



HOUSE COMMITTEE ON NATURAL RESOURCES REPORT ON

PUERTO RICO'S EARTHQUAKES

CHAIR RAÚL M. GRIJALVA PUBLISHED FEBRUARY 2020

TABLE OF CONTENTS

OVERVIEW	3
MAJOR DISASTER DECLARATION	4
COMMITTEE RESEARCH MISSION	5
LESSONS LEARNED	
INADEQUATE EMERGENCY MANAGEMENT PROTOCOLS	5
IMPORTANCE OF INVESTING IN HOUSING AND INFRASTRUCTURE	6
IMPORTANCE OF INVESTING IN RENEWABLE ENERGY	7
URGENT NEED FOR ADDITIONAL MENTAL HEALTH SPECIALISTS AND RESOURCES	9
NEED TO PROTECT ESSENTIAL PUBLIC SERVICES	11
RECOMMENDED ACTIONS	12

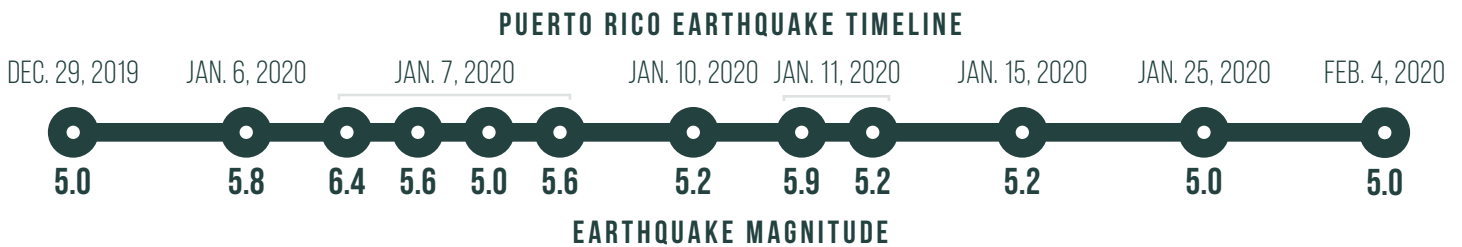
NATURAL RESOURCES
COMMITTEE
CHAIRMAN **RAÚL M. GRIJALVA**



Residence in Guánica collapsed due to the tremors, taken 1/21/2020

OVERVIEW

On December 28, 2019, Puerto Rico experienced the first earthquake in what would be a series of tremors, including 12 earthquakes of greater than 5.0 magnitude on the Richter Scale. This includes a 6.4-magnitude earthquake in early January that led to a confirmed fatality and island-wide power cuts. This activity is ongoing and additional aftershocks and earthquakes may continue hitting the island even after the publication of this report.



Though Puerto Rico lies in a tectonically active region, the island had not been struck by a major earthquake in more than 100 years. U.S. Geological Survey (USGS) Emergency Management Coordinator Marie Pepler stated, “This is a special situation requiring a special response.”¹

The ongoing earthquakes have repeatedly struck the south and southwest regions of Puerto Rico. Tremors have caused **significant damage to critical infrastructure**, including power plants, residences, roads and bridges. On January 29, USGS published a report indicating, “This sequence is very productive and **the probabilities of magnitude 5 or greater aftershocks remain sufficiently high to warrant concern and will for some time in the future.**”²

