Cover Photo: A hurricane survivor in Loiza seated outside of his damaged home. Above: A community worker visits a family living in Loiza whose home, which lost most of its roof during the hurricane, remains flooded.
In late September 2017, Hurricane Maria, one of the strongest Atlantic hurricanes on record, directly struck the Commonwealth of Puerto Rico, a territory of the United States. The hurricane resulted in catastrophic damage to critical infrastructure and left the island’s entire population of 3.4 million people literally and figuratively in the dark and in urgent need of life-saving humanitarian assistance.

In late November, Refugees International (RI) conducted a mission to Puerto Rico to assess the protection and assistance needs of the most vulnerable hurricane survivors. This was RI’s first mission within the United States in the organization’s 38-year history. Our goal was to provide insights and expertise based on RI’s long history of advocating for improvements in responses to international humanitarian crises and our experience in similar acute, sudden-onset weather-related disasters in foreign countries, including island nations.

At the time of RI’s mission to Puerto Rico, more than two months after the storm hit, our team encountered a response by federal and Puerto Rican authorities that was still largely uncoordinated and poorly implemented and that was prolonging the humanitarian emergency on the ground. While food and bottled water are now widely available and hospitals and clinics back up and running, thousands of people still lack sustainable access to potable water and electricity and dry, safe places to sleep. Moreover, Maria survivors are encountering enormous challenges navigating the U.S. Federal Emergency Management Agency’s (FEMA) bureaucratic and opaque assistance process and lack sufficient information on whether, when, and how they will be assisted.

The horrendous conditions that tens of thousands of Puerto Ricans—many of whom are poor and elderly—continue to endure require the Trump Administration and Congress to prioritize needs and corresponding response programs. FEMA and Puerto Rican authorities, with support from the highest levels of the U.S. federal government, must immediately adopt a more streamlined, coordinated, transparent, and effective strategy that includes, among other things, ensuring that survivors have access to safe and secure accommodations while most hospitals become operational again. In doing so, international best practices endorsed by the U.S. Agency for International Development’s Office of Foreign Disaster Assistance (USAID/OFDA) and other international humanitarian agencies should be brought to bear both in Puerto Rico and in future U.S. disasters. In addition, affected populations must be provided with better and easier-to-comprehend information on FEMA’s assistance process.

Grappling with questions around Puerto Rico’s medium-to longer-term recovery requires Congress’s and the Trump Administration’s focus and attention—but this will take time. In the meantime, we cannot leave our fellow Americans in Puerto Rico without adequate assistance and support.
**RECOMMENDATIONS**

**The Ongoing Emergency:**

- **Strengthen leadership and coordination**—The President should direct FEMA to work closely with Puerto Rican authorities to adopt vastly improved coordination and management systems to identify inefficiencies and life-threatening gaps in the disaster response. This means more intensive engagement not only with local authorities but also with local community leaders and working groups that have been established by non-governmental organizations (NGOs).

- **Transform information management and dissemination**—In view of the huge gaps in public information reaching survivors of Hurricane Maria, FEMA and the Puerto Rican government must implement a public information campaign to effectively share easy to understand information on response and recovery assistance. In addition to widely accessible forms of media, this should include directly visiting the homes of more vulnerable individuals, including the elderly and disabled.

- **Target the most vulnerable, especially with respect to urgent housing assistance**—Federal agencies involved in providing housing assistance in Puerto Rico, in close cooperation with Puerto Rican authorities, NGOs, and community groups, must immediately adopt an outcomes-based strategy to address urgent gaps in emergency housing assistance and ensure that disaster survivors are not forced to reside in unsafe and uninhabitable homes.

- Working with NGOs with expertise in providing shelter assistance to disaster survivors in the United States and abroad, FEMA and local authorities should undertake a more aggressive program to distribute tarps and shelter kits and conduct community training on tarp installation and temporary roof repairs.

- **FEMA and the U.S. Army Corps of Engineers (USACE) must adopt** a more streamlined and expedited process for distributing tarps and installing temporary roofs. This should include adopting a community-based approach and working directly with aid agencies and community groups to ensure timely and effective targeting of the most vulnerable households.

- **FEMA should adopt or support a program to provide direct financial aid to host families** that are providing accommodations to the displaced, thereby lightening the burden and facilitating self-repairs where feasible.

- **Puerto Rican authorities must ensure that safeguards are in place so that the few remaining people living in government-run shelters are not forcibly evicted or forced to relocate to unsafe, undesirable locations because they have no other options.**

**Apply International Best Practices and Lessons Learned in Puerto Rico and to Future U.S. Disaster Responses:**

- **Adopt best practices for disaster response**—In considering how to enhance the response in Puerto Rico and with respect to future disasters, FEMA and other U.S. domestic agencies must consider adopting international best practices, including lessons learned by USAID in its leadership and support of disaster responses around the world. These include needs assessments, public situation reporting, and other information management tools developed by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA).

- **Building resilience and building back better**—All response and recovery activities in Puerto Rico should be viewed as opportunities to reduce the risk of future disasters and enhance the island’s overall resilience, including by building back safer and imparting knowledge, information, and skills.
related to disaster management to local government authorities, communities, and individuals.

