



Integrated Crisis Response and Emergency Preparedness for Puerto Rico

Lessons Learned and Strategies for Enhancing
Disaster Response

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Introduction

Emergency management has evolved exceptionally over the last three decades both in the United States and abroad, from responding to natural disasters to public health crises. Governments working alongside civil society have built working frameworks that recognize the role of local stakeholders while responding to the requirements and demands of donor agencies. Still, gaps remain. When disasters strike (particularly unanticipated ones), local communities and governments are faced with a litany of competing priorities, such as addressing the immediate removal of danger, correcting critical utility issues, and managing the high demand of public services that are often in low supply.

This paper will discuss disaster recovery in Puerto Rico from 2017 to the present, including ongoing challenges and impacts of recent storms and ways in which professional services consulting firms like McBride can play a key role in the recovery. It will begin by identifying the social, political, and economic conditions that affect the government's ability to respond to crises, followed by a description of the theoretical framework for disaster recovery work. Next it will isolate ongoing challenges in the management of response to Hurricanes Irma and Maria, subsequent earthquakes, and COVID-19. Ultimately, the intent is to offer a recommended approach for executing next steps in the island's recovery and share a model that can be used in future disaster recovery efforts globally.

Puerto Rico

Puerto Rico has been considered a United States territory since the legal acquisition of the archipelago in 1898, following the Spanish-American war. The island is an unincorporated territory of the United States, neither an independent nation nor a US state within the federal system.¹ With 3,515 square miles and a shrinking population of 3.2 million,² Puerto Rico is a small Caribbean Island beleaguered with a streak of incredibly bad luck. Even prior to the landfall of Hurricanes Irma and María in 2017, the island territory was besieged with crippling debt, failing infrastructure, and a deteriorating public health system. Nearly half of the residents were living below the poverty line before Hurricane Maria struck.³ The economy languished due to loss of federal tax provisions, massive accumulation of public debt, population decline with migration to the mainland,

¹ Weiss, Antonio and Setser, Brad W. June 5, 2022, "America's Forgotten Colony," <https://www.foreignaffairs.com/articles/puerto-rico/2019-06-11/americas-forgotten-colony>.

² Cheatham, Amelia and Roy, Diana. February 3, 2022, "Puerto Rico: A U.S. Territory in Crisis. Council on Foreign Relations: *Backgrounder*." <https://www.cfr.org/backgrounder/puerto-rico-us-territory-crisis>

³ OHCHR. October 30, 2017, "Puerto Rico: Human rights concerns mount in absence of adequate emergency response Puerto Rico hurricane."

and mismanagement.⁴ With a GDP of \$103 billion, Puerto Rico’s per capita production is \$32,291,⁵ less than half the average of the United States.⁶

Disaster Recovery Framework

Responding to disasters is best understood within four cones: response, recovery, preparation, and mitigation. When disaster strikes, local government and society need to be equipped with the infrastructure, processes, and tools to respond quickly and effectively to mitigate further injury and damage. Effective recovery considers the medium- and long-term economic development, housing, and infrastructure initiatives that communities need. Furthermore, understanding that responding to disasters is not a question of if but rather of when will enable local stakeholders to properly prepare for the worst. Equipped with the knowledge that the impacts of climate change will include more frequent and destructive storms, local governments and civil society must develop plans for how to respond in those moments of crisis. Finally, for agencies with the capacity and resources, extending preparation to include mitigation of a disaster’s worst impacts is ideal.

The immediate response after disaster strikes involves various key stakeholders, including emergency responders, civil society, local law enforcement, and local government. The primary goal of emergency response is to mitigate further harm by getting people out of harm’s way, finding missing people, clearing roads of debris, connecting individuals with medical attention, restoring electricity, and providing or facilitating temporary housing for those who need it. A community’s and local government’s ability to respond adequately immediately after a disaster may contribute to how many people die or are injured in a storm and how much damage is done to both public and private property. In other words, a robust, well-thought-out emergency response plan is critical to minimizing injury and damage.



Figure 1: Disaster Recovery Framework

Once the immediate response to the disaster has occurred, stakeholders will transition focus to the medium- and long-term recovery. In contrast to the quick and urgent emergency response, recovery can last anywhere from five to fifteen years or more. Initiatives span from economic development – managing grants to small businesses or specific industries who were affected by the disaster or incentivizing businesses to re-open in affected communities – to housing – buyout and acquisition programs, grants or subsidies to homeowners or renters, encouraging homeowners to purchase flood insurance. The goals of this phase are to encourage the community to recover to a spot even better than they were before the disaster.

⁴ Cheatham, Amelia and Roy, Diana. February 3, 2022. “Puerto Rico: A U.S. Territory in Crisis. Council on Foreign Relations: *Backgrounder*.”