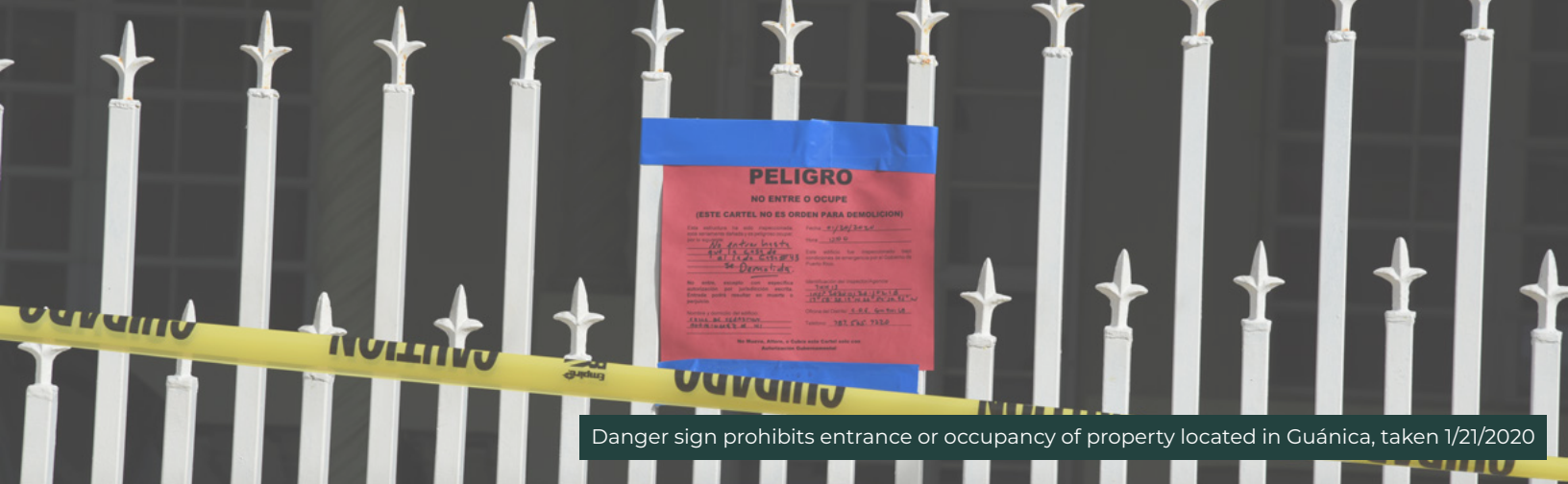
The Trump administration is withholding federal disaster recovery funds for Puerto Rico that Congress appropriated after Hurricanes María and Irma devastated the island in 2017. **Additional federal aid** is needed to help those affected by the earthquakes.

“
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 SITUATION REQUIRING
 A SPECIAL RESPONSE.**
 ”

MARIE PEPPLER
 USGS EMERGENCY MANAGEMENT COORDINATOR

¹ <https://www.usgs.gov/news/aftershocks-continue-puerto-rico-usgs-supports-quake-recovery>

² <https://pubs.usgs.gov/of/2020/1009/ofr20201009.pdf>



MAJOR DISASTER DECLARATION

On January 11, the Governor of Puerto Rico, Wanda Vázquez Garced, requested that President Trump declare an **expedited major disaster** as a result of the continuous seismic activity on the island. Five days later, on January 16, President Trump signed the major disaster declaration authorizing the Federal Emergency Management Agency (FEMA) to provide aid to six municipalities - Guánica, Guayanilla, Peñuelas, Ponce, San Germán, and Yauco - through the Public Assistance (PA) and Individual Assistance (IA) programs.

PA includes coverage for debris removal, emergency shelter, emergency power generation, and restoring buildings for providing public services. IA covers emergency medical care, crisis counseling, unemployment assistance, legal services and some housing assistance.

On January 22, under the major disaster declaration, FEMA approved IA program assistance for an additional 10 municipalities affected by the earthquakes.

MAJOR DISASTER DECLARATION REQUEST HIGHLIGHTS

- The Puerto Rico Seismic Network Team detected more than 1,950 earthquakes in Puerto Rico and the U.S. Virgin Islands region from December 28, 2019, through January 10, 2020.
- The earthquakes impacted power generation, public infrastructure, residences and businesses.
- The earthquakes had displaced 6,407 individuals as of January 11.
- The constant earthquakes and aftershocks create an atmosphere of insecurity and anxiety.
- Federal assistance is necessary to save lives and protect property, public health and safety, and to lessen or avert the threat of greater disaster.



