

# Puerto Rico's Housing Sector: The economic and post-disaster context

Filantropía Puerto Rico  
2023 Annual Convening

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Research Director & Churchill G. Carey, Jr. Chair  
Center for a New Economy



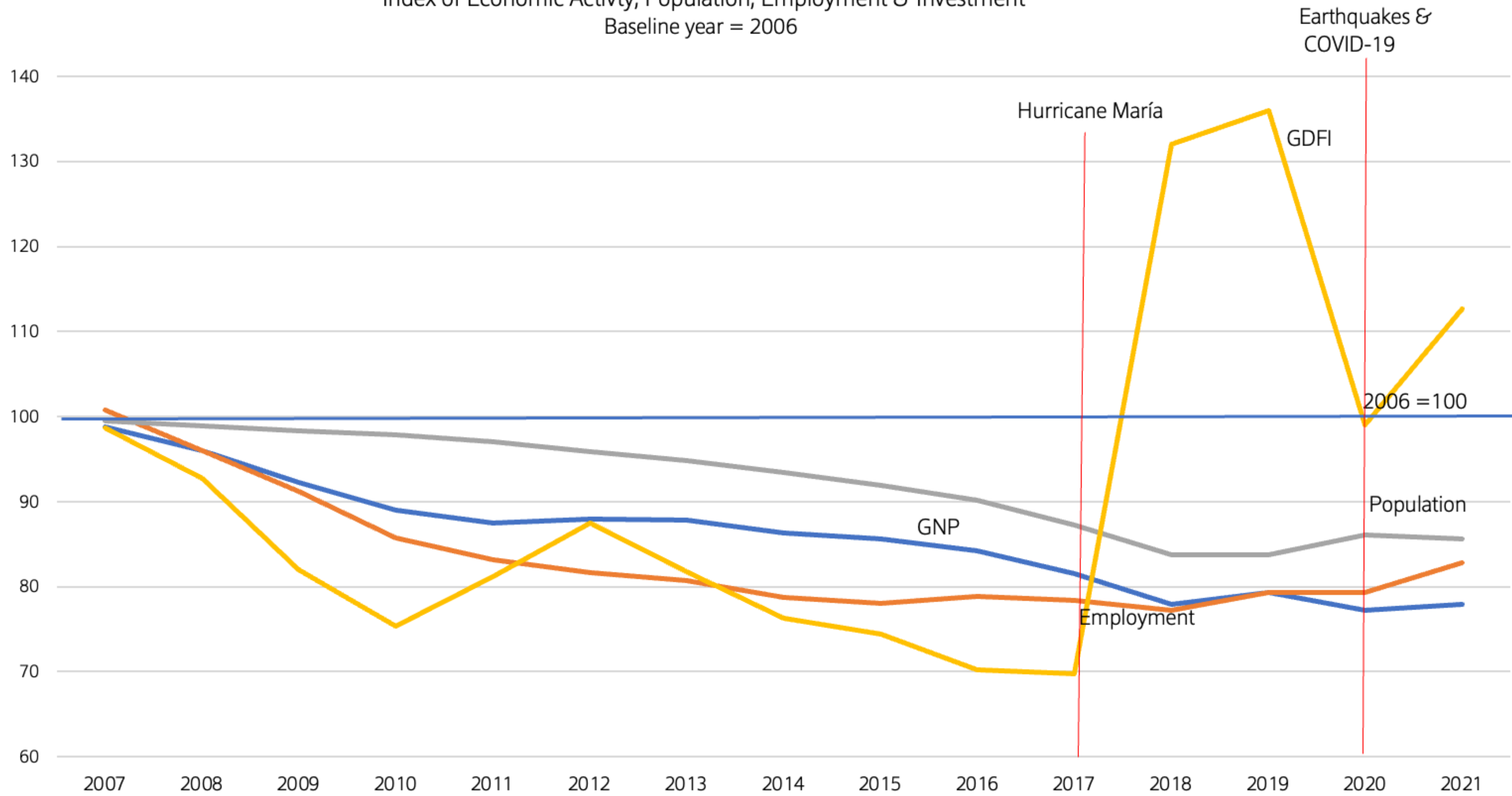
# Agenda

## Principal Themes

- General characteristics of Puerto Rico's economy and housing sector
- The post disaster context
- Sources of information and variables of interest
- Q&A

