

TACTICS TO TRY FOR EMERGENCY FOOD PLANNING:

Planning for Catastrophic Events with Lessons Learned from Puerto Rico

The Tactics to Try series of case studies was created to complement the Emergency Food Planning webinar series presented by Food Cities 2022 Learning Partnership. Tactics to Try highlight proven emergency food responses in a format that offers practitioners the most essential points for trying something similar in their own city.

Objective

This Tactics to Try case study describes the devastating effects of Hurricane Maria on Puerto Rico's food system in 2017. We provide some insights behind the startling 'All the Food Is Gone' headlines that appear after catastrophic hurricanes hit any region. The lessons learned from the Puerto Rico case provide key areas for other cities to consider as they develop robust emergency food plans for natural disasters.

Geography

The Commonwealth of Puerto Rico is an archipelago in the Caribbean Sea consisting of the main island, four small islands, and hundreds of cays and islets. An unincorporated territory of the United States, the island territory is only 160 km long and 55 km wide. Home to 3.19 million people, Puerto Rico is the smallest and easternmost island in the Greater Antilles, located in the Caribbean Sea east of the Dominican Republic and approximately 1,600 km southeast of Miami, Florida.

Major Participants

U.S. Federal Emergency Management Agency (FEMA)
Puerto Rico Emergency Management Agency (PREMA)
Banco de Alimentos Puerto Rico—Puerto Rico's Food Bank
Unidos por Puerto Rico—a Puerto Rico non-profit established in the aftermath of Maria to utilize donations support individuals and small businesses devastated by natural disasters
The World Central Kitchen—a non-profit created by Chef José Andrés to provide food in the wake of disasters

Background

On September 20, 2017 Hurricane Maria made landfall in Puerto Rico. This catastrophic, category 5 hurricane devastated the island, and was the worst storm to hit the island in over 80 years. The hurricane traveled across the island from coast to coast, plunging the entire island into crisis. Although Puerto Rico is in 'Hurricane Alley' and always at risk of being hit by hurricanes, the government and residents were completely unprepared for a catastrophic hurricane because one had not occurred in recent memory.

Although Puerto Rico's climate could support diverse agricultural production, 89 percent of food was imported in 2017. Although the island was relatively food self- sufficient into the 1950s, industrialization expanded food consumption and the reliance on food imports. Puerto Rico primarily depends on food imported from the United States. As an island nation, this means almost all food is imported through its ports, which means its supply chain is very vulnerable to natural disasters. Although Puerto Rico has 22 ports, only one (San Juan) has a container terminal. The majority of food is imported through San Juan from the port of Jacksonville, Florida.

The damage from Hurricane Maria to infrastructure on the island put Puerto Rico at significant risk for food shortages and created a critical need for emergency food aid. Air and seaports were closed immediately after the storm. The port of San Juan, where Puerto Rico would receive emergency supplies from the mainland United States, closed immediately and did not re-open for three days. Heavy rains and high winds covered much of Puerto Rico's 600 miles of roads in debris and water, destroying bridges and making the mountainous interior almost inaccessible. Eighty percent of the already vulnerable electrical grid was destroyed, leaving the entire island without power. The storm also knocked out 96 percent of telecommunication cell sites in Puerto Rico, leaving millions without access to any form of communication.

How it Works

Emergency Food Aid

- As part of the U.S., the Federal Emergency Management Agency (FEMA) provides emergency assistance to Puerto Rico in partnership with the Puerto Rico Emergency Management Agency (PREMA). However, the degree of devastation caused by Hurricane Maria overwhelmed both FEMA and PREMA in the immediate aftermath of the storm.

- After the storm hit, FEMA was working to provide 20 percent of the population with food, water and other life-saving essentials, but by September 27 the Puerto Rico government was requesting support for 60 percent of the population.

- The situation was compounded by four important factors: (1) FEMA was facing 'unprecedented' demands on their staffing, resources and budget in 2017 as three major storms hit the United States in quick succession; FEMA's support for Hurricane Irma just two weeks prior to Hurricane Maria had depleted FEMA's supply warehouse in Puerto Rico; (2) Puerto Rico's electrical grid was in a state of crisis before the storm, meaning there were no 'quick repair' options; (3) the closing of air and seaports for the first few days delayed emergency provisions; and (4) there was significant food insecurity and poverty in Puerto Rico before the storm and the hurricane pushed even more into poverty and food insecurity.

- Once the air and seaports re-opened, emergency provisions still needed to be distributed throughout the island and the damage to the roads and fuel shortages immobilized transport trucks. Further, the lack of telecommunications made it extremely difficult for agencies to know where aid was most needed. According to some reports, some communities in the interior region of the island waited for days for pallets of food sitting in distribution centers to arrive.

- In the weeks following Hurricane Maria, FEMA delivered 18 million shelf-stable meals and sent all food and water it could procure, but this did not meet demand. In the first month after the hurricane hit, FEMA and partners were providing an estimated 600,000 meals a day, but more than two million people needed to be fed—leaving a huge gap of unfilled meals. Further, many of the meals being provided were military stile 'ready-to-eat' meals, which are not designed for long-term consumption.