COMMITTEE RESEARCH MISSION

During January 2020, **Committee staff** visited the municipalities of Guánica and Guayanilla **to assess damages**. They met with government officials from the Puerto Rico Electric Power Authority, Puerto Rico Energy Bureau, Puerto Rico Department of Housing, and Central Office of Recovery, Reconstruction and Resiliency (COR3) in San Juan **to discuss the pace of emergency and reconstruction efforts**. This report includes lessons learned from their research and visit.

LESSON LEARNED #1

INADEQUATE EMERGENCY MANAGEMENT PROTOCOLS

On January 6, the Commissioner of the Puerto Rico Bureau for Emergency Management and Disaster Management acknowledged that the Government of Puerto Rico **had not completed its Earthquake Plan**.³ The tremors revealed the absence of protocols to coordinate government and private sector resources, and provide a quick and effective emergency response.

During the first two weeks of January, many families and individuals living in the south and southwest of the island evacuated their homes because they did not feel safe. **The Government of Puerto Rico and volunteers transported emergency supplies from other regions** because businesses remained closed and supplies were allegedly not available in the area.

On January 18, **a video was published showing a government distribution center with supplies in Ponce**. Outrage was immediate and widespread, leading to protests that Committee staff observed. Gov. Vázquez fired and replaced three senior government officials responsible for emergency distribution centers to improve the distribution of supplies. An Earthquake Plan would have facilitated the distribution of emergency supplies.

³ <https://www.elnuevodia.com/noticias/locales/nota/elplandeterremotosparapuertoricounnoestalista-2539061/>

RECOMMENDED ACTIONS

- The Government of Puerto Rico should complete, test, and disseminate its Earthquake Plan.
- The Government of Puerto Rico should provide emergency management training to all government officials expected to be involved in emergency management operations.



LESSON LEARNED #2

IMPORTANCE OF INVESTING IN HOUSING AND INFRASTRUCTURE

Puerto Rico will need federal aid to invest in housing and infrastructure that is resilient to future natural disasters. Due to the earthquakes, as of January 11, more than 76 residences had been totally destroyed and 173 homes had major damage.

After a middle school in Guánica collapsed, the mayor of the town announced that all public schools in the municipality needed to be demolished. **Experts estimate that 500 public schools in Puerto Rico do not meet current construction codes and standards.**

In addition to homes and schools, impacted areas have also experienced damage to power plants, bridges, and roads. Reconstruction will need to address a broad array of infrastructure needs across the island.

Committee staff met with the Puerto Rico Department of Housing, who stressed the importance of receiving federal aid for this new natural disaster.

They also emphasized the importance of ensuring that any future federal legislation authorizes the Government of Puerto Rico to use federal funding originally made available in response to Hurricanes María and Irma to address the impacts of the earthquakes.



Democrats in the U.S. House of Representatives introduced the Emergency Supplemental Appropriations for Disaster Relief and Puerto Rico Disaster Tax Relief Act of 2020. The legislation includes funding to address the damage caused by the earthquakes, including aid to restore housing and infrastructure, restart school operations, fund technical assistance related to electrical grids, revitalize the economy, and mitigate damage in the most impacted areas. In addition, the legislation allows federal funding previously made available in response to Hurricanes María and Irma to also be used to address the impacts of the recent natural disaster.