# Puerto Rico's Lost Decade & Slow Recovery

Index of Economic Activity, Population, Employment & Investment  
Baseline year = 2006



Source: CNE Analysis of Puerto Rico Planning Board Data

# General Characteristics

## Puerto Rico

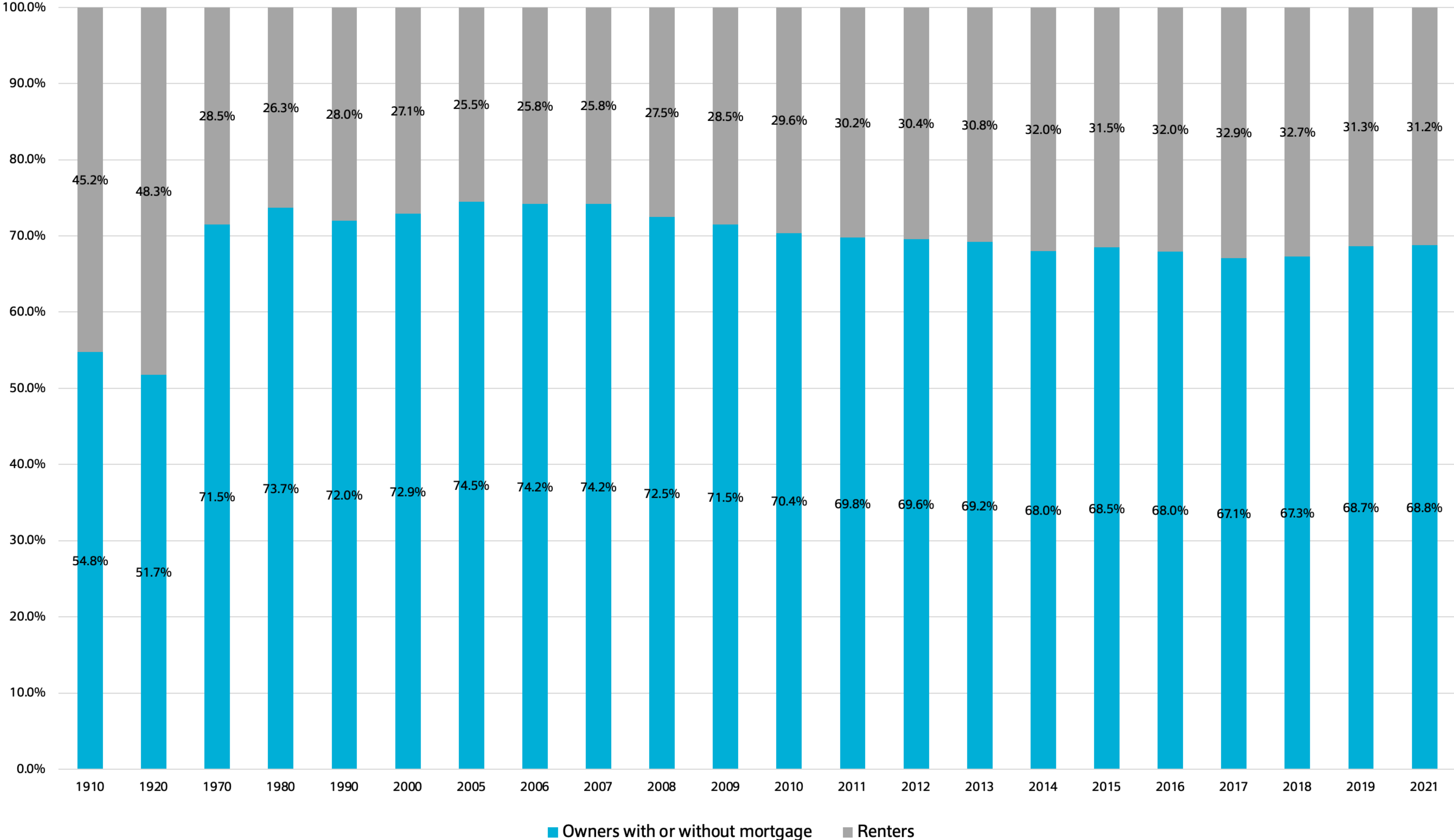
- Housing Units: 1,526,801
  - Occupied Units: 1,165,982 (76.3%)
  - Vacant Units: 360,819 (23.6%)
    - Vacation homes, etc.: 115,441
    - “Other vacant”: 245,378