Congressional Appropriations for Puerto Rico:

- Congress must generously support emergency response and recovery efforts, including for housing assistance (especially for the most vulnerable households) and efforts to build resilience to future disasters.

BACKGROUND

Hurricane Maria in Puerto Rico: A Catastrophic Disaster Meets a Slow and Uncoordinated Emergency Response

On September 20, 2017, Hurricane Maria tore a direct path across the island of Puerto Rico. Following closely in the path of Hurricanes Harvey, Irma, and José, Hurricane Maria was the fourth major hurricane and the second Category 5 hurricane of the hyper-intense 2017 Atlantic hurricane season.¹ By the time Hurricane Maria made landfall, it had weakened slightly to a high-end Category 4 but was nonetheless the most intense hurricane to hit the island in 89 years and the tenth strongest Atlantic hurricane on record. Situated directly in Hurricane Maria’s path, Puerto Rico took a massive pummeling over a 40-hour period as the hurricane’s eyewall drove its way across the island with 150+ mile-per-hour winds and torrential rain.²

The hurricane took out 100 percent of the island’s electricity, leaving all of Puerto Rico’s 3.4 million residents in the dark. Nearly all communication was lost with 95 percent of cell networks down and 85 percent of above-ground phone and internet cables disabled.³ More than 70 percent of Puerto Rico’s potable water treatment and distribution system was compromised due to a combination of direct damages and the loss of power, leaving nearly half of the population without potable water.⁴ Hundreds of thousands of homes were damaged.

According to Puerto Rican authorities, the storm was directly responsible for the deaths of 64 people. Recent reports indicate, however, that the disaster’s true death toll was likely much higher, with potentially more than 1,000 hurricane-related fatalities, resulting from delayed medical treatment, poor conditions, and lack of electricity in hospitals, as well as the other extreme challenges survivors faced in the aftermath.⁵

In late November, approximately two months after Hurricane Maria, RI conducted a mission to Puerto Rico to assess outstanding assistance and protection needs among vulnerable populations and to review the overall response. The RI team met with federal and Puerto Rican authorities involved in the response as well as with representatives from international, national, and local NGOs that are providing assistance. In addition, the team visited affected communities in eight municipalities: Yabucoa, Comerío, Lares, Adjuntas, Canóvanas, Loíza, San Juan, and Guaynabo.

The Puerto Rico mission was the first RI has conducted within the United States. Our goal was to identify how best practices that the U.S. government often seeks to promote in responding to disasters in foreign countries around the world might be applied in Puerto Rico to address some of the ongoing challenges.
Lacking Leadership, Disaster Response Sets Sail on a Slow, Difficult Course

“Terrible, horrible mistakes were made in the opening days. Unfortunately, you can never get that time back.”

– Former FEMA employee

Unfortunately, failure to take a more proactive, robust, and agile approach in the days immediately leading up to and following the Puerto Rico disaster put the response on a slow and problematic course that, to this day, is prolonging the humanitarian emergency on the ground and preventing recovery.

In the days leading up to Hurricane Maria’s first impact with U.S. territory and as the storm increasingly set its sight on Puerto Rico, the potential catastrophe became increasingly evident. Four days before the storm hit, the National Weather Service warned that Maria (at the time a rapidly strengthening tropical storm) could affect Puerto Rico as a “dangerous major hurricane.” Over the course of the next several days, Maria intensified at record-breaking speed and by September 18, had been upgraded to a Category 5 hurricane headed directly for Puerto Rico and the U.S. Virgin Islands.

In terms of its strength, Hurricane Maria was formidable when compared to Hurricanes Harvey and Irma, although not necessarily greater than Irma in terms of wind speed or Harvey in terms of rainfall intensity. Rather, what made the storm’s impact and the resulting disaster so enormous was the vulnerability of Puerto Rico’s aging and poorly maintained infrastructure and the government’s lack of preparedness. Worse yet, at the time Maria hit, the island was still reeling from a sideswipe by Hurricane Irma two weeks earlier, which damaged thousands of homes and cut power to 70 percent of the island’s customers and potable water access to 34 percent of residents. Puerto Rican commonwealth and local authorities were neither sufficiently prepared for, nor capable of, effectively responding to a disaster of this magnitude—a fact that should have been well known to federal authorities.

To be sure, FEMA and other federal and state emergency response agencies were already stretched extremely thin, as they struggled to respond to major disasters in Texas, Louisiana, and Florida brought on by Hurricanes Harvey and Irma. Nonetheless, as Maria approached, federal officials appear not to have been sufficiently focused on planning for the worst-case (but not unexpected) scenario about to unfold in Puerto Rico. The clearest evidence of this was the absence of bold and swift action in the immediate aftermath of the hurricane.

Once the storm hit, critical time was lost in the first few days as top federal officials were slow to react to the catastrophic nature of the disaster, the urgent needs it had left in its wake, and the enormous logistical challenges. These included inability to communicate with most of the island, lack of electricity throughout the island, lack of access to potable water for approximately half of the population, and destruction of ports, bridges, and roads. These challenges were compounded by the remote location of the island, which is 1,000 miles from the closest U.S. city (Miami), and Puerto Rico’s reliance on the import of critical supplies, including food, bottled water, and gasoline.

