of risk to lose access.

Social Wellbeing

There are protected groups that have been identified because of disadvantages and violence, physical and systemic, that they experience.

We look to experiences of feeling safe, having support, being able to socialize with others.

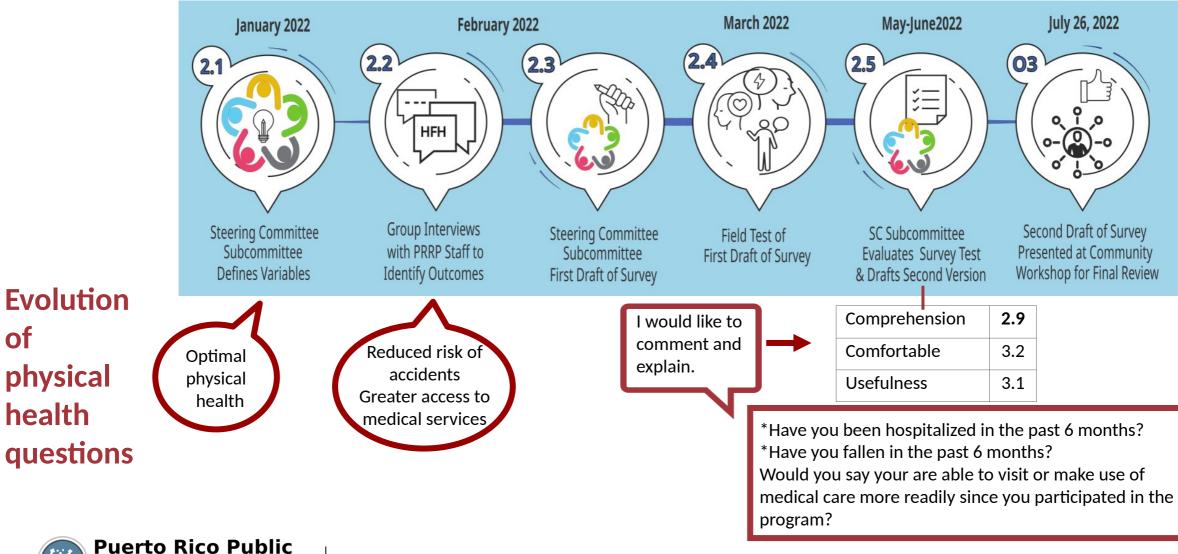
The ability to cover basic needs prepare for and overcome an emergency.

Economic

Health

We look changes in income, credit, ability to pay, loans, access to cash and ability to perform repairs and mitigate risk.

Designing the instruments





of

health

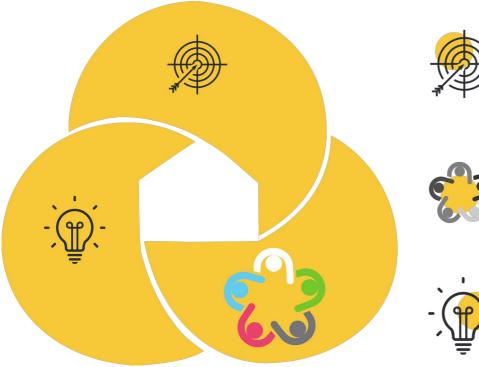
Community-based data collection

- Steering Committee participated in data collection, as did new participants
- Capacity training and modeling of procedures to prepare data collectors
- After action review of fieldwork process
- Rapid analysis protocol gathered field insights
- Weekly meetings held with larger research team





Participatory data analysis process





Brainstorming for Hypotheses:

Sharing of what we expect to see in the data that would answer the guiding question under analysis.



Data Party 1 – Initial Review of Data

Discussion of survey results gathered.



Data Party 2 – Preliminary Findings

We went back to answering our initial questions correlating survey data with stories, observations and program data.