American Community Survey  
**B25130** | OTHER VACANCY STATUS  
2021: ACS 1-Year Estimates Detailed Tables | Universe: Other vacant

Notes | Geos | Topics | Codes | Year | Hide | Transpose | Margin of Error | Restore | Excel | CSV | ZIP | Share | Print | Map

Puerto Rico		
Label	Estimate	Margin of Error
✓ Total:	245,378	±7,451
Foreclosure	6,685	±1,464
Personal/Family reasons	74,977	±4,426
Legal proceedings	4,330	±996
Preparing to rent/sell	4,081	±958
Held for storage of furniture	5,776	±1,382
Needs repairs	25,921	±2,839
Currently being repaired/renovated	18,972	±2,438
Specific use housing	1,109	±542
Extended absence	37,148	±2,891
Abandoned/Possibly condemned	17,540	±1,976
Other	48,839	±3,200


# Puerto Rico: Housing Tenure



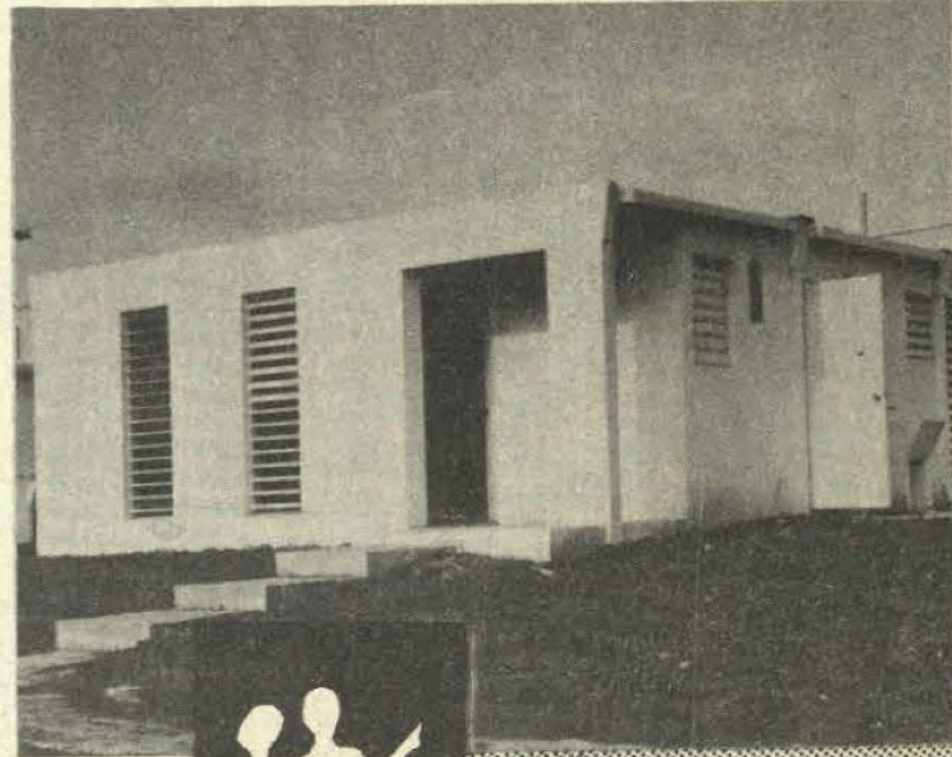
Source: US Census Bureau data, accessed via IPUMS USA, University of Minnesota