It is common to hear experts in disaster risk reduction declare that a natural hazard (like a hurricane) is more likely to become a disaster when infrastructure lacks resilience, when response capacity within a community is very limited, and when the community itself has particular vulnerabilities. Crucially, top federal officials appear not to have appreciated fully that this was the situation in Puerto Rico. Commonwealth and local authorities in Puerto Rico had extremely limited capacity to respond due to factors that included a lack of strong emergency management capability, assets (e.g., helicopters, vehicles), equipment (e.g., satellite phones, generators), and emergency funds. Nor was there sufficient recognition of the pre-existing vulnerabilities of the affected population, 40 percent of whom live below the poverty line and close to 15 percent of whom are over the age of 65.

In light of these known limitations, it is troubling that it took five days before any senior federal official from
the U.S. mainland visited the island to survey the damage (FEMA Administrator Brock Long and White House Homeland Security Advisor Tom Bossert arrived on Monday, September 25) and for President Trump to hold his first meeting on the disaster in the Situation Room.11 Citing concern over U.S. shipping jobs, the President did not waive the Jones Act, which requires only U.S.-flagged ships to enter Puerto Rican ports, until eight days after the storm struck and then declined to extend it beyond 10 days.12 Finally, the President did not visit the island until two weeks after Maria made landfall and has not returned since.13

While every disaster is unique, comparisons can nonetheless be illuminating. In this case, comparing the assets and manpower devoted to the response to Hurricane Maria in the initial days to those deployed to several foreign disasters suggests that senior federal officials had not fully grasped the challenges in Puerto Rico. The absence of a more rapid and forceful military response to the catastrophe in Puerto Rico, a U.S. territory, was called into question by military experts with experience responding to foreign disasters, including Lt. Gen. P.K. “Ken” Keen, the three-star general who commanded the U.S. military effort in Haiti following the 2010 earthquake. “I think it’s a fair ask why we’re not seeing a similar command and response. The morning after, President Barack Obama said we were going to respond in Port-au-Prince . . . robustly and immediately, and that gave the whole government clarity of purpose.”14

In short, the Puerto Rico disaster presented huge obstacles and unprecedented challenges that required extraordinary measures. Above all, it required the leadership of the President himself. According to the National Response Framework, “Regardless of the type of incident, the President leads the Federal Government response effort to ensure the necessary resources are tallied quickly and efficiently to large-scale and catastrophic incidents.”15 At a time when FEMA was fighting disasters on numerous fronts, the President’s direct engagement would have brought with it the necessary focus, resources, and the “get it done” mentality the disaster warranted. Without that direct engagement, the response quickly ran into challenges and became bogged down in bureaucratic processes that were poorly adapted to the context.

“No one here in Puerto Rico—no one—was speechless by a lack of leadership,” Keen said. “Everyone here is here to help, but there is an epic leadership void.”

— Aid worker

A full accounting of the human costs of the failure to respond boldly and effectively in the initial days and weeks after the hurricane will have to await future, detailed studies on morbidity, mortality, out-migration, impacts on education, housing, and employment as a result of failures to initiate immediate repairs, among other related issues. Nonetheless, and as reflected in the next section on the ongoing emergency, we know enough today to conclude that those costs—which continue to accumulate—have been significant and substantial.

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<tr>
<th>Aircraft Assets</th>
<th>Military Troops</th>
<th>Naval Vessels</th>
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<tr>
<td>Haiti Earthquake</td>
<td>Within 14 days: 300 helicopters</td>
<td>Within 2 days: 8,000; within 7 days: 17,000</td>
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<tr>
<td>Philippines Typhoon Haiyan</td>
<td>66 aircraft (at peak)</td>
<td>Within 12 days: 9,500</td>
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<tr>
<td>Puerto Rico Hurricane Maria</td>
<td>Within 24 days: 68 helicopters</td>
<td>Within 10 days: 4,500</td>
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Facing Lack of Local Capacity, FEMA Slow to Adapt to the Puerto Rico Context

The crux of the initial problem lay in the fact that FEMA is not set up to lead a natural disaster response but rather to support state and local governments to respond. As FEMA Administrator Long recently acknowledged to Members of Congress, “FEMA was never designed to be the first and only responder, but in many cases, that’s where we find ourselves.” As another FEMA official explained to RI, “The whole intent is to be responsive to the state, to fill the gaps at the state level.” However, in the case of Puerto Rico, commonwealth and local authorities and agencies had extremely limited capacity or ability to respond. At the highest level, the White House never came to grips with this reality. As one aid worker told RI, “FEMA keeps saying the process has to be locally led, but there is a time when you have to step in and lead. The local government here doesn’t know what to do.” While FEMA eventually became cognizant of the challenge, it has been extremely slow to adapt.

