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## Urban programming case study: Puerto Rico

### Puerto Rico Recovery Program

*Model of intervention: Pathways to Permanence Urban Crisis*

#### Overview of Urban Housing Context

The United States is grappling with unprecedented housing challenges related to access, supply, and quality, all worsened in areas prone to natural disasters. Puerto Rico, reported as one of the top regions in the world with the highest risk for disaster (Global Risk Index, 2021), has experienced significant devastation in the aftermath of hurricanes, earthquakes, and other natural events in recent years. The island's housing stock, as well as its public infrastructure, is often outdated and vulnerable to damage, leaving many residents without safe and secure homes. As a mitigation strategy, the federal government, through the Federal Emergency Management Agency (FEMA), has awarded \$23.4 billion in public assistance funds that prioritize critical services like electricity and water. Unfortunately, much of that aid remains largely unspent.

The 2017 hurricanes, Irma and María, damaged an estimated 725,000 homes, killed about 2,975 people, and caused over \$100 billion in damages (The Associated Press). Along with ongoing crises, the hurricanes revealed the fragility of Puerto Rico's housing system that continues to displace thousands. Many homes remain in a state of disrepair, with residents struggling to afford the necessary renovations. Furthermore, limited access to federal recovery funds and bureaucratic delays have slowed progress. According to a 2024 study from the US Government Accountability Office, only about \$1.8 billion has been spent of the \$23.4 billion awarded (it should be noted that the exact disbursement amount may vary by source). Spending delays can be largely attributed to bureaucratic hurdles (e.g., Public Assistance's reimbursement programs and changing guidance, interagency review requirements for HUD on grant notices), mismanagement (e.g., shipping delays and lost supplies), complexity of projects (e.g., large numbers of affected sites, costs estimates), and political tensions.

As climate change increases the frequency and intensity of natural disasters, the need for resilient and affordable housing in Puerto Rico is more urgent than ever. Addressing these challenges requires comprehensive, adaptive, and community-centered approaches.

#### Detailed Overview of Project Area/Problem

Residents in Puerto Rico face continuous urban development and socioeconomic hurdles. In 2021, the poverty rate in Puerto Rico was 43% (Center for Puerto Rican Studies, 2023), three times higher than the national average of 12.6% in the United States. The island's urban areas are also densely populated, leading to overcrowding and increased strain on infrastructure (e.g., the Puerto Rico Aqueduct and Sewer Authority and the Electric Power Authority Power Plant in San Juan). Slightly over half of residents, or an estimated 55% (Acevedo, 2019), live in informal or inadequately constructed housing, making them highly vulnerable to natural disasters like hurricanes and floods. Climate change has intensified these problems, with rising sea levels and more frequent extreme weather events threatening low-lying coastal areas where many people reside. Additionally, limited access to secure land ownership and tenure further complicates the situation, as residents often lack the legal rights to rebuild or improve their homes after disasters, through government sponsored programs. This, combined with bureaucratic hurdles and insufficient government support, leaves many without safe, resilient housing.

## Effect on Target Groups/Communities

The housing crisis following Hurricanes Irma and María severely impacted the health, safety, economic and overall wellbeing of marginalized communities in Puerto Rico, deepening existing disparities. The destruction of homes and infrastructure led to unsanitary living conditions, with the presence of untreated water and proximity to mold. In 2017, over 13.7 billion gallons of untreated wastewater were discharged into the San Juan metropolitan area as a result of energy failures at the wastewater treatment plants. Cases of leptospirosis, gastrointestinal outbreaks, conjunctivitis, and influenza were reported across schools from drinking contaminated water (RAND, 2020).