Validating Findings

- Disaster recovery context will present challenges
 - Population movement
 - Remaining in contact with participants
 - Priorities change
- Triangulation in research
 - Disciplines (Theory) Convergence
 - Data sources: Qualitative, Quantitative, Observation
 - Investigators Stakeholders*
- *Discussing findings with the study participants







Rapid Dissemination

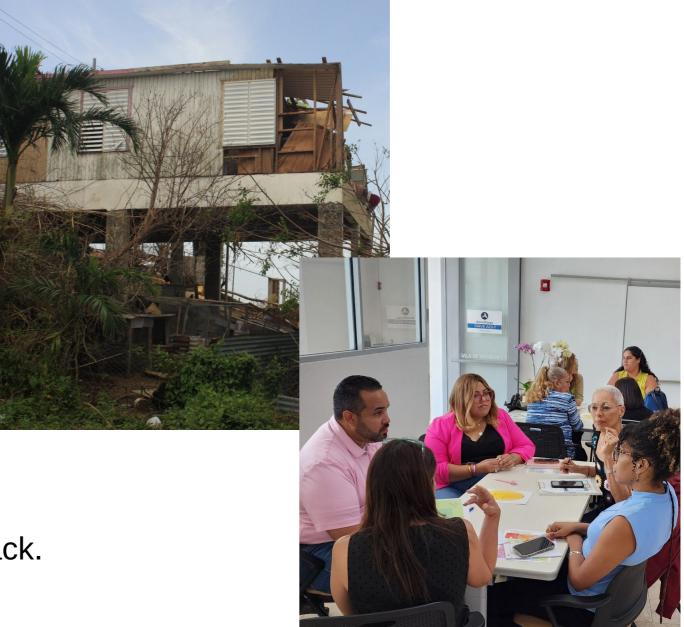
- Town hall meetings
 - Communities studied
- Research & Policy Seminar
 - Masterclass for graduate students
 - → FEMA, COR3, Legislature, Academia
- Practitioner Conferences
 - → NHC, SfAA, NVOAD
- Participatory methods can accelerate and decentralize learning.

Distribución de Fondos Pobreza y Salud Presentación de Hallazgos Abierto al público Investigación subvencionada por Cupo máximo 30 NATURAL HAZARDS CENTER Habrá picadera v refrigerios. Haz tu reservación 787-638-5380



Rapid Learning

- Community-driven: Understand change that has happened
- Participant-centered: Identify patterns among those deemed ineligible
- Participant stories help identify institutional blindspots
- Disseminate policy changes at the same time you are receiving feedback.





Challenges

- Participatory processes take time.
- Embracing with humility the process of unlearning takes practice.
- Participant-centered: Finding new way to keep participants coming back (meaningful experiences).
- Community: Remembering to check-in
- Finding a balance between authentic community participation and client deliverables.





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Benefits

- RAPID dissemination and learning
- Gaps are revealed when comparison groups are used.
- Decentralizing force that recognizes the power and role of communities.
- Monitoring and evaluation becomes an extension of recovery efforts.





What did engaging the community achieve?

Collaborators' assessments



Puerto Rico Public and Applied Social Sciences Workshop

Experience of the Steering Committee Members

"I have a lot of demands on my time from work and trying to help fix the homes of my brother and mother-in-law. These are the same homes that allow me to connect to the meetings.

When I can't make it, I listen to the group videos on my phone. It has helped me stay informed and review what is being said."

- Kellys Cirino

"It is a lot of work but I find that the load has been distributed. I send pictures of my work and often connect from my cell phone from the coffee fields."

"I am convinced that **listening to voices from outside the program** will help future developers understand how to improve the design."

- Dévora Colón



"I feel like I am back in college! We have had many workshops where I have learned skills and gained a new perspective on the news and my own experience.

I don't listen to the news the same way as before, now, when they say talk about a new program, I listen for details in a new way. When I hear talk about vulnerability or mental health, my attention and interests have changed."

- Myriam Miranda



"Meaningful"

What is it? Why it matters?

- Benefit analysis: personal and community
- Value creation
 - ✓ Stipends matter
 - ✓ Attention to details
 - ✓ Art, social & cultural value creation
- Participatory theater vs Change driven by engagement







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Closing thoughts

- Community-driven and participant-centered evaluation can be illuminating and disruptive.
- It is important to continually reflect upon our work to be responsive to the complex needs of our community.
- If it is valuable, budget for it.