This is not to say that FEMA staff and other federal and local responders on the ground were not doing their best under the circumstances. Many FEMA workers, who were working 24/7 to respond in Puerto Rico, had come directly from other disasters and had been working for weeks on end meeting the extreme demands of a particularly disastrous hurricane season. But given the institutional constraints, their overall effectiveness was limited. Moreover, FEMA’s usual process for responding to disasters on the U.S. mainland, wherein dozens of federal and local agencies work on parallel tracks according to their “emergency support function,” seemed particularly directionless in the Puerto Rican context and in the absence of local capacity to guide the response or at least meet federal efforts half way. Absent political signals and support from the highest levels to pull out all the stops to ensure a timely, effective response, this challenge was only compounded, and opportunities to adapt and innovate to the Puerto Rican context were lost. The result has been serious dysfunction, especially in terms of overall logistics, coordination, and information sharing. Meanwhile, the urgent humanitarian needs of thousands of vulnerable people remain unaddressed.

THE EMERGENCY IS NOT YET OVER

“There is a lot of need, and there is a lot of fear.”
–Community aid worker in San Juan

At the time of RI’s visit in late November, two months after the hurricane hit, and thanks to a tremendous effort by federal and local responders who were working around the clock, roads had been cleared and ports reopened to allow aid to flow in (albeit at inflated prices due in at least some measure to the decision not to extend the waiver of the Jones Act). Most hospitals and clinics had reopened. Food and bottled water were widely available in supermarkets and were making their way to vulnerable households with the help of voluntary organizations and community groups.

But huge gaps and problems remain that are prolonging the emergency and impacting recovery. Foremost among these is the urgent housing needs of tens of thousands of Puerto Ricans who are currently living in damaged and potentially unsafe homes, many of which also lack lighting and/or a sustainable source of potable water. According to the Puerto Rican government, more than 472,000 housing units were severely damaged or destroyed by Hurricanes Irma and Maria. Unfortunately, many of the most severely damaged homes are poorly constructed, uninsured, and occupied by lower income populations. The housing assistance packages being provided by FEMA and the Puerto Rican government are not only poorly implemented but also ill-suited to the context and ineffective at meeting needs in a timely manner.
Lack of Dry, Safe Spaces Leaves Tens of Thousands with Few Options, Facing Unsafe Conditions

In addition to providing disaster survivors with cash assistance to meet urgent needs, FEMA provides disaster-affected individuals whose residences were damaged or destroyed with broader housing assistance. FEMA’s program, which is implemented with the federal Department of Housing and Urban Development (HUD) and the Small Business Administration (SBA), includes: (1) temporary rental assistance; (2) financial assistance to homeowners to repair their home to “a safe and sanitary living or functioning condition”; and (3) financial assistance and grants (from both FEMA and SBA) for homeowners who must replace or rebuild their homes as a result of a disaster. As of early November, more than one million Puerto Rican households had applied for FEMA individual assistance, and many more are likely to apply in the coming months.

Unfortunately, while FEMA’s usual types of housing assistance may have worked effectively in other disaster contexts such as Texas and Florida, they have been highly problematic in Puerto Rico where many of the worst affected are poor and uninsured to begin with, and, due to the storm, lack access to phone service or the internet. In traveling to many of the worst hit municipalities, RI was deeply concerned by the slow—and in some cases, nonexistent—response to survivors’ urgent housing needs. RI’s team met with families still living in shelters who have nowhere to go. The RI team also met with numerous poor families (including many with young children) who were living in homes that had sustained major damage, were leaking water and growing mold, and lacked reliable water, sanitation, and lighting. Moreover, due to the failure to provide timely, effective emergency shelter assistance, many homes had sustained significant additional damage over the past two months as the result of ongoing heavy rains that occur this time of year.

Two primary factors are driving the current housing emergency in Puerto Rico. First is the failure of federal and Puerto Rican authorities to widely distribute
tarpaulin (tarps) and install temporary roofs (known as blue roofs) as quickly and widely as possible in the immediate aftermath of the storm and as part of the life-saving and life-sustaining emergency phase. The second is FEMA’s and the Puerto Rican government’s bureaucratic, complicated, confusing, largely opaque, and poorly executed process for applying for assistance, including for home repairs and transitional housing.

Survivors’ Long Wait for Emergency Repairs: Tarps and Blue Roofs

“The whole tarp process remains shrouded in mystery.”
—Aid Worker

Why more tarps—a common immediate emergency response measure in natural disaster settings—have not been more widely distributed across the island remains unclear. According to a FEMA spokesperson, as of late November, 93,000 tarps had been sent to distribution centers on the island.23 Yet RI met with local government officials, affected individuals, and community leaders who said they still were having a hard time getting their hands on tarps. A recent news report revealed that in early November, FEMA cancelled a contract with a manufacturer that had failed to deliver more than 500,000 tarps and 60,000 rolls of plastic sheeting, forcing the agency to go out for rebidding, losing nearly a month in the process.24 This may explain in part why tarps have not been distributed more broadly.