**Obra de C.R.U.V.  
por Municipios  
JUNIO DE 1967**

**HOGAR  
PROPIO**

**ARRABAL** 

**ALBERGUE  
TRANSITORIO**



\* NAC  
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P962

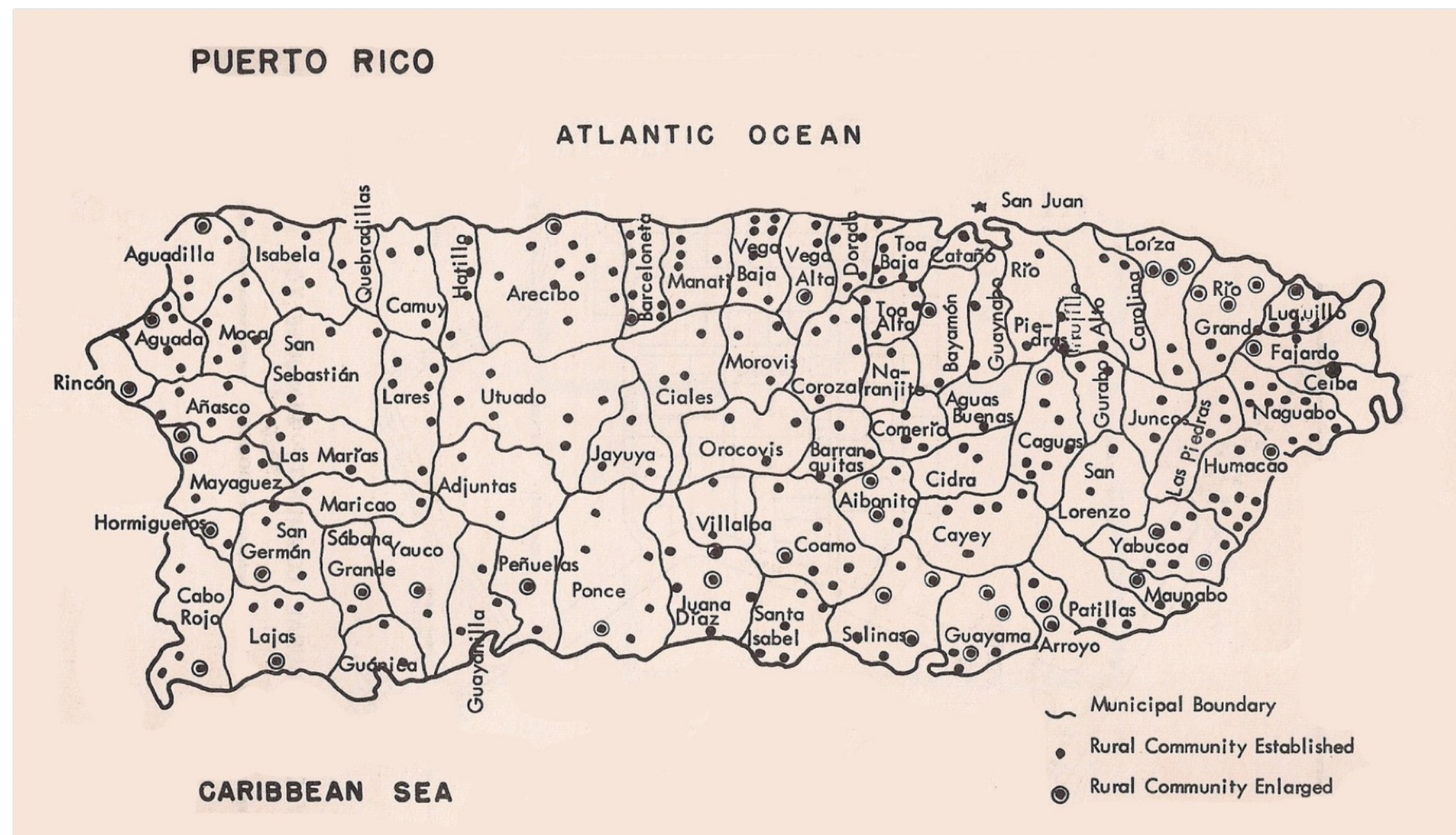
RUTA DE PROSPERIDAD

**PROGRAMA ADMINISTRACION GENERAL  
oficina de estadísticas**

Puerto Nuevo, 1948



Las parcelas, 1960



### Housing (continued)

**14 a. LAST MONTH, what was the cost of electricity for this house, apartment, or mobile home?**

Last month's cost - Dollars

\$  ,   .00

OR

- Included in rent or condominium fee
- No charge or electricity not used

**b. LAST MONTH, what was the cost of gas for this house, apartment, or mobile home?**

Last month's cost - Dollars

\$  ,   .00

OR

- Included in rent or condominium fee
- Included in electricity payment entered above
- No charge or gas not used

**c. IN THE PAST 12 MONTHS, what was the cost of water and sewer for this house, apartment, or mobile home? If you have lived here less than 12 months, estimate the cost.**

**16 Is this house, apartment, or mobile home part of a condominium?**

- Yes → **What is the monthly condominium fee?** For renters, answer only if you pay the condominium fee in addition to your rent; otherwise, mark the "None" box.