The hurricanes severely disrupted education. Schools closed for a period of 33-70 days immediately after the hurricanes (RAND, 2020) with 265 of them closing permanently (Vox, 2018). For children, this disruption was particularly damaging, further limiting their opportunities for advancement and perpetuating cycles of poverty. The loss of homes often meant the loss of jobs, as 77% of small businesses reported damage from the hurricanes (Fed Small Business, 2018), with about 43% of Puerto Ricans living below the poverty line before the hurricanes, the prolonged recovery and lack of access to financial assistance left many without the means to rebuild their lives, leading to increased poverty and economic instability. The trauma of losing homes, livelihoods, and the subsequent displacement caused widespread anxiety and depression, with reported cases of mental health issues. Rates of suicide witnessed a 29% increase in 2017 and in 2018 the suicide hotline experienced a 246% increase in calls (RAND, 2020). Those already struggling with social and economic disadvantages were particularly affected, leading to a long-term decline in overall well-being.

To mitigate some of these deepened disparities related to the health, safety, and wellbeing impacts of the disasters, the Puerto Rico Recovery Program prioritized applicants experiencing vulnerability measured across a variety of distinct socio-demographic variables that included: number of residents per home, number of children, age, gender, disability, income, and education.

## Project Intervention

One month after hurricanes Irma and María made landfall in September of 2017, Habitat for Humanity International (headquarters) and the local affiliate, Habitat for Humanity Puerto Rico, partnered in response to the crisis beginning their efforts with the disbursement of 2,000 Hurricane Shelter Kits. Through the support of donations and grants, \$63 million was subsequently activated over five years to collaboratively design and implement the systems-oriented intervention, or the Puerto Rico Recovery Program (PRRP), with an effort to restore homes and strengthen communities.

To identify the most pressing concerns and impactful interventions, a needs assessment was quickly conducted which identified four major housing-related disaster response areas in places like Bayamón, Caguas, and San Juan. These areas included: 1) home construction through offerings like repairs, rehabs, and production in 35 communities across 22 municipalities; 2) capacity building for those in the construction industry, communities, and homeowners; 3) home tenure to secure access and protection of homes through titles and land tenure; and 4) knowledge exchanges with key and diverse stakeholders to improve housing policies and systems. Through these interventions, it is estimated that around 20,900 people were favorably impacted through services including 3,486 shelter and solar kits, 795 home repairs, and 48 new homes.

## Project Innovation

The Puerto Rico Recovery Program was not only challenged by the magnitude of the damage caused by two category five hurricanes, but also by a series of natural and sociopolitical events that proceeded. With ongoing tumult, Habitat for Humanity was forced to act swiftly and strategically to meet the pressing and evolving needs of the communities most impacted. To remain adaptive, the Puerto Rico Recovery Program took a participatory and data centered approach that prioritized interventions done with communities. The Home Repairs' scope of work was particularly notable for its community-based approach, integrating personal outreach through local knowledge, a data-driven selection process, and comprehensive professional assistance throughout the home repair stages. As part of the community-based approach, Habitat for Humanity built relationships with municipalities and local organizations to encourage collective interventions. Personal outreach efforts were partly conducted through local referrals to mitigate some of the trust barriers that residents experienced largely due to the hurdles in soliciting aid from other entities, such

as FEMA. Once eligible residents were identified, a data-driven selection process was employed to prioritize the individuals with heightened vulnerability using weighed scores across a variety of indicators.

## Global relevance of community-level impact

**SDG 3: Ensure healthy lives and promote well-being for all at all ages.** By rendering repairs to the communities most in need after the shock of the hurricanes, program participants witnessed improvements to their physical and mental health. Overall, 91% of participants reported feeling safe at home, while others attributed their mental health improvements to the reduced isolation that came from having people at home during the repairs.

**SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable.** Through its many interventions, the Puerto Rico Recovery Program afforded some of the most vulnerable communities a sense of safety through the repairs conducted. By working with municipalities, other local organizations, and with the communities themselves, Habitat for Humanity weaved a network of support that would strengthen resilience and response in the face of another disaster.

**SDG 10: Reduce inequalities within and among countries.** By focusing on the most vulnerable communities, using a data-driven selection process complemented by a localized referral process, Habitat for Humanity was able to work with those most impacted by inequality.