Lack of supplies, however, is not the only problem. FEMA’s overly bureaucratic distribution process appears to be a culprit as well. One aid worker relayed her frustration in trying to get tarps from FEMA to distribute in the areas in which her organization is working. “I’ve been here for a month and the process has changed four times. I would go to the desk at the Convention Center [where FEMA has set up its central disaster response center known as the “Joint Field Office” or JFO] to fill out a form and was given an order to take to the [FEMA] warehouse. Now there are three forms that have to be signed, including by a regional official who is based in that region.” RI spoke to a community worker in San Juan who, following the disaster, saw the enormous need for tarps and set about trying, without success, to procure tarps from FEMA. Eventually she was told that tarps were being distributed only to mayors. “The importance of the tarps can’t be overstated. I’m personally cleaning three inches of water from my house each day,” she lamented.

Even families that have been able to procure a tarp complained that they were not effective in keeping out the rain, were already full of holes and leaking, or had blown away altogether. RI visited numerous damaged houses where this was the case. According to interviews, most tarps provided by FEMA came only with a rope and no instructions on how to properly secure the tarp in place. (As discussed below, this contrasts with international settings where USAID/OFDA adheres to more effective guidelines on emergency shelter).

The other key federal government emergency shelter assistance program, installation of “blue roofs” by the U.S. Army Corps of Engineers, likewise has been too slow in implementation. Managed by USACE for FEMA, the blue roof program is a free service that provides homeowners in disaster areas with fiber-reinforced sheeting to cover their damaged roofs until arrangements can be made for permanent repairs. According to USACE, the blue roof program “protects property, reduces temporary housing costs, and allows residents to remain in their homes while recovering from the storm.”25
During field visits to many of the worst-affected areas, RI saw little evidence of blue roofs. According to a FEMA spokesperson, USACE contractors have installed 11,000 blue roofs on homes. Yet as Michael Byrne, Puerto Rico’s FEMA coordination officer, recently admitted, it is estimated that at least 60,000 blue roofs are needed across the island. For example, in one hard hit municipality a few hours’ drive from San Juan, the mayor told RI that he had requested 1,500 blue roofs but only expects to receive 600. That leaves more than half of the damaged homes in his district with no temporary repair assistance. Worse yet, in the almost eight weeks since the storm, not one blue roof had been installed. “My biggest problem with FEMA is the [blue roof repairs]. People don’t want to go live somewhere else. They want to go home.”

As an urgent first step, FEMA and local authorities, with the assistance of organizations with expertise in shelter programming in disasters in the United States and abroad, must dramatically strengthen efforts to distribute tarps and shelter kits and conduct community training on their installation. In addition, FEMA and USACE must adopt a streamlined and expedited process for installing blue roofs, including taking a community-based approach and working directly with aid agencies and local groups to ensure timely and effective targeting of the most urgent cases and vulnerable households.

Few Options for Those in Shelters

In the initial days and weeks following the hurricane, most people whose homes were damaged or destroyed either went to stay with relatives/friends/neighbors or took refuge in government-run shelters set up in schools or other public buildings. Yet given the extensive damage to housing stock caused by the hurricane, there were very few hotels or rental properties available where people displaced to shelters could stay until more permanent housing solutions could be found. In late October, facing a lack of temporary housing on the island, and under pressure to close shelters to allow schools to reopen, FEMA and the Puerto Rican government announced that they were providing Transitional Sheltering Assistance (TSA) to Puerto Ricans displaced by the hurricanes to stay in hotels in Florida and New York. People still residing in shelters were prioritized for the program but many do not want to go. As of December 11, 39 shelters housing 737 individuals were still open.
For those displaced in shelters who do not want to go to the U.S. mainland, there are few options. RI spoke to several families and individuals still living in shelters who said that they were staying there because they had nowhere else to go. RI interviewed one displaced mother who, along with her two children, almost died during the storm when their first floor rental apartment next to the river flooded up to the ceiling. Although she wanted to go back to their apartment, she could not locate her landlord to obtain permission to make the requisite repairs to her badly-damaged unit. Fighting back tears, she told RI that she had asked the local government to find her an apartment in town but was told none was available and that the only option was for her to move her family to a public housing project in the next town, a 30-minute drive away. She was terrified to move to public housing because of the high crime rate, drug use, and criminal gangs for which the housing project was notorious. “They are shooting people with guns over there!” she said. Moving away would also mean pulling her 14-year-old daughter, who has special needs, out of her current classroom, where she has been able to get support, and putting her into a public school.

Puerto Rican authorities need to ensure that safeguards are in place so that the few remaining people living in government-run shelters are not forcibly evicted or forced to relocate to an unsafe, undesirable location. One option would be for FEMA to adopt a program to provide direct financial support to host families who could provide rooms or housing units to people who would otherwise be displaced. This would create an incentive for more home owners to help find housing solutions for displaced people and provide the cash needed to facilitate self-repairs where feasible.

A Deeply Flawed Process for Meeting Urgent Housing Needs

The slow response to housing and shelter needs in large part stems from the bureaucratic, confusing, and obscure process for applying and qualifying for FEMA relief in the first place. Per FEMA’s usual procedures, disaster-affected individuals apply for assistance either via phone or by filling out a form on the internet. The total loss of power and near total loss of communications throughout the island, along with the slow pace at which they have been restored, meant that many, if not most, people had no way to file a claim in the first few weeks after the disaster.