Monthly amount - Dollars

\$  ,   .00

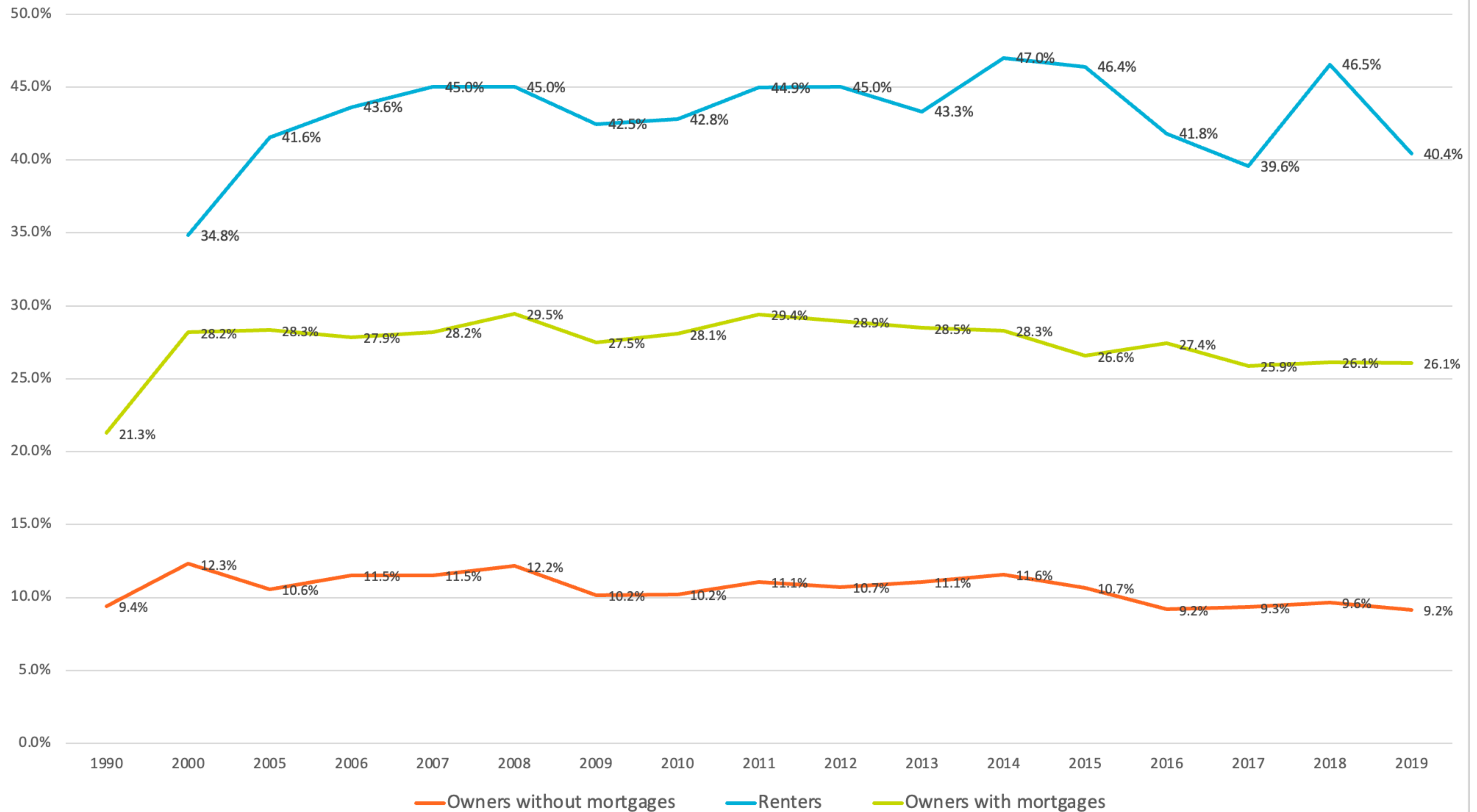
OR

- None
- No

**17 Is this house, apartment, or mobile home - Mark (X) ONE box.**

- Owned by you or someone in this household with a mortgage or loan? *Include home equity loans.*
- Owned by you or someone in this household free and clear (without a mortgage or loan)?
- Rented?
- Occupied without payment of rent? → **SKIP to C on the next page**