- The World Central Kitchen, aware of the need for food aid in Puerto Rico, created a network called #ChefsForPuertoRico which began as a small operation in Santurce to feed local residents, and turned into a massive relief operation. While they originally had a FEMA contract to provide just 20,000 meals a day, they ultimately provided one million hot meals to residents after three weeks, and four million meals in total. This massive endeavor to provide hot, nutritious, culturally-appropriate meals drew on a massive network of chefs and local volunteers, restaurants, and businesses.

- From September 20, 2017 to March 31, 2018, FEMA ultimately shipped 62,062,317 meals to Puerto Rico. Although FEMA mobilized to distribute a historic amount of food and water, the scope of problem was far larger than they initially realized, and the agency received criticism for the scale and speed of their response.

Expanded Food Bank Operations

- As FEMA, PREMA, and the Puerto Rican government struggled to effectively distribute enough food to manage the crisis, Banco de Alimentos Puerto Rico, Puerto Rico's food bank was up and running two days after Maria hit. They provided critical support, first assessing their own damages and then those of their food distribution network.

- The food bank is part of Feeding America, a nationwide network of 200 member food banks and 60,000 food pantries. Feeding America supports its members through food, funds, and advocacy. Feeding America also plays an active role in recovery efforts following major disasters by providing local food organizations with food, water and trained staff, while also providing specialized disaster training for its food banks around the country.

- Within Puerto Rico, Banco de Alimentos partners with over 170 agencies in 40 municipalities to provide emergency food support to vulnerable residents. Partner agencies are chosen to cover the largest possible geographical area for distribution, ensuring fewer residents who are unable to access food.

- Initially, Puerto Rico's food bank also faced a food shortage. Like all food banks, they struggle to meet demand for food aid in normal times. Prior to the hurricane, it was estimated that Puerto Ricans were four times more likely to be food insecure than the U.S. average. After Hurricane Maria, it was estimated that 85 percent of Puerto Ricans were food insecure.

- In addition, the main anti-hunger program in Puerto Rico is different from the system in the rest of the U.S. Puerto Rico receives capped funding for its Nutrition Assistance Program (NAP) about 25 percent less than funding for the federal Supplemental Nutrition Assistance Program (SNAP). Not only is the total amount of funding less, but it also provides a fixed amount of money, regardless of the need (including hurricanes). One study provided by FEMA estimated that up to 70 percent of Puerto Ricans could need food assistance after the hurricane. The hurricane pushed more people into poverty and caused an increase in food prices.

- The food bank was also housed in small (22,000 square feet), sub-standard facilities that limited their ability to store and distribute enough food to meet the island's needs. According to the President of the food bank, "it was a miracle that the buildings withstood the hurricane."

- With local and international donations flooding into Puerto Rico after the hurricane, food supply became less of an issue than storing and distributing food. The port quickly became jammed with emergency provisions.

- In the first few months following the hurricane, the breakdown of communications systems made it difficult for municipal leaders to communicate needs to the central government, creating a need for non-profit organizations and food banks to step in with small volunteer crews to inventory and distribute emergency food.

- Banco de Alimentos organized the island into a grid system, distributing emergency food to regional centers that would then distribute the food more locally.

- A new non-profit, Unidos por Puerto Rico, was established in 2017 by a well-connected group of Puerto Rico leaders, to be able to consolidate and manage monetary donations under a well-organized umbrella. As is the case in many disasters, the sudden influx of massive donations causes its own sets of challenges. In the aftermath of the hurricane, many new grant making non-profits were created in Puerto Rico.

- Unidos por Puerto Rico provided Banco de Alimentos with $2 million, and coordinated with capital donors who contributed over $3 million, totaling a $5.3 million investment in the food bank's new distribution center.

Grocery Store Closures and Reopening

- The majority of the island did not regain power until nearly four months later in January 2018. The blackouts did not end for most until August of 2018, when PREPA announced it had reconnected all customers to the electrical grid. However, power outages still plague the island. · In the first week following the storm, only a small number of grocery stores were prepared and had access to generators and fuel to run them. However, even the grocery stores that had generators soon ran out of fuel to operate them. Further, none of the commercial back-up generators were designed to operate continuously for weeks on end. In the immediate aftermath of the hurricane, daily fuel consumption jumped more than 40 percent, as people were relying on generators to power their stores and homes. Fuel tankers were delivering with security escorts. Initially, fuel was rationed until the Secretary of Consumer Affairs made rationing illegal and extended curfew for delivery vehicles, which improved the flow of fuel on the island.

- Many grocery stores on the island, even large, corporate supermarkets such as those owned by Walmart, were not able to access generators or emergency fuel.

- Without electricity, food stores were unable to power refrigeration and freezer units to safely store perishable food. Likewise, households also did not have power, meaning they were unable to safely store perishable food. · The transition to stocking shelf-stable food products was also difficult. Puerto Rico has an inventory tax that limits the amount of excess inventory that grocery stores and warehouses can stockpile. The island was only able to hold a 30-day supply of grocery items at the time Maria hit, quickly causing food shortages.

