

Understanding the Impacts of Managed Retreat and Resettlement on Informal Communities

2025 Natural Hazards Workshop
Reducing Risk and Saving Lives:
The Mitigation Matters Research Award Program

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relocation + informal communities



relocation

- abandonment of at risk (or “risky”) areas by moving socio-economic assets and settlements to “safer” locations

informal communities

- low-income
- marginalized
- having non-traditional housing arrangements (i.e., self-constructed or lacking formal land security)
- excluded from formal planning and decision-making processes
- located in areas with high exposure to hazard risks

case study



research question

- how are informal communities engaged in resettlement and relocation policies and practices in Puerto Rico?

practitioners

- semi-structured interviews
- planning, engineering, and hazard professionals in Puerto Rico

communities

- small focus groups
- representatives & leaders of informal communities in Puerto Rico

findings

frustrations with inaction surrounding relocation

“neighbors feel frustrated,
saying...here they come again
with their little questions to make
the interview in which nothing
happens”

[community]

“unfortunately, a distrust,
mistrust, cynicism [exists] because
the government has been
promising for many years to fix
things”

[planner]

findings

community-led adaptive practices (Wamsler & Brink, 2014)

types	examples
hazard reduction and avoidance: to limit or avoid current and future hazards	cleaning waterways “ever since we cleaned up the creek, we have seen a decrease in flooding...now people are preparing themselves when it rains, they check up on the creek to make sure that it’s not clogged”
vulnerability reduction: to reduce current and future vulnerability to hazards	modifying housing construction methods “after hurricane Maria everything changed, people were more conscious to build their houses stronger, those who built theirs out of wood switched over to concrete, and now everyone builds with concrete”
preparedness for response: to provide functional and flexible mechanisms and structures for disaster response	developing disaster response teams “when Maria touched down, the first aid our people received was the aid that we, the leaders brought to the people”
preparedness for recovery: to provide functional and flexible mechanisms and structures for disaster recovery	facilitating housing recovery efforts “if I, or any other leader, didn’t volunteer here, we wouldn’t survive. In my community over 115 people lost their roofs...the municipality never came to [assess]. If it weren’t for us looking for that assistance... It would be handed to places where it’s not needed”

findings

re-examining resilience

we find that community-led adaptive practices provide a useful lens for re-visiting our understanding of resilience frameworks and practices

prioritizing a holistic approach toward the framing of risks

different areas of hazard risks (i.e., flooding and landslides) & different types of hazard planning needs (i.e., mitigation, response, and recovery)

addressing broader livelihood needs

adapting not just to hazard-related threats by clearing waterways and creating disaster response teams but also addressing broader livelihood issues like finding ways to manage land tenure issues

takeaways

reports + publications + developing the next generation of hazard planners

NATURAL
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RESEARCH BRIEF SERIES

MITIGATION MATTERS

AWARD RECIPIENTS

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AWARD AMOUNT:
\$2,400

FEMA defines mitigation as the effort to reduce loss of life and property by lessening the impact of disasters. Effective mitigation requires that we all understand local risks and invest in long-term planning to reduce risks and enhance community well-being.

UNDERSTANDING THE IMPACTS OF MANAGED RETREAT AND RESETTLEMENT ON INFORMAL COMMUNITIES

SUMMARY

Informal communities—settlements that are established outside of the traditional legal boundaries of land tenure, permitting, or construction practices— in Puerto Rico face widespread issues, including inadequate infrastructure, unsafe living conditions, and frequent exposure to environmental hazards. Relocation and resettlement activities in such communities often center on moving informal communities away from high-risk areas and are generally presented as a necessary approach to address hazard-related issues. Managed retreat practices can provide an opportunity for communities to move to safer places.

This research focused on understanding the planning strategies and decision-making involved in resettling informal communities in Puerto Rico. Information was collected through interviews with planners and decision makers, as well as focus groups with local community representatives and leaders. The study examined the factors that were considered in relocations and the perspectives and experiences of community members who had been or were about to be resettled.