Building knowledge together

In order to improve disaster response we need to incorporate more evaluation strategies (Duckers, 2021).

The co-generation of knowledge about disaster can more effectively mitigate disaster risk (Spiekermann et al 2015).



Resources



Questions & Comments

Thank You! Questions or comments: Laura Gorbea Lgorbea@PRPASSWorkshop.org



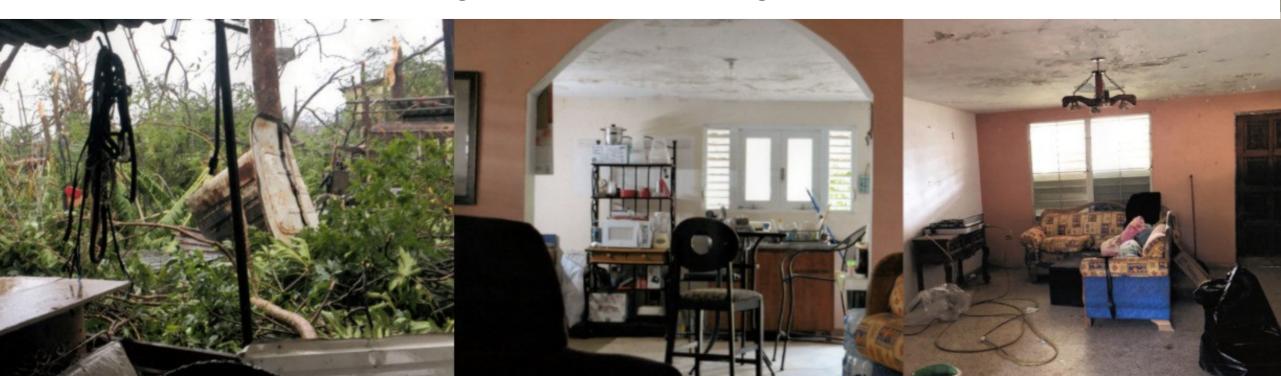
Evaluation & Feedback The role of story-telling across various monitoring and evaluation practices

Workshop





Everyone has a story to tell.



Disaster Narratives

Media and other sources sometimes use stories to highlight "failed states" and inform decision making.

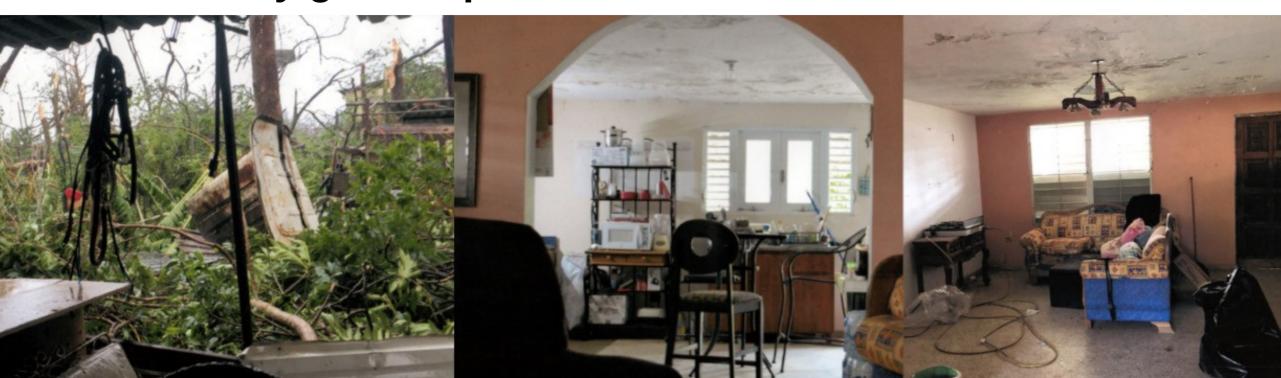
However, these narratives create a feedback loop

- Deepens distrust among local actors
- Erodes local autonomy
- Diminishes fiscal sustainability





Whose story gets amplified? How are stories used?