⁵ Ibid.

⁶ World Bank. 2022. “GDP per Capita: United States.” <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=US>

In terms of preparation and mitigation, the National Preparedness System (NPS) utilized by FEMA consists of six functions: identifying and assessing risk, estimating capability requirements, building and sustaining capabilities, planning to deliver capabilities, validating capabilities, and reviewing and updating processes. As a means of involving all citizens in the development of national preparedness plans, FEMA considers preparedness a shared responsibility, owned by the “whole community.” Role and responsibilities are reflected in FEMA’s materials, emphasizing the ownership of individuals and families, including those with access and functional needs. Additionally, organizational roles and responsibilities are highlighted, including businesses, faith-based and community organizations, non-profits, schools and academia, media outlets, and all levels of government.

60+ 
Countries
 Lived and Worked in

Local Expertise, Global Experience

McBride has a diverse team of consultants from across the country who have lived or worked in over **25** States, **21** foreign countries and speak **16** different languages

International Organizations we've Worked with

North Atlantic Treaty Organization, European Union, United Nations, Inter-American Commission on Human Rights

Figure 2: McBride's Experience

responders who are ultimately responsible for managing the disaster response. If and when the magnitude of the disaster overwhelms the resources and abilities of the local government, the next level up from a territorial government, in terms of assistance, is the federal government. In this scenario, the executive branch can declare disasters, congress can allocate funds, and agencies obligate those funds in service to the disaster. When this occurs, additional resources and expertise are offered to local officials. Though collaborative in nature, this model also results in critical gaps in response and long-term recovery.

Disasters, 2017-Present

Puerto Rico is no stranger to natural disaster. The geographic location of the island in the Caribbean makes it vulnerable to earthquakes, tsunamis, wildfires, hurricanes, tropical storms, and drought. The last five years, unfortunately, have delivered an onslaught of both natural disasters and public health crises, publicly exposing the longstanding underfunding of critical infrastructure, rampant

Similar to the NPS, the National Disaster Recovery Framework (NDRF) utilized by FEMA is a scalable, flexible guide that includes recovery guiding principles and core capabilities. Roles and responsibilities of recovery coordinators and other stakeholders are outlined, and details of the federal support structure – a coordinating structure that facilitates communication and collaboration – are delineated to provide guidance for both pre- and post-disaster recovery planning. Ultimately, the framework seeks to provide a macro-level process through which communities can rebuild stronger, smarter, and safer. Both frameworks involve the “whole community” approach, which is critical to an effective response and recovery. This is particularly relevant in places like Puerto Rico that have experienced devastating storms. Engaging with every part of civil society in a shared governance model enables the necessary bottom-up approach that U.S. donors such as FEMA and HUD require.

In a federalist system like the United States, a bottom-up approach means that local officials – the municipios, or municipalities, in Puerto Rico – are the first

poverty, and governmental mismanagement of funds. Hurricane Irma passed just north of the island on September 6, 2017, with tropical-storm-force winds and significant rainfall. This resulted in near total losses in electricity and water service, severe damage to homes and businesses, collapsed buildings, uprooted trees, and significant direct and indirect deaths.⁷

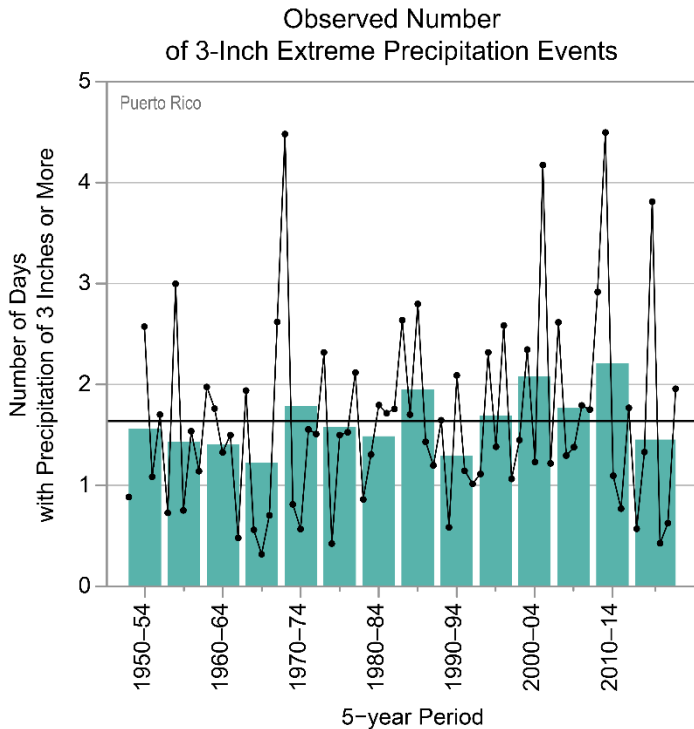


Figure 3: While future changes in total precipitation are uncertain, extreme precipitation is projected to increase, including associated increases in the intensity and frequency of flooding.⁸