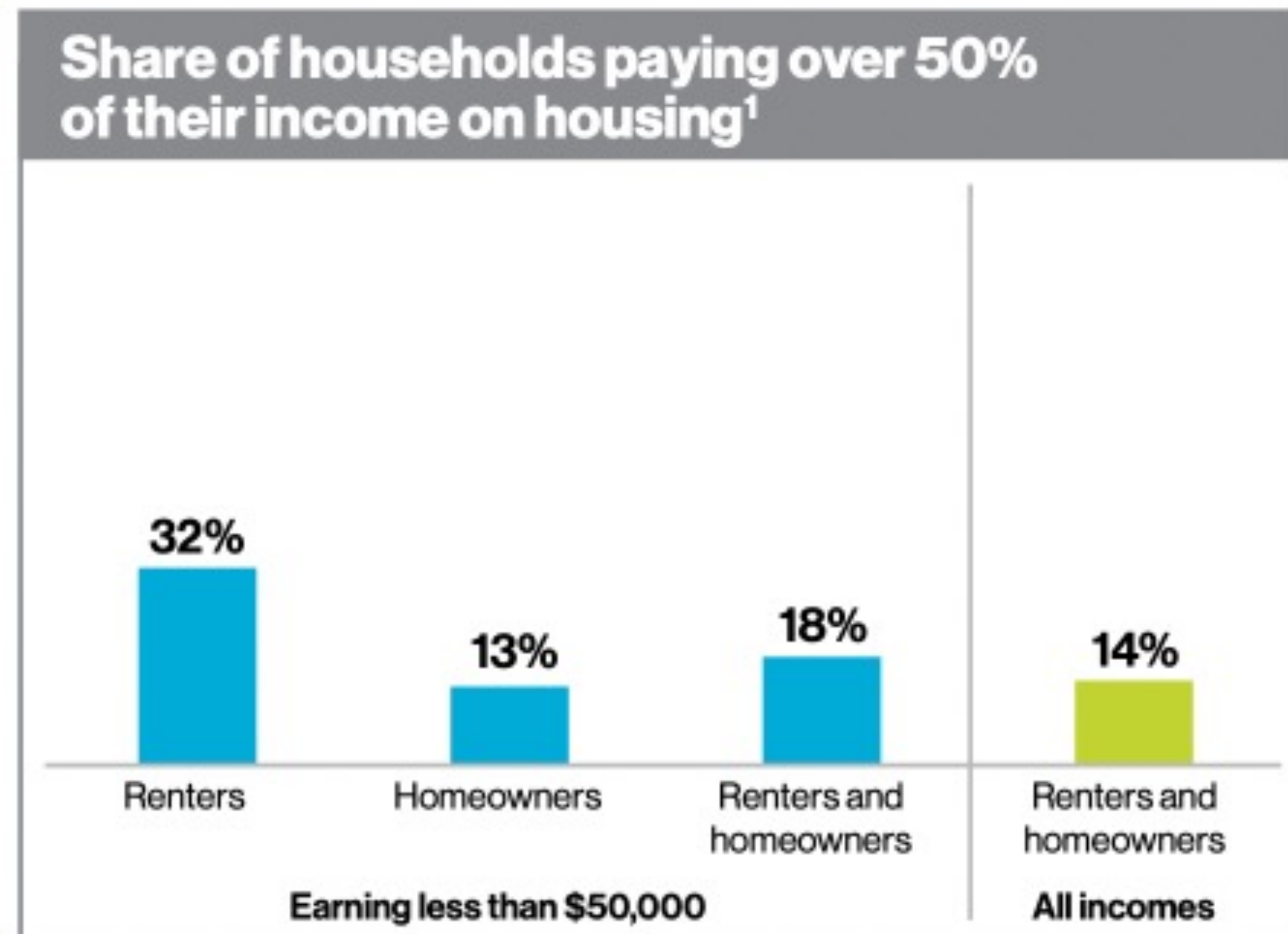
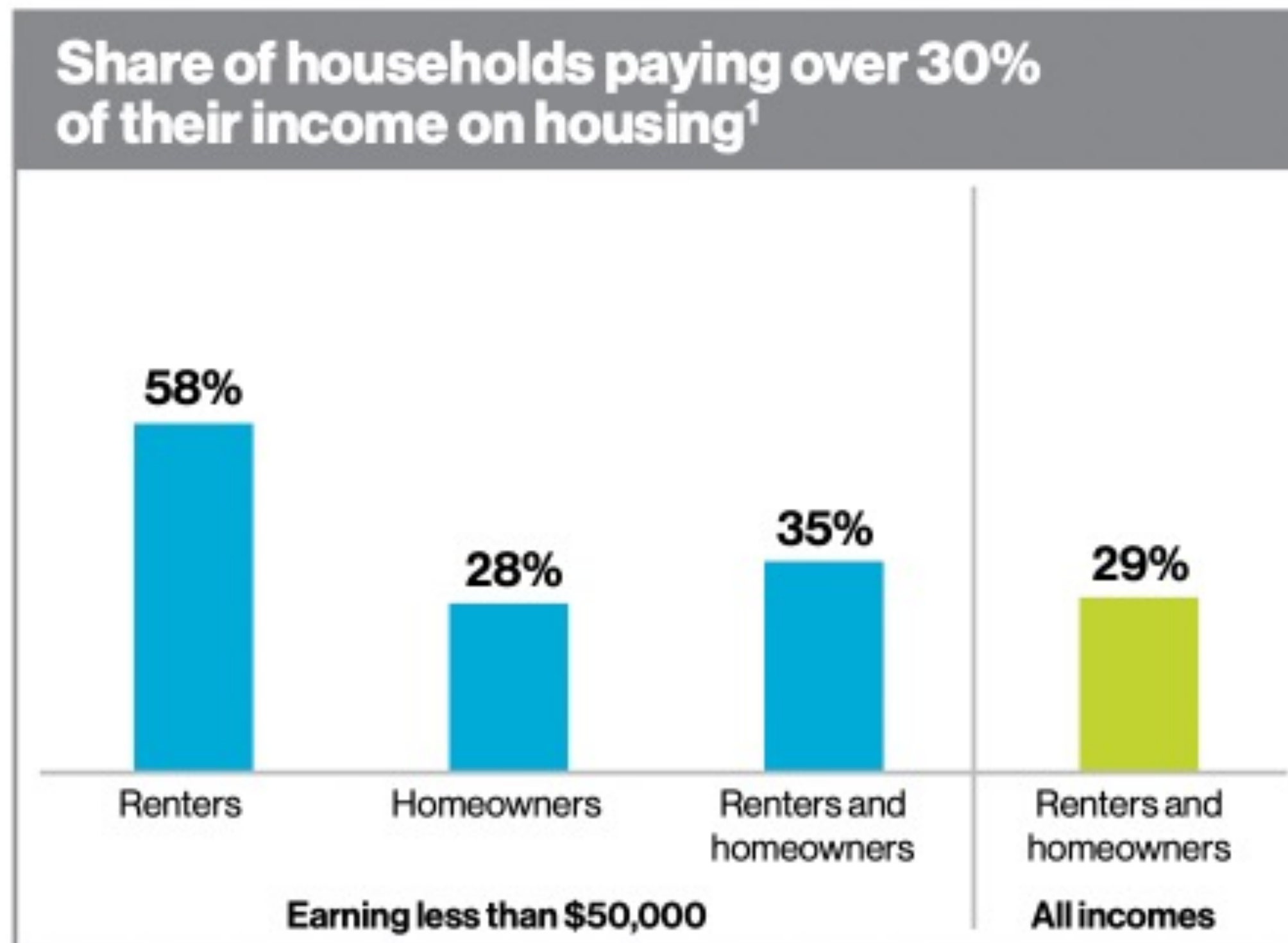
# Puerto Rico: Housing Costs as a Percent of Median Income