- One week after the hurricane, most grocery stores on the island remained closed, without reliable access to generators and fuel. Those open quickly ran out of food, both fresh and shelf-stable, and water.

- The state of the roads and the ports in Puerto Rico created significant problems for food and fuel distribution to keep grocery stores running, as trucks now had to navigate dangerous roads to make their deliveries, even paving new routes in some cases.

- Without electricity and telecommunications, the grocery stores that were able to re-open within days of the hurricane were unable to process bank card payments. Likewise, the lack of cellular and wireless services left millions unable to use credit, debit, and Electronic Benefits Transfer (EBT) cards to purchase food. This effectively turned the island into a cash-only economy, and left the most vulnerable residents of the island, who rely on their PAN (Puerto Rico's Nutrition Assistance Program) cards to feed themselves and their families, without reliable access to food.

- By November 6, over one month after the storm, 89 percent of grocery stores had re-opened. Some stores began offering items on a credit system, to be paid back when communications systems could process bank and PAN cards. The major fuel terminals were operating at or well above levels prior to the storm by mid-October, allowing stores to use their generators (if they had them) for power.

- To support the private sector and avoid sustained dependency on FEMA-supplied food, FEMA developed a 'Food Availability Index' to assess the local food system in each of Puerto Rico's 78 municipalities. The index supported data-driven decisions on food distribution.

Implications for Emergency Food Planning

To prepare for catastrophic disasters, emergency food response and recovery plans need to be aligned with broader emergency management plans and prioritized within those plans. The plans need to leverage all food assets to ensure residents will have access to food over an extended period—months if not years. The following elements should be considered as you develop your city's emergency food plan to ensure this happens:

1. During any massive crisis, government authorities will be overwhelmed dealing with response and recovery for multiple sectors (transportation, housing, etc.). Without an emergency food plan in place, government leaders will be forced to scramble and provide inequitable, inefficient solutions. To ensure a rapid, robust emergency food response, the local authority should establish a dedicated Food Team that will be able to quickly mobilize government and non-governmental resources, establish help lines and online help portals, act as the primary contact for the voluntary sector and collect critical data and information city-wide. This team will bring together key staff from various departments that will be needed to respond to the food system crisis (e.g., public health, transportation). The government team should also seek input, or include, relevant non-profit and private sector stakeholders who are critical in assessing need and delivering food resources, such as food banks, the Red Cross/Red Crescent, relevant food manufacturing and retail trade associations, and in the United States, state or local Voluntary Organisations Active in Disaster (VOAD).

2. Establish a plan for rapid assessment of need and response that is independent of telecommunications. It is critical to have a fully developed plan, that has been communicated to key stakeholders throughout your city, that will be implemented without communication. Cities will need to be broken down into areas small enough to canvass physically (e.g., the grid system used in Puerto Rico). Key liaisons for each area should be established. Create a database of vulnerable community members (relying on food assistance and healthcare providers) and plan to provide shelf-stable food assistance immediately to them in the event of a disaster.

3. For catastrophic events that capture the world's attention, critical donations of supplies and money often follow. Establish or identify charity (grant-making) organisations that have the capacity to manage the donations and redistribute donations. Food banks will play a critical role. Review your food bank's capacity to support the storage and redistribution of food aid and donated funds to purchase food. What criteria will be used and what are the logistics for food distribution? New storage facilities, equipment and experienced workers will be needed to handle the food distribution. They may be needed now, especially if the food bank is located in areas at risk of impact, in sub-standard facilities. Plan how to fully leverage support from The Global FoodBanking Network.

4. Review the national government's emergency food plans for your city. Are sufficient resources for a catastrophic event accessible? Set up warehouse facilities with enough rations of nutritious, shelf-stable food items to distribute in the event of infrastructure failure. Have plans in place for temporary cold storage of perishable food items. Most plans involve moving resources from unaffected areas to those hardest hit. What happens when the entire region or country is decimated? With climate change, natural disasters are increasing in frequency and severity. The storms are massive in scope. Plans also need to account for multiple natural disasters, which deplete resources. In their report on the 2017 hurricane season, FEMA describes struggling to manage relief efforts for a record breaking hurricane season, with nearly five million people applying for assistance. Emergency management leaders should also plan to engage with local food banks

5. Grocery stores need solid emergency plans, not just generators. Even national chains should be required to submit their response and recovery plans for review. Generators, fuel reserves, transitioning to more shelf-stable products, workforce considerations and alternative payment systems all need to be considered in the plan. Stores may be without power for months, not days. National or international grocery stores will not always have the resources (or the incentive) to re-open their stores immediately. They will also be relying on emergency aid. Smaller grocery stores may be more nimble and more committed to their community, but may not have the capacity or resources either to re-open.

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The mission of the Feeding Cities Group is to create equitable and resilient urban food systems—globally. To learn more, please visit our website: **www.feedingcitiesgroup.com**

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