its location surrounded by complex fault line systems, the series of quakes that wrecked Puerto Rico in the beginning of 2020 only aggravated the slow, ineffective response of the hurricane two years prior. The last few years have left Puerto Rico battered and in need of effective and efficient disaster recovery assistance. The spirit of the island’s residents and the beauty of its culture and nature deserve the best of what the U.S. mainland can offer. Partnerships between the public and private interests will best advance Puerto Rico in its revival.

Paths Forward

Fiona made landfall as a Category 1 hurricane in Puerto Rico on September 18, 2022, just one day before the five-year anniversary of Hurricane Maria. Even before the hurricane struck, the entire island lost power, hurling residents back to recent and painful memories.¹² At the time this paper

The President’s declaration of a major disaster triggered access to assistance, expanded public assistance in some areas, and authorized hazard mitigation throughout the island. Moreover, the major disaster declaration enabled the Small Business Administration (SBA) to provide SBA Disaster Loans.⁹ Just two weeks after Irma swept the island, Hurricane Maria made landfall as a category 4 hurricane with wind speeds just below the category 5 threshold. Immediate damage from the storm led to loss of power, cell phone service, and water; extensive damage to homes and buildings; sunken boats; broad and impactful damage to infrastructure; destroyed trees; and a substantial death toll. The President declared a major disaster days later, which, like Irma, opened the door for further federal funding.¹⁰

The aftermath of Hurricane Maria exacerbated preexisting challenges, with some persisting today.¹¹ Each new disaster compounds the island’s challenges, including the COVID-19 pandemic since March 2020. Additionally, given

⁷ Congressional Research Service. *The Status of Puerto Rico’s Recovery and Ongoing Challenges Following Hurricanes Irma and Maria: FEMA, SBA, and HUD Assistance*. R46609. November 13, 2020.

⁸ Runkle, J., K.E. Kunkel, L.E. Stevens, S.M. Champion, D.R. Easterling, A. Terando, L. Sun, B.C. Stewart, G. Landers, and S. Rayne, 2022: Puerto Rico and the U.S. Virgin Islands State Climate Summary 2022. NOAA Technical Report NESDIS 150-PR. NOAA/NESDIS, Silver Spring, MD, 5 pp.

⁹ Ibid.

¹⁰ Ibid.

¹¹ Vann R. Newkirk II, “Puerto Rico’s Dire Health-Care Crisis,” *The Atlantic*, October 29, 2017, <https://www.theatlantic.com/politics/archive/2017/10/puerto-ricos-health-care-crisis-is-just-beginning/544210/>.

¹² Partlow, J. and Hernández, A. September 19, 2022. “Even before Fiona, Puerto Rico’s power grid was poised for failure.” *Washington Post*.

was published, full damage has not yet been assessed and a final death count is unknown. What is known is that the people of Puerto Rico deserve a robust and strategic response.

Effectively responding to disasters amidst Puerto Rico’s socio-economic backdrop requires an approach focused on People, Process, Data, and Technology. Centering the lived experience and implications of disasters on residents is the top priority of emergency management. Ensuring that each sector of society is given a seat at the table when crafting the long-term response is equally critical for success. Key stakeholders such as the municipal government, mutual aid organizations, nonprofits, agency heads, community leaders, subject matter experts, donor agencies, and individual residents must be involved in the building and execution of any plan.

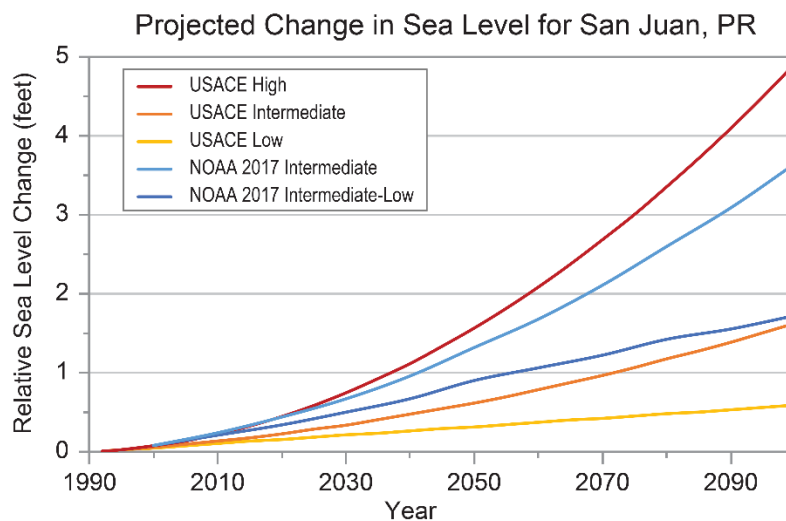


Figure 4: Hurricanes continue to be a major threat to Puerto Rico. Rainfall rates, storm surge heights due to sea level rise, and the number of the strongest (Category 3, 4, and 5) hurricanes are all projected to increase in a warming climate.¹³

