



**PUERTO RICO**  
**ONE YEAR**  
**AFTER HURRICANE**  
**MARIA**



# PUERTO RICO ONE YEAR AFTER HURRICANE MARIA

A Report by Center for Puerto Rican Studies,  
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(Extract of introductory information)

## INTRODUCTION

SEPTEMBER 20, 2018 MARKED A YEAR since hurricane Maria wrought havoc on the island of Puerto Rico. Though the media has reported the crisis in a myriad of ways—for better or Worse—our intention here is to provide a timeline of the major occurrences in the aftermath, a meta-analysis of the media’s coverage of the disaster, and an updated account of the exodus of people. The island continues to suffer from a tenuous electric grid, ruined infrastructure, and financial bankruptcy a year after the hurricane; the increase in migratory numbers reflects the limitations that many continue to face on the island. More importantly, the island’s population continues to decline, and as a result, many schools have been closed, small businesses experienced financial losses, and death rates exceeded birth rates for the first time in history.

As per George Washington University’s study released on August 28, 2018, the most recent official death toll numbers to an astounding 2,975 the deadliest event in more than one hundred years. Hurricane Maria represents many firsts in U.S. history: the longest sustained domestic air mission of food and water response, the largest disaster commodity distribution commission, the most expansive sea-bridge operation of federal disaster aid, and the biggest disaster generator installation mission. In addition, Maria constitutes one of the largest disaster medical response and housing operations in U.S. history.

For our analysis of media response, we have gathered topics covered by US online news sources and compared the frequencies of certain key Words used by reporters on a monthly scale. The Word Cloud datasets visually convey these trends over the past year, by Way of Media Cloud, an open-source platform for media analysis. The exodus section details new migration estimates, taking into account alternative data, namely Puerto Rico’s Department of Education and the U.S. Census Bureau’s American Community Survey (ACS), as compared to traditional methodologies and sources used to render migration estimates by other research institutes in the recent past.

The closures of the public school system for months in the wake of the storms further exacerbated the massive drainage of population already in force prior to the cyclone, due to what is now considered over a decade recession. The humanitarian crisis in the aftermath of Hurricane has led to over 160,000 people to leave the island for the states.

Ranked from highest to moderate in migrants preference are: Florida, Pennsylvania, Texas, New York, New Jersey, Massachusetts, Connecticut, Ohio, California, and Illinois. Given the uncertain nature of the islands economy, We can expect the continuation of Puerto Rican migration to the states, and, by implication, a changing experience for stateside Puerto Ricans. This report marks this important turning point and is divided into three sections: timeline, media analysis, and exodus.

## I. TIMELINE

The most salient events and media headlines provided here highlight to understand where the island currently stand relative to one year ago. This section focuses on the impact of the hurricane, emergency disaster relief death toll counts, and recovery efforts. Among some of the unanswered questions:

- What is the actual death count? The first official estimate was that 64 people lost their lives. Yet, according to the latest independent study by George Washington University estimated 2,975 deaths, six months post-Maria.

- Why was the restoration of basic energy and portable water services delayed for so long? A year ago, the publicly-owned electric power company in Puerto Rico announced that power was restored to the entire island.

- What will be the long-term economic impact of Hurricane Maria? Preliminary estimates are of up to 20% decline in economic activity, with up to a cumulative \$100 billion in lost economic output.

## II. MEDIA ANALYSIS

For our analysis of media response, we have gathered topics covered by US online news sources and compared motifs on a month-to-month scale. This section analyzed how Hurricane Maria related topics covered on national news changed between October 2017 through September 2018. Hurricane Maria did not initially receive as much press coverage from the U.S. media as previous Hurricanes Harvey or Irma did, for a variety of possible reasons. In all, this section shows a general overview of the prevailing topics discussed in U.S. news relating to Puerto Rico.

## III. POST-MARIA MASSIVE EXODUS

One year since Hurricane Maria made landfall in Puerto Rico on September 20, 2017, nearly 160,000 residents of the island have relocated to the United States. This exodus represents one of the most significant movements of Puerto Ricans to the U.S. mainland in the island's history in terms of both volume and duration. The new emigration estimates -- 159,415 with an upper bound confidence interval of 176,603 -- is as high as the net migration estimates in the previous two years combined (144,801). (1) However, measuring population movement in real time, especially after a natural disaster like Hurricane Maria, continues to be a major undertaking that presents various methodological challenges. The need for migration estimates drew attention in states that experienced an influx of Hurricane Maria evacuees, which included both states of traditional Puerto Rican settlement as well as those in which Puerto Rican settlement is relatively recent.(2)

- This section presents findings from a new alternative methodology, known as the 'School Enrollment Migration Index' (SEMI), to estimate the emigration from Puerto Rico to the United States using a combination of school enrollment data from Puerto Rico's Department of Education and U.S. Census Bureau's American Community Survey (ACS).

- The findings from the FEMA data show that Puerto Ricans have dispersed throughout the U.S. to a large extent following existing population settlement, showing recent migration flows to the Northeast and to the U.S. south in particular.

- Puerto Rico's Department of Education closed 265 public schools throughout the Island, more so in the rural areas than urban areas; and showed a student population loss of 39,144, from 546,096 students in 2017-2018 school year to 306,652 students in 2018-2019 school year.

All in all, one-year since Hurricane Maria swept through Puerto Rico, the post-Hurricane Maria exodus continues to change the prevailing narrative of Puerto Rican migration. To the island, the migration exodus reinforces a pattern of depopulation that has induced austerity and the decline in government services and employment, the closing of schools, increased poverty among the most disadvantaged such as families with children and the elderly, among other unfolding consequences of sudden population losses. Those that relocate have the challenge of finding jobs, housing, medical services, and schools. This recent exodus represents one of the most significant historical movements of Puerto Ricans to the U.S. in terms of both volume and duration.

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(1) Source: 2016 and 2017 American Community Survey (1-year estimates)

(2) For further reading, see introduction of *The Almanac of Puerto Ricans in the United States*, Centro Press, 2016