Eventually, FEMA, local governments, community organizations, legal aid agencies, and others began helping people fill out FEMA claim forms by manually taking down their information and later uploading it onto the FEMA website. Unfortunately, some of these initial claims were not properly filed, forcing people who had filed weeks earlier to refile. Calling the FEMA hotline was a challenge as well since many of the worst-affected areas in the mountainous central region of the island still lack cell reception. RI spoke to people who were forced to travel to other areas to get through to FEMA’s helpdesk or had to ask relatives or friends to call for them. RI spoke to a woman from Lares who said her husband had to drive to a neighboring town 30 minutes away to call FEMA to inquire about his claim. Once he got through, he was put on hold for 20 minutes. He eventually lost connection when his cell phone battery ran out. To make matters worse, he had nowhere to charge it.

Another major stumbling block has been the fact that, in order to receive any type of housing assistance other than tarps, FEMA requires a home inspection. Applicants are told to wait for a phone call from FEMA to set up an inspection. This is obviously problematic since many people do not have reliable cell reception or landline phone service. In fact, one of the reasons people are staying in their damaged homes is the fear they will miss the inspector’s visit. But at the time of RI’s mission, the inspection process was incredibly slow. According to the Puerto Rican government, as of early November, only 7 percent of the overall housing inspections required for housing repair had been conducted.

Once an inspector does appear, applicants are required to be present and show not only a valid ID but also proof of occupancy, proof of ownership (deed, title, mortgage payment book, or tax receipt), and a host of additional
RI heard numerous concerns from people who had applied for FEMA assistance but were unable to provide proof of ownership. According to legal aid workers with whom RI spoke, a large number of people lack legal proof of ownership in Puerto Rico.

Renters also ran into challenges. Temporary repairs to rental units require the permission of the owner, making it challenging for many renters with absentee landlords to get the assistance, which would allow them to stay in their rental units.

RI interviews with local government officials, legal aid workers, local community organizations, and affected individuals themselves identified the following concerns about FEMA’s claims system:

- Lack of basic communications made applications and follow-up extremely challenging, if not impossible.
- FEMA forms were poorly translated and not easily understood by applicants—and even by some FEMA volunteers.
- Claims made manually later encountered verification problems which could not be fixed or addressed, forcing individuals to refile.
- The forms did not clearly indicate “eligibility criteria” for various types of assistance, leaving people to guess if they were answering the questions correctly and resulting in people who were entitled to assistance not receiving it.
- Widespread complaints by citizens, who believed that they were entitled to $500 in emergency assistance from FEMA, not receiving it when they thought they were eligible or being told that there was “no money left.”
- For those who did receive housing assistance, the amounts were insufficient to meet needs, and there was no information on how the amount of damage or assistance had been calculated.

For those who have not received assistance or received insufficient assistance, FEMA’s appeals process has been equally frustrating. It is unclear whether people who received some assistance can appeal, or if appeals are only available for people who received no assistance. Moreover, appeals can only be made to FEMA, and FEMA’s decisions are not appealable through any court.

In Loíza, RI met with Justina and Pedro, an elderly couple whose home was severely damaged by the storm. They were staying with Justina’s sister but returned to their damaged home every day because they want to be “at home.” When Maria hit, it tore off the roof and parts of a wall. Repairing their home will cost tens of thousands of dollars. Pedro is a carpenter by trade but now has Parkinson’s. “My husband hasn’t been the same since the storm. It breaks my heart because he is a builder, and when our home was damaged before by Hurricane Hugo, he was able to repair it. But that is no longer possible, and I know that he is suffering.” She feels that FEMA has not treated them well. “They took too long to come, and when they finally came here two weeks ago, they said they would let us know within 10 days. Yesterday I received a check for $918. But I don’t want to cash it, because I don’t know what it is for.”
Adopting International Best Practices in Puerto Rico and Future U.S. Disasters

In many ways, the disaster in Puerto Rico was akin to what U.S. officials have encountered in large-scale, sudden-onset disasters in non-U.S. settings where the United States has led or joined international response efforts overseas. In such settings, as has been the case in Puerto Rico, local capacity is often limited, especially where local responders have themselves been seriously affected by the disaster. The United States has also joined the response to foreign disasters that occurred in island or other geographically-remote settings. It is useful to consider lessons learned from such international responses, because they are applicable both to future disasters and to ongoing challenges in Puerto Rico. As discussed below, international practices relating to the need for strong coordination, ensuring that the most urgent needs are prioritized and taking advantage of opportunities to build resilience to future hazards are particularly relevant in the current context.

Leadership, Coordination, and Information Management

By all accounts, the response in Puerto Rico suffered from an absence of leadership, structure and coordination, and management and dissemination of information.