## Moving Forward

**Community-centered approach.** Prioritize community-centered approaches by working with municipalities, local organizations, and residents to identify the resources most urgently needed and the families who would most benefit from support.

**Trauma informed construction.** Train workers in the construction industry on how to navigate the delicate environments in which they are operating in. It is important that workers have a firm grasp of trauma-informed practices when working with individuals who have experienced the shocking effects of having lost their homes.

**Co-creation of post recovery plans.** Involve community in designing a post recovery plan that enables them to identify priority needs, build a risk mitigation approach, and effectively manage their set of agreed safe practices in ways that are contextually appropriate to them.

**Flexible and generous funding.** If in a position to fund, provide multi-year, low barrier support that reduces the number of requirements across the funding continuum largely taking the form of general operating support. Flexible funding is crucial in high-risk environments such as Puerto Rico because programmatic interventions must remain adaptive to changing needs.

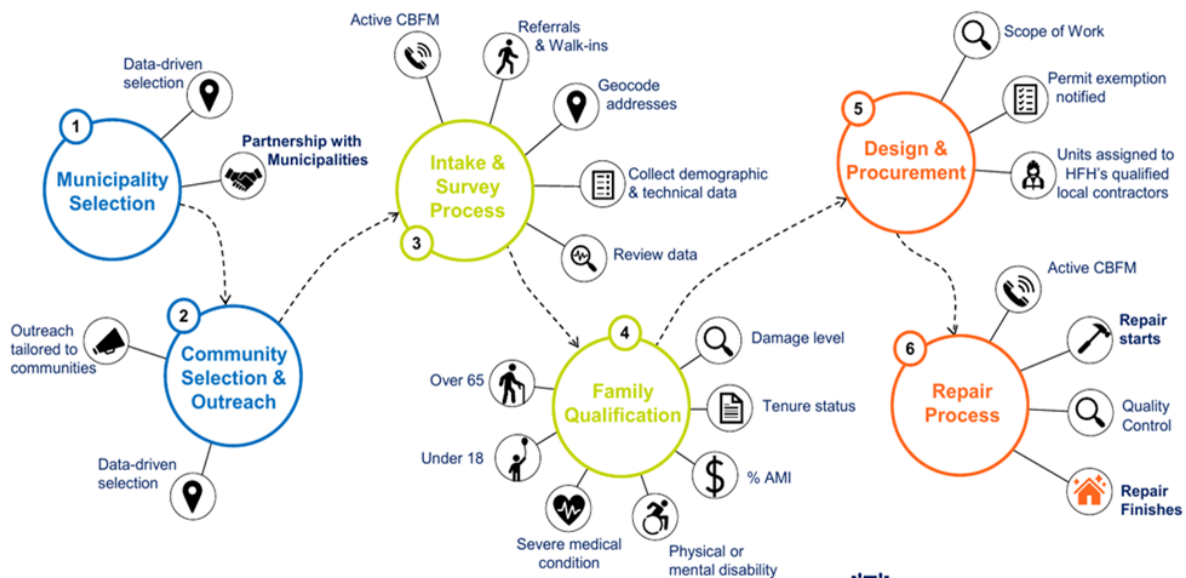
**Multiplying effects and their sustainability.** Acknowledge and consider the multiplying effects interventions can have on the health and wellbeing of participants (e.g., reduced isolation) as part of the impact repertoire, however, know that some of these outcomes may have a shelf life (e.g., the duration of the program). Plan, if feasible, continued support to extend the livelihood of these residual outcomes.

**Good stewardship.** Support residents in navigating the laws and regulations (e.g., of land tenure and titles) of their local landscapes so that they can properly access any type of government assistance (e.g., FEMA).

## Visual Documentation



## COMMUNITY-BASED REPAIR PROGRAM PROCESS



We build strength, stability and self-reliance through shelter.



AVERAGE PROGRAM TIME: 9 MONTHS