RECOMMENDED ACTIONS

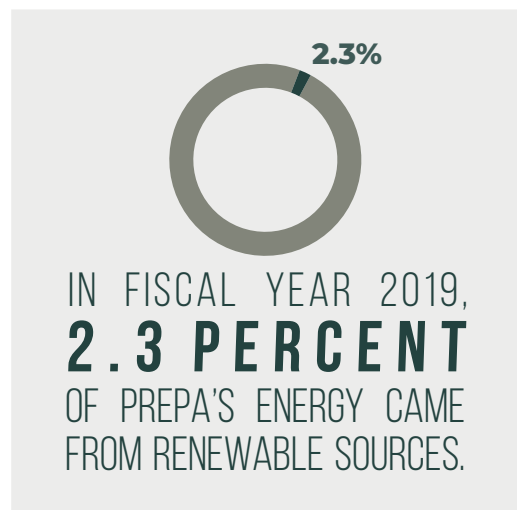
- Congress should swiftly pass, and President Trump should sign, the Emergency Supplemental Appropriations for Disaster Relief and Puerto Rico Disaster Tax Relief Act of 2020. The bill, proposed by Speaker Pelosi and House Democratic leadership, ensures Puerto Rico has the federal aid it needs to invest in housing and infrastructure and to recover from the earthquakes.



LESSON LEARNED #3

IMPORTANCE OF INVESTING IN SOURCES OF RENEWABLE ENERGY

The **earthquakes once again destabilized Puerto Rico's electrical system** and highlighted the importance of prioritizing investments in reliable, renewable energy. In 2017, Hurricane María knocked out the island's power grid, leaving families without electricity for months in what is considered the second largest blackout on record worldwide. At the same time, the Puerto Rico Electric Power Authority (PREPA) is trying to reconfigure power production to meet new renewable energy goals required by the Puerto Rico Energy Public Policy Act, which requires PREPA to get 40 percent of its electricity from renewables by 2025. In Fiscal Year 2019, 2.3 percent of PREPA's energy came from renewable sources.





The Costa Sur power plant in Guayanilla generates more than 25 percent of Puerto Rico’s electricity by burning natural gas. The 6.4-magnitude earthquake caused physical damage to the power plant. The **earthquake reduced power generation and triggered blackouts across the island** that lasted for several days and affected millions of people.

Committee staff requested authorization to visit Costa Sur, but their request was denied because the plant is out of service and is unsafe, according to government officials. The staff delegation met with PREPA Executive Director José Ortiz, who estimates it could take PREPA a year or longer to repair Costa Sur and cautions that it may be cost prohibitive to rebuild. Damage assessments were ongoing at the time of the meeting. He told staff that damage to Costa Sur represents an opportunity to invest in renewable power generation and funding for renewables could come from Community Development Block Grant Disaster Recovery funding. PREPA is also hoping to get a 500 megawatts generator from FEMA to help with system fragility issues resulting from Costa Sur being offline.

The staff delegation also met with Puerto Rico Energy Bureau (PREB) government officials, including Chairman Edison Avilés. He shared that PREB asked PREPA to submit information about how damage to Costa Sur will impact PREPA’s long-term Integrated Resource Plan (IRP). PREB will be involved in evaluating whether Costa Sur should be rebuilt and, if not, whether its production should be replaced with renewables and batteries or with new fossil fuel infrastructure.

In Guayanilla, the staff delegation witnessed families living in makeshift camps relying on solar-powered emergency generators for basic needs.

RECOMMENDED ACTIONS

- PREPA and PREB should prioritize investments in sources of renewable energy during the review and approval of the IRP and replacement of Costa Sur’s energy production, if necessary.



LESSON LEARNED #4

URGENT NEED FOR ADDITIONAL MENTAL HEALTH SPECIALISTS & RESOURCES

Though Puerto Rico has suffered major economic crises and devastating hurricanes, each of the crises came with a warning of at least a few days, allowing people to prepare. **Earthquakes are unnerving**, especially to those that have never experienced them, **in part because they happen without warning**, at any time of the day or night, repeatedly, with no immediate end in sight. Many residents expressed that they cannot trust local or federal government authorities to help them in their time of greatest need, which exacerbates the already severe mental strain on the public.