In contrast, and with the strong support of the United States, the United Nations has developed a management structure for disasters which is useful to examine in considering lessons learned. In large-scale foreign disaster situations where the UN is assisting a national government with the response, the UN’s Office for the Coordination of Humanitarian Affairs (OCHA) plays a critical role in ensuring that the response is well-managed. At the top is a “humanitarian coordinator” who is the UN’s main liaison with the national government for the disaster response and who drives overall strategy and setting of priorities with the government. In addition to supporting a rapid, multi-sector, initial assessment of overall needs in the first two weeks of a disaster, OCHA, with the direction of the national government, sets up...
sectoral “clusters” to allow stronger coordination between government, UN, and NGOs working within specific sectors of aid (e.g., food, water and sanitation, or shelter/housing). Clusters are co-led by the relevant national government ministry/agency and an international humanitarian agency. Cluster co-leads do not direct the response by agencies but rather are accountable for a well-coordinated response in that sector. This often involves developing a cluster strategy to ensure that all agencies working on that sector have a common set of goals and a strategy for timely and efficiently meeting needs. To be sure, the system is in many ways imperfect and has often failed to meet expectations, but it has also responded effectively in many large-scale, sudden-onset disasters and offers a model for more effective management and coordination.

OCHA also plays a critical role in sharing information as widely as possible. If not already established by national authorities, common tools set up by OCHA include a database of “who, what, where”—the “3Ws”—in order to map as widely as possible the needs and who would meet them. OCHA also issues daily situation updates in the first few weeks of a disaster that comprehensively describe the response in each sectoral area as well as a depiction of gaps. Internet problems aside, aid workers attending FEMA coordination meetings were frustrated that basic information on the 3Ws, or of outstanding needs—as opposed to how many goods were delivered each day (outputs)—was not collected and widely shared. One experienced humanitarian worker told RI, “I wish I could just get FEMA to put a map on the wall.”

This is not to suggest that FEMA should adopt the UN coordination model. Rather, as noted by numerous international aid organizations with which RI spoke, the kinds of coordination and information management tools and systems used in international settings, imperfect as they are, would nonetheless have greatly improved the response in Puerto Rico. Had such coordination and information management systems been set up earlier in Puerto Rico, critical time might have been saved and duplication avoided, thereby allowing needs to be more effectively and efficiently met.

In Puerto Rico, working groups were eventually set up by some aid agencies that FEMA ultimately supported and which, according to interviews, improved coordination. In addition, an international aid organization frustrated by the inability to obtain information eventually established a simple, free information-sharing platform using the business application known as Slack, which is now being used by 65 voluntary organizations and supported by FEMA. Other voluntary organizations are now setting up similar, innovative information-sharing applications.

In Puerto Rico and in future disasters, FEMA must improve coordination and information management, both drawing on international best practices and building on the more novel information management tools that have now been developed. In seeking to improve its own efforts, FEMA should consider OCHA’s coordination tools and mechanisms, including the 3Ws, daily or weekly situation reports, and information management systems, as well as build on innovative information-sharing platforms developed in Puerto Rico.

Assessing and Targeting the Most Vulnerable, Especially with Respect to Housing Needs

The federal government’s response in Puerto Rico did not appear to prioritize those facing the greatest needs or who were most vulnerable. Based on RI’s visits to numerous affected communities, it was apparent that the lack of a more targeted emergency relief system had left the elderly, the handicapped, children, and others with special needs or certain vulnerabilities at greater risk. The disaster has taken a particularly hard toll on Puerto Rico’s elderly. Many have no income other than what they receive through welfare or social security and, cut off from modern technology, they face enormous difficulties accessing assistance. Noting that assistance was not targeting the most vulnerable, one experienced international aid worker told RI, “There is a lack of awareness that, in one community, people can be affected very differently.”
In responding to the current disaster in Puerto Rico and in future disasters, FEMA must better identify needs and vulnerability criteria and put in place safeguards to ensure that the most vulnerable individuals are not overlooked. Given that the federal emergency housing assistance package is not designed to make everyone whole and that resources are limited, there is an urgent need in Puerto Rico for FEMA to work more effectively not only with local officials, but with community leaders as well. This can often be done most effectively through NGOs with experience in implementing disaster assistance programming at the community level that employs context-specific, vulnerability criteria and prioritizes protection of vulnerable groups.

In the area of urgent housing assistance, best practices employed by USAID are instructive. In meeting transitional forms of shelter assistance and housing repairs, USAID/OFDA works closely with partners like the International Organization on Migration (IOM) to widely distribute emergency shelter assistance directly to affected households in the immediate aftermath of a sudden-onset disaster. USAID/OFDA encourages its partners to ensure that tarps are distributed as part of a full “shelter kit” which includes rope, nails, and other materials necessary to secure the tarp in place (so that it does not blow away with the first strong gust of wind, which was often the case in Puerto Rico). The kits either come with instructions for securing the tarp or, more often, include training for affected households on how to install the tarps in order to impart knowledge on disaster risk reduction. USAID has also developed shelter designs for locally appropriate emergency and transitional shelters with improved construction measures and practices that reduce the risks of hazards like earthquakes, floods, and wind storms.