The power of stories

At the first community workshop, we asked for people to come share their story.

- Everyone has a story to tell. The barrier to participation was low.
- Participants said they felt heard, connected and strengthened.
- They exchanged information about the recovery.
- We gained **community-sourced definitions** to frame our work.





Interactive Documentary Theater

Puerto Rico Public and Applied Social Sciences Workshop Experimental use of theater and art in evaluation and learning.

- Borrowing verbatim theater
- Theater arts are considered a third space, not quantitative or qualitative, but an experience.

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• Objective: Reflect on policy and change



First Community Workshop: Frank

I was lucky in my house that nothing much happened. A mango tree fell and cracked the roof a bit, but the owner came to deal with it a long time later. Water started pouring through the roof... but at least it didn't happen to us much. Although here in Santa Rita, it was quite impressive because many things flew, many trees had to be chopped down. But it was like an example for me because when we went out into the street... my wife and I decided to go out with machetes and we're going to work with whatever we found to help people. I remember there was a huge tree that fell on one of the streets here, and paramedics couldn't get in. I'm talking to you two or three days after the hurricane hit.

The paramedics couldn't get in, and there was a woman who was suffering from diabetes; it seems her blood sugar was very high at the time. Seeing the community rushing to chop the wood with a machete because no one had an electric saw or axe—I'm talking about a wood easily 7 feet thick. We followed the community there, chopping and chopping, took turns, we were able to chop it, and they were able to get the woman out. For me, that was very important. Later, thanks to that, a couple of us realized it was necessary to organize ourselves, and we formed a brigade that we called the Mellao Brigade (laughs). At my house, we still have the machete we used for chopping; it was very thick. Everyone liked it, but it finally got dulled, lost a corner, and the machete became legendary, and that's what we called it.



Frank, continued

We met every day at a specific location, divided up, took a census of which places needed to be chopped and whatnot, and then we went. From there, we developed projects to feed people, and that's how what is now known as the Common Pot here in Río Piedras came about. In that sense, we saw, as Jorge said, that the government didn't act as it should have and that things took a long time, but we realized that if we unite, we can act and respond. After that, I got a job providing post-Maria services in Utuado and different areas of the island. I can also say I was a survivor because during the time I was helping, I got pneumonia and spent 10 days convalescing in the hospital, with all that entails—the hospitals were almost without electricity... but I survived, and here we are.



First Community Workshop: Nydia

But, I mean, those of us who were affected by Hurricane Maria. Truly, in Puerto Rico, there are only a few of us, as far as I understand, who had access to the aid that was offered. We often look and see, but in truth, not everyone necessarily receives a high pension. And so, I understand that people who receive less money in their retirement are more vulnerable, ¿right? Because the moment that happens, what you've been building up your whole life; in a moment, you've lost it. But, then, you're no longer working, you're retired, and with ailments, as we say. We're not 15 anymore...

We're not. We're not 15 anymore, nor do we have the tools to be able to get back on our feet. There, I understand that there are a large number of vulnerable people in Puerto Rico... when that (Hurricane María) happened. Well, everyone was going to sign up for FEMA. I was one of those affected. And I am lucky because I am one that benefited from the home title program, because the house, the house we have, well, that house wasn't my uncle's, and I had a legal will, a testament, and some things that he had done for me. And, for me, the lack of understanding and knowledge of many things, well, for me, that will, and the deed to the house, I proved to them that the house was mine. But that wasn't the case, and we didn't qualify for the aid. We didn't qualify for everything, we didn't qualify to fix the house.



And, my house had a wood and zinc roof, very pretty, very cozy, the top, and María took all that, and we lost everything we had inside. At that time, well, no, my husband was a veteran and had some health problems, and so did I, and we had to leave (applause) because of our health.

..It took us three hours or so to get from Maunabo to the Veterans Hospital, to the emergency room, to the Veterans Hospital, because my car broke down. (Applause) The canopy fell on it. Still, we had to seek medical treatment, and the only way was for all our family members to come, and we had to leave, seeking medical treatment.