On the day of the 6.4-magnitude earthquake, the Puerto Rico Mental Health and Anti-Addiction Services Administration received at least 428 calls directly related to the earthquake. The unprecedented number of calls focused primarily on doubts about whether the island's infrastructure - power grid, homes, roads and hospitals - could withstand additional natural disasters.⁴ The day after the strong earthquake, the **U.S. Department of Health and Human Services declared a public health emergency for Puerto Rico.**

Committee staff witnessed the need for additional mental health specialists to help those affected by the earthquakes. In Guánica, Mayor Santos Seda expressed grave concern as engineers prepared to go through each home to assess structural damage. He feared the mental health implications, including suicide, of a new wave of homelessness after the evaluations. Roughly 40 percent of the people in the central tent camp in Guánica had lost their homes; the other 60 percent were too scared to sleep in their own homes. Unemployment in Guánica was said to be nearly universal, as even grocery stores, pharmacies, health clinics, schools and banks - as well as other basic and urgent services - were closed.

⁴ <https://www.elnuevodia.com/noticias/locales/nota/saludmentaltrasterremotosobre400personashanllamadoalalineapasenbuscadeayuda-2539483/>



Pharmacy in Guánica collapsed due to the earthquakes, taken 1/21/2020



Makeshift camp in Guayanilla, taken 1/21/2020

In Guayanilla, medics in a makeshift outdoor medical camp shared how they are coping with continuous seismic activity, including self-medicating and taking breaks regularly to cry. **There is no consistent source of mental health care for the patients or caregivers in that clinic.** Wherever pressure on residents is heaviest, it is doubly so for caregivers, many of whom are volunteers.

Still, Committee staff witnessed remarkable commitment by providers to their patients and communities. The Guayanilla makeshift medical camp was started by a doctor whose clinic, normally run out of the first floor of her house, was destroyed in the quakes. Another doctor who ran a nearby clinic damaged by the quakes had to be threatened with arrest to get him to stop providing care to his community from his clinic.

RECOMMENDED ACTIONS

- FEMA must rapidly disseminate information about its Crisis Counseling Assistance & Training Program (CCP), available to areas that have received a major disaster declaration, at official shelters and makeshift camps. The program supports short-term interventions to assist disaster survivors.
- The impact on mental health will be enduring for many, placing a significant burden on mental health services. In 2019, the Government of Puerto Rico received two-year federal funding for its Medicaid program. However, federal legislation should be considered to permanently and adequately fund Puerto Rico’s Medicaid, Medicare, and Children’s Health Insurance Program programs to meet the long-term needs of the population.



Residence in Guánica collapsed due to the tremors, taken 1/21/2020

LESSON LEARNED #5

NEED TO PROTECT ESSENTIAL PUBLIC SERVICES

The Government of Puerto Rico has suffered several consecutive years of **austerity measures that have severely compromised access to essential public services**, including public education and healthcare.

Even with a limited budget, the University of Puerto Rico has played a significant role throughout the emergency. The Puerto Rico Seismic Network (PRSM) is operated by the university, and professionals from the institution have been actively informing and advising the public. Both the public and private sectors rely heavily on experts and resources from the PRSM to save and protect lives and physical property.

In Guayanilla, the staff delegation learned that residents of the area are **struggling to access healthcare** services during the disaster. The only active hospital in Yauco, Hospital Tito Mattei, suffered damage and was evacuated. The public hospital in Yauco was closed years ago. It is imperative to provide the residents of the south and southwest regions of Puerto Rico with adequate public healthcare services, especially since the mental health needs experienced by those living in the area are likely to increase. The earthquakes evidenced the importance of funding and protecting essential public services in Puerto Rico.

RECOMMENDED ACTIONS

- The Financial Oversight and Management Board for Puerto Rico should authorize adequate funding to protect essential public services in the island.

RECOMMENDED ACTIONS

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- Congress should swiftly pass, and President Trump should sign, the Emergency Supplemental Appropriations for Disaster Relief and Puerto Rico Disaster Tax Relief Act of 2020. The bill, proposed by Speaker Pelosi and House Democratic leadership, ensures Puerto Rico has the federal aid it needs to invest in housing and infrastructure and to recover from the earthquakes.
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- The Financial Oversight and Management Board for Puerto Rico should authorize adequate funding to protect essential public services in the island.