Nearly three months after the hurricane struck, it may be unrealistic to expect FEMA to transform its emergency housing assistance model. But to meet ongoing transitional shelter needs and empower communities with technical knowledge to future disasters, FEMA, working with HUD and drawing on international shelter experts from USAID and elsewhere, should consider adopting an outcome driven strategy aimed at ensuring each household has at least one safe, dry room with a light source, access to water and plumbing, and that is free of leaks, mold, and other health hazards. This would require putting in place new partnerships with organizations with experience in emergency/transitional shelter.

**These elderly sisters share a home in Comerío which lost the second story in the hurricane. Water now leaks into their bedrooms, but they remain positive.**
Investing in Opportunities to Reduce Risk of Future Disasters and to Build Resilience

Especially in terms of building local capacity and resilience, the U.S. government, through USAID, has been a global thought leader and a lead donor. Since 1989, USAID/OFDA has supported disaster risk reduction (DRR) efforts in 130 countries and helped establish 17 global, regional, and national early warning systems. In Latin America and the Caribbean alone, USAID/OFDA has trained more than 70,000 emergency managers and disaster responders. The agency also sets targets to ensure that sufficient funds are dedicated to disaster response programs that incorporate components aimed at reducing disaster risk and building resilience. OFDA and other USAID offices and programs, such as Food for Peace, also implement innovative programming that seeks to build the resilience of vulnerable communities in developing countries across Asia and Africa where, due to recurrent disasters and changes to the climate system, humanitarian emergencies have become chronic.

Both in the current context in Puerto Rico and going forward in Puerto Rico and throughout the United States, FEMA and the U.S. government must rethink how the U.S. approaches disaster response within the United States. As the FEMA Administrator Long recently recognized, "The nation needs to stop, take a deep breath, and figure out how we collectively become more resilient, not just FEMA but the whole community."

This is clearly a long-term process that spans all levels of government down to the community level. As the recent spate of unprecedented disasters across the country have tragically shown, the United States is not sufficiently prepared to address the growing disaster risk to our nation’s infrastructure, economy, and people, especially in light of the rapid pace of climate change.

Supporting FEMA and other U.S. agencies to focus more intently on resilience will require strong and generous congressional support. In appropriating supplemental funding for disaster response and recovery for Puerto Rico, Congress should provide generous support to build more resilient housing and infrastructure and to correct deficiencies that contributed to massive hurricane damage. Congress should ensure that flexible funding mechanisms are in place to ensure that funding goes to local and international voluntary agencies with experience in implementing disaster response and early recovery programs, including those with expertise in DRR and resilience, and even look for ways to channel federal disaster assistance directly to the local communities that host the first responders.

CONCLUSION

Unfortunately, the response to the catastrophic disaster in Puerto Rico lacked the requisite leadership from the highest levels of the U.S. government necessary to support a more effective, timely response by FEMA. The response remains poorly coordinated and lacks transparency. Disaster survivors continue to face horrendous living conditions and lack information on whether or when they will be assisted.

In addition to failing American citizens, the problematic response to the disaster in Puerto Rico is in many ways a reflection of the numerous ways the United States government, and Americans themselves, are not sufficiently prepared to address the increased frequency and force of extreme weather events and other adverse effects of climate change.

Immediately and over time, U.S. officials, supported by the Congress, must do better by their fellow Americans in Puerto Rico in responding to the disaster borne by Hurricane Maria and must better equip federal agencies, territories, states, and localities for the challenge of building resilience.
Lost weekend: How Trump's time at his golf club hurt the response to Hurricane Maria,
October 31, 2017, The Atlantic, "What's happening with the relief effort in Puerto Rico?"
The New York Times, December 9, 2017, "Hurricane Maria, the Strongest Puerto Rico Landfall in 89
Rainfall totals exceeding 10 inches were recorded along Maria's track with large parts of the island receiving more than 20 inches of rain. "Satellite shows rainfall amounts from Hurricane Maria," AccuWeather, September 2017, https://www.accuweather.com/en/videos/satellite-shows-rainfall-amounts-from-hurricane-maria/iwzglyze60ox7grmwsst35of9ajgfnrl.
Supra, note 6.
Although the President did soon waive the FEMA's cost-sharing requirements for the emergency response, most municipalities had insufficient funds to respond.
Id.
The 1988 Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) and its amendments, which lay out the system for federal natural disaster assistance, was designed to encourage states and localities to develop comprehensive disaster preparedness plans, prepare for better intergovernmental coordination in the face of a disaster, encourage the use of insurance coverage, and provide federal assistance programs for losses due to a disaster.

ENDNOTES
19 Supra, note 16.
20 Supra, note 4.
22 Supra note. Puerto Rico Request for Federal Disaster Recovery Assistance.
24 Id.
27 Id.
34 Id.
37 Proposals in the Governor’s request include: upgrading 58 percent of housing which is currently located in floodplains, adopting an updated hazard resistant building code that will ensure that housing repairs and reconstruction will result in safer and more secure housing across the island; addressing the problem of “informal housing” by supporting the development of safe and decent replacement housing to which people can be relocated; and programs for single-family, multi-family, and public housing repair, restoration, and reconstruction to facilitate replacement of the housing stock. Supra, note 4, p. 12.
This home in Loiza sustained heavy damage during Hurricane Maria, including to the roof.