Somehow, we got him into treatment quickly. In that time, I came to Puerto Rico every six or seven weeks. Every time I came, I tried to get all the help I could. But nothing, until this home title program came along! Until then, it was sad, you practically had to go and beg someone, for help. Then someone told me, "look, there's no housing program, go and apply". We went and applied. Thank God, everything I was holding onto life waiting, then this happened. The home title is now mine. I have a document proving it,

It was a process... but I have the home title now. Still, it didn't resolve it all. I had to resort to the mercy of a church program so they could give me a roof, a wooden roof.



Interactive Documentary Theater

Puerto Rico Public and Applied Social Sciences Workshop How did listening to the story read by a peer change its the reception?

What stood out about the stories of people navigating damages and loss?

Share your thoughts online



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Most Significant Change

A participatory monitoring and evaluation technique where stakeholder stories are gathered, shared and discussed allowing organizations time to review and reflect about program outcomes.

- In the PRRP, it was a technique used for program monitoring and for data gathering for the impact evaluation.
- We gathered 81 stories.

Davies R, Dart, J (2005). *The 'Most Significant Change' (MSC) Technique: A Guide to Its Use, Version 1.0.* Melbourne, Australia: MandE. Disponible en: https://www.mande.co.uk/wp-content/uploads/2005/MSCGuide.pdf.

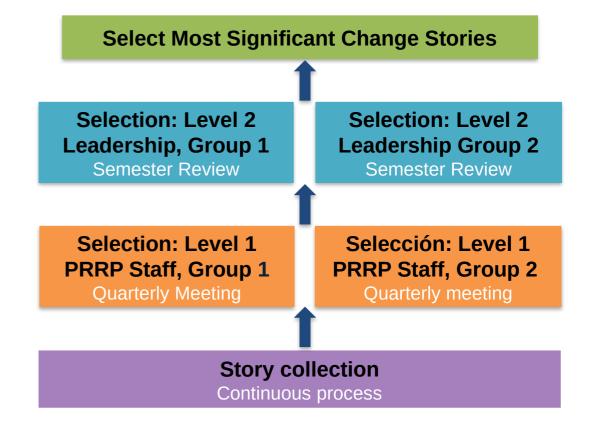




MSC Stages

- 1. Decided collection and selection processes using participatory approach.
- 2. Stories collected are grouped by domains of change and presented for selection.
- 3. Individual preselection was followed by small group discussion and final selection.
- 4. The results from story selection were summarized in a Feedback Memo that was shared with the team.
- 5. Stories that need verificationed are revisited and we discussed next steps with the team.
- 6. There were four levels of selection that reduced the portfolio reviewed.
- 7. Collection and selection was iterative.

Throughout the process, the staff had the opportunity to learn and reflect about their work.

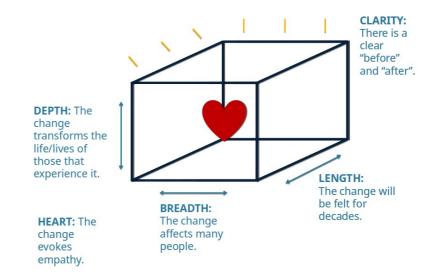




MSC Story Selection

- 1. Read and discuss the stories.
- 2. Determine mechanism (ie. voting, consensus, ranked choice)
- 3. Select the story of most significant change for each domain of change.
- 4. Select the most significant change story overall.

MSC story selection criteria





Stories from the field: David

David is a Home Repair Program participant. His participation began in December 2019.

When the rain really started to come down during Hurricane María, David and his family decided that it would be safer for them to go down to their basement, knowing that the roof would not hold. "In a house at the top of a hill in Salinas, we didn't know if the mountains would protect us from the hurricane winds. My family and I prepared as best we could, but the hurricane brought problems that we could not control. Hurricane María's winds were so strong that when my sister and I went to charge our phones in the car, the car moved from side to side like it was floating." It was a long, distressing night knowing that, just above them, their house would be destroyed.