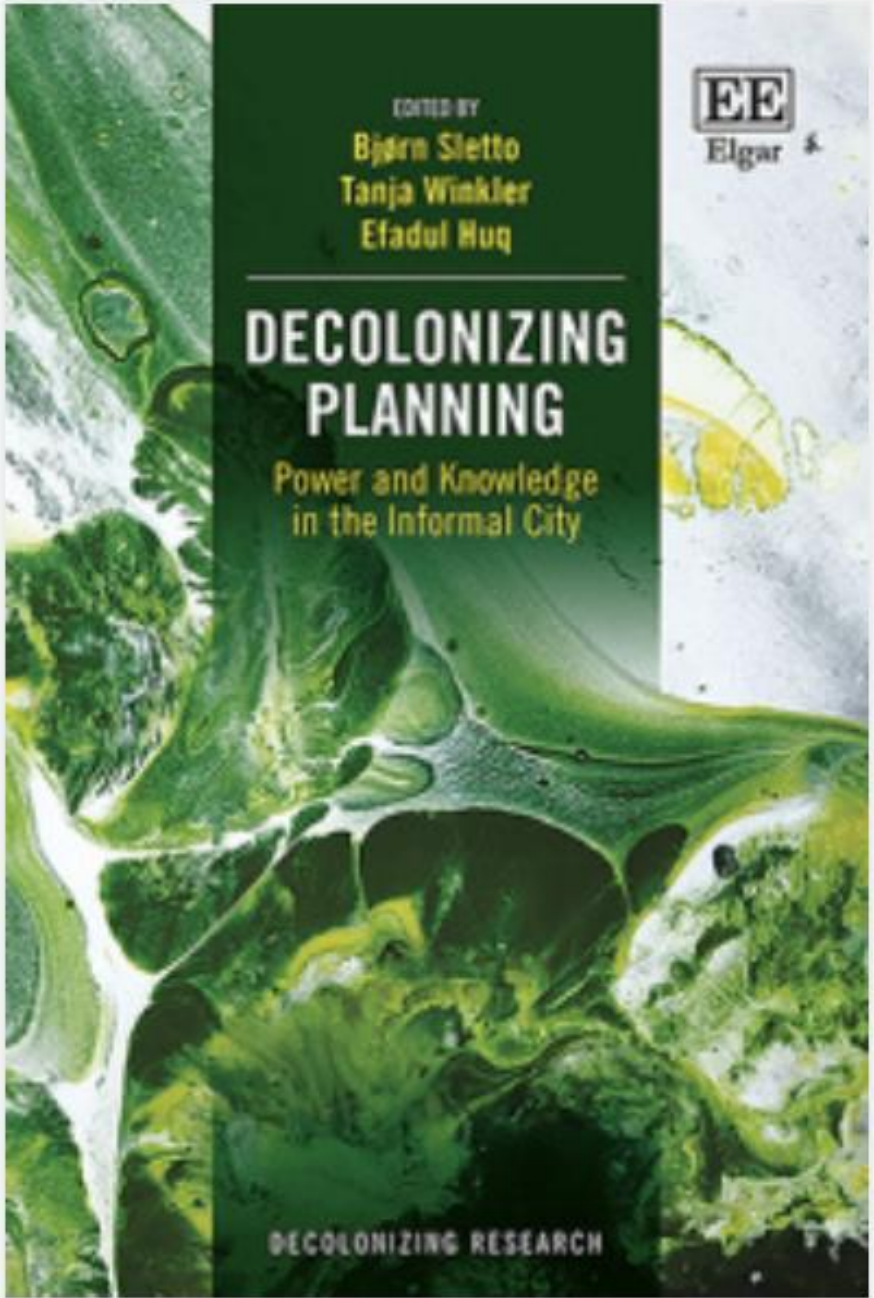
The findings indicate that there are several key factors to address for relocation to be a positive and inclusive experience for local communities.



An informal community in San Juan, Puerto Rico. Image credit: Monique A. Lorenzo Pérez, 2022.

These include understanding:

- the broader motivations and reasoning behind relocation and resettlement plans,
- the rationale used to identify risks and determine what qualifies as safe in new and existing locations,
- the impacts of community members past experiences with planned relocation projects, and
- community perspectives on what an ideal relocation project would look like.



Thesis presentation

Relocation and Resettlement of Informal Communities in Puerto Rico: Challenges and complexities of selecting safe locations in hazardous environments

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Informal Communities in Puerto Rico

- Caribbean Archipelago, U.S. Territory
- Planning History in P.R. 1940s
- Mid 20th Century Rural – Urban Migration
- Housing shortage
- *Arrabales*, slums, shanty towns, unplanned communities, and special communities (Safa, 1964; Fuller Marvel, 2008).
- Relocation and Resettlement in P.R.
 - Public/Urban Housing (Safa, 1964).
 - Mameyes Landslide (1985) (Fuller Marvel, 2008, 2020).
 - Environment and health hazards, Communities along the Martín Peña Channel (Proyecto ENLACE del Caño Martín Peña, 2017).
 - Climate change, flooding, and natural hazards (Yarina et al. 2019)