The relational dynamic with key stakeholders varies based on the needs and desired outcomes of the partnership. Social contracts – such as between a local government agency and a faith-based group – are often relied upon due to the trust and rapport built over years of community-building. Legal contracts including subrecipient agreements and implementation contracts are also important, particularly between the federal and municipal government. The “co-production of public services,” as disaster recovery expert O’Donovan writes, is critical to building consensus and gaining momentum for an effective implementation.¹⁴ To coordinate between these various stakeholders, one must outline a concrete process that focuses on emergency response while recognizing change management principles. Consulting services that offer expert project management while liaising with key stakeholders can fill that fundamental need.

While the progress made across the island since Hurricane Maria should be celebrated, there are ways in which future responses may be improved, primarily by focusing engagement on local government and community groups, mitigating barriers that subrecipients and individuals face when attempting to access funds and programs, and supporting applicants of FEMA and other federal funding in documenting duplication of benefit requirements.

When a disaster like a hurricane strikes, a differentiated approach that accounts for a community’s needs and strengths is vital. Tapping implementing-agencies or consulting groups to engage with the local government and community groups can reduce the programmatic burden on the Island’s leadership that often gets bogged down by unnecessary bureaucracy and external stakeholder interests. Delegating these responsibilities can afford the Island’s leadership valuable time to focus

¹³ RAND Homeland Security Operational Analysis Center. 2022. “Supporting Puerto Rico’s Disaster Recovery Planning,” accessed September 9, 2022, <https://www.rand.org/hsrd/hsoac/projects/puerto-rico-recovery.html>; O’Donovan, Kristin. 2019, Disaster Recovery Service Delivery: Toward a Theory of Simultaneous Government and Voluntary Sector Failures. Vol. 51(1) 120-129. SAGE.

¹⁴ Ibid.

on other immediate needs. Consulting firms and aid agencies should work together to directly engage and curate their services to the impacted communities while being mindful to take on tasks that can open up practical and intellectual headspace for the Island's leadership.



Figure 5: Ariel survey over northern Puerto Rico Sept. 26, 2017 after hurricane Maria impacted the island six days before.¹⁵

Implementing agencies can also mitigate the barriers that subrecipients and individual applicants face when attempting to access federal funds and programs. For example, developers of grant applications should strive to make the process as straightforward and accessible as possible. This could mean utilizing user-experience or applicant-experience journey mapping to understand the pain points for those attempting to navigate the complex process of applying for federal funds. It could also entail strategically bifurcating projects that are funded by individual applicant-based funding versus reimbursement-focused public services funding.

Finally, consulting firms can also assist in applicant intake, processing and documentation procedures. This task can help preclude duplication of benefits issues to ensure funds are being maximized, disbursed equitably, and being provided to those in

need. Because federal funding from FEMA and HUD, for example, requires applicants to prove that they are not receiving a duplication of benefits from other programs, applicants sometimes are not eligible for benefits until they have labored through the process of proving that their requested aid is not duplicative. Consulting firms could help support applicants in navigating this process.

McBride Solution

In terms of data and technology, leveraging professional services' existing resources can be an efficient and expedient way of standing up disaster recovery. Moreover, consulting services such as McBride are adept at crafting and executing impact and unmet-needs assessments, facilitating tabletop exercises, and building consensus toward a plan that elicits a resilient response. Our firm is poised to step in and support professional consulting needs for disaster recovery in Puerto Rico. Our expertise in grants management and program and project management both in Puerto Rico and elsewhere, coupled with our experience implementing FEMA-PA, HUD, and CDBG funding, position us to hit the ground running. With fluency in Spanish and deep knowledge of Latin America generally and Puerto Rico specifically, we understand the larger context of responding to disasters on the U.S. territory while respecting local expertise and culture.

If you have questions or thoughts about our people, process, data, technology approach and are as excited as we are to re-imagine the future of disaster recovery, please reach out to any one of the authors of this document. We aspire to leverage our consultative capacities to address real-world challenges plaguing those in Puerto Rico and beyond.

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