The following day, they were able to assess the damages: "Most of my roof was on the ground, the windows had disappeared, and there was debris everywhere. The water that came into the house caused even more problems, leaking though where the electrical wiring is located. Everything in the bedrooms, the kitchen, and the living room got wet and was ruined. When we came up from the basement, we could not believe that we had lost everything."

With the money FEMA gave them, they were able to get the basics, such as beds, mattresses, food, and some of the windows, but it was not enough to even begin to repair the roof. They tried to fix as much as they could by hiring a company to fix the roof, but it was much more expensive than what their budget allowed. According to David, finding someone who could restore the corrugated zinc roof was an absolute nightmare, nobody was willing to go up to their home on the hill. One day, almost a year later, a friend of David's told him about the Home Repair Program



David,continued

"This organization helped us restore our home and to finally put a roof up." The home was inspected by a gentleman who helped us throughout the entire process." David felt greatly relieved knowing that his house would finally be fixed and restored. In this process, David felt relieved and well-informed. The process got delayed due to the pandemic, and just when he thought that they had forgotten about him, a call changed everything.

"They showed up at my house with a desire to help us out and I will be forever grateful to them for that. They fixed the roof, installed the tin, fixed our doors, walls, and even other windows. My house is as good as new and in better shape than I could have imagined. We are extremely grateful for the service since, at my age, it is hard for me to rebuild my home. Now we can focus on what matters, on creating new memories with our family."

What would you say was the most significant thing about that experience or what changed in your life? This story changed our lives because, in the end, we felt that somebody was truly able to help us. Living so far away, not many people could help us with our roof. We are extremely grateful to have a roof and for all that they fixed for us, because we really had no way to do it ourselves. We don't have a lot of money and not many people are willing to help, but the Home Repairs Program did help us a lot. Now my grandchildren can run through the house without falling or without the sun hitting them too harshly. The biggest impact was how kind they were and how fast they worked.



Stories from the Field: Miguel

Miguel is a Home Repair Program participant. His participation began in December 2019.

Miguel, his wife, and their five daughters lived through Hurricane María in the unfinished basement of their home. They lost the roof of their home, as well as everything that was in it. The sense of loss was devastating for his family. After five months of living at someone else's house, he was able to properly cover the roof with a blue tarp using blocks and sheets of plywood; he put in makeshift walls and partitions in the basement so that they could return to their home. After two long years searching for help, Miguel learned about the Home Repair Program, applied for it, and qualified. They all cried when the builders left because they had become part of the family. They are beyond grateful. They can sleep now. He sees that his daughters are happy, unafraid.

Why did you choose this change story? What difference did it make?

For 2 years, we didn't have access to our home. We felt fearful and unsafe. We now have peace of mind.

How will this change affect your future?

Their daughters will be able to grow up without fear. They can make plans, celebrate with others in their family.

How, if at all, has Habitat contributed to this change?

The Home Repair Program gave Miguel and his family a safe roof, strengthening their stability and self-sufficiency.







Decision time!

Which story would you select as the story of Most Significant Change for the Repairs Program?

- David
- Miguel

Which story would you select overall as the story of Most Significant Change for the Puerto Rico Recovery Program?

- David
- Miguel
- Nydia







"David" "Miguel" "Nydia"





How were the stories used?

Outcomes Harvesting

An evaluation practice used in complex contexts where it is difficult to predict the relationships that will shape outcomes or the outcomes themselves.

In the impact evaluation

In a thematic analysis of the stories the reader asks:

- What themes stand out (deductive)
- We also used computerized text analysis to analyze word frequency and relationships
- Read between the lines: Do I see the key variables of the study in this text?
- Having diversity of readers ensures we address different constructions of meaning.



Closing Thoughts

Myriam was a beneficiary and Steering Committee member whose experience with stories shows their power

- Engendered trust
- Helped others understand title ownership procedures.
- Organized research volunteers
- Conducted over 60 interviews
- Visited close to 25 homes
- Contributed changes in methods
- Participated in the analysis
- Dissemination of findings.

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Questions & Comments

Thank you for your time!

 Please complete the evaluation form



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