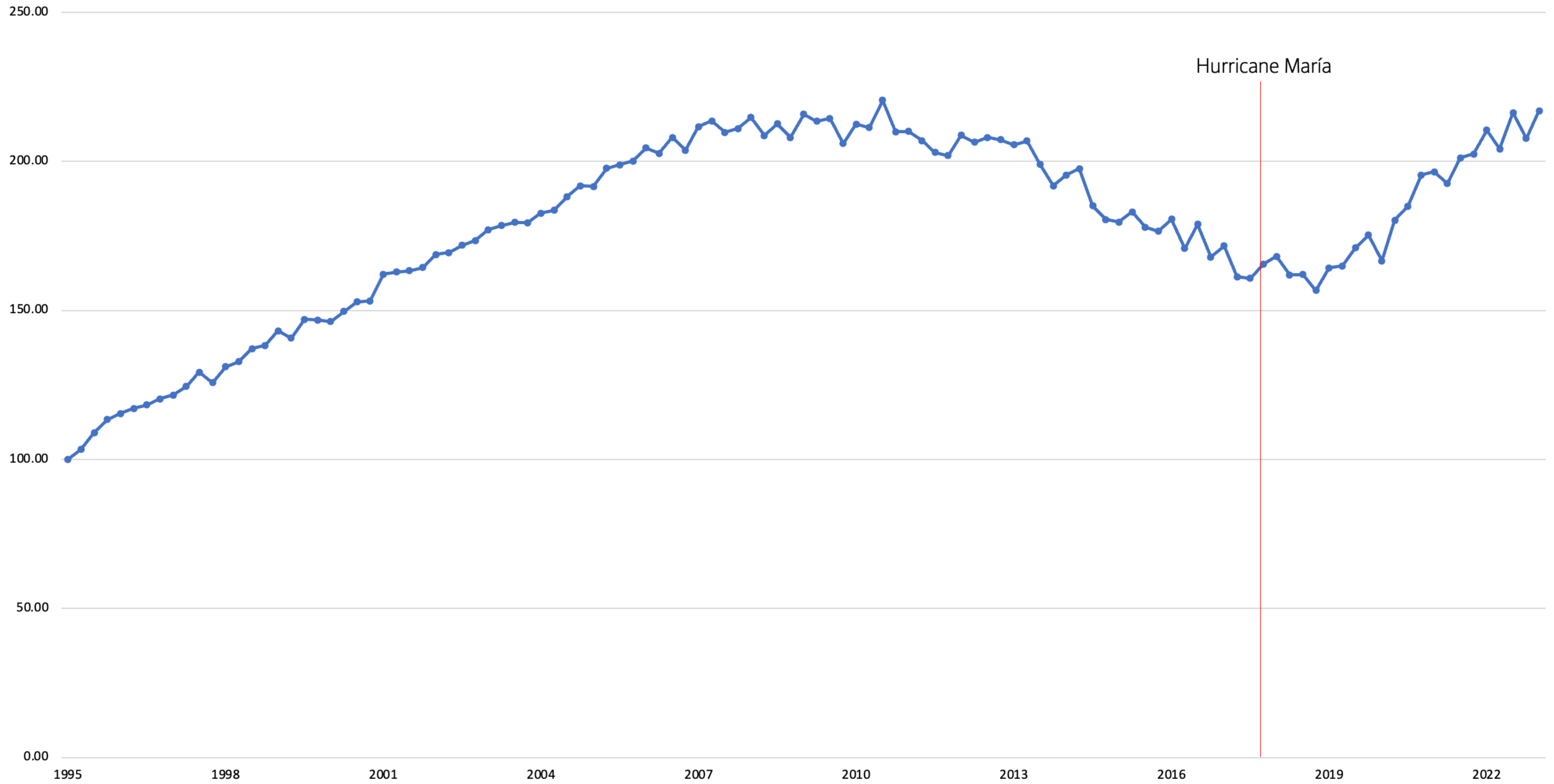
Source: US Census Bureau Data accessed via IPUMS USA, University of Minnesota



# Housing Costs for Households with Incomes Lower Than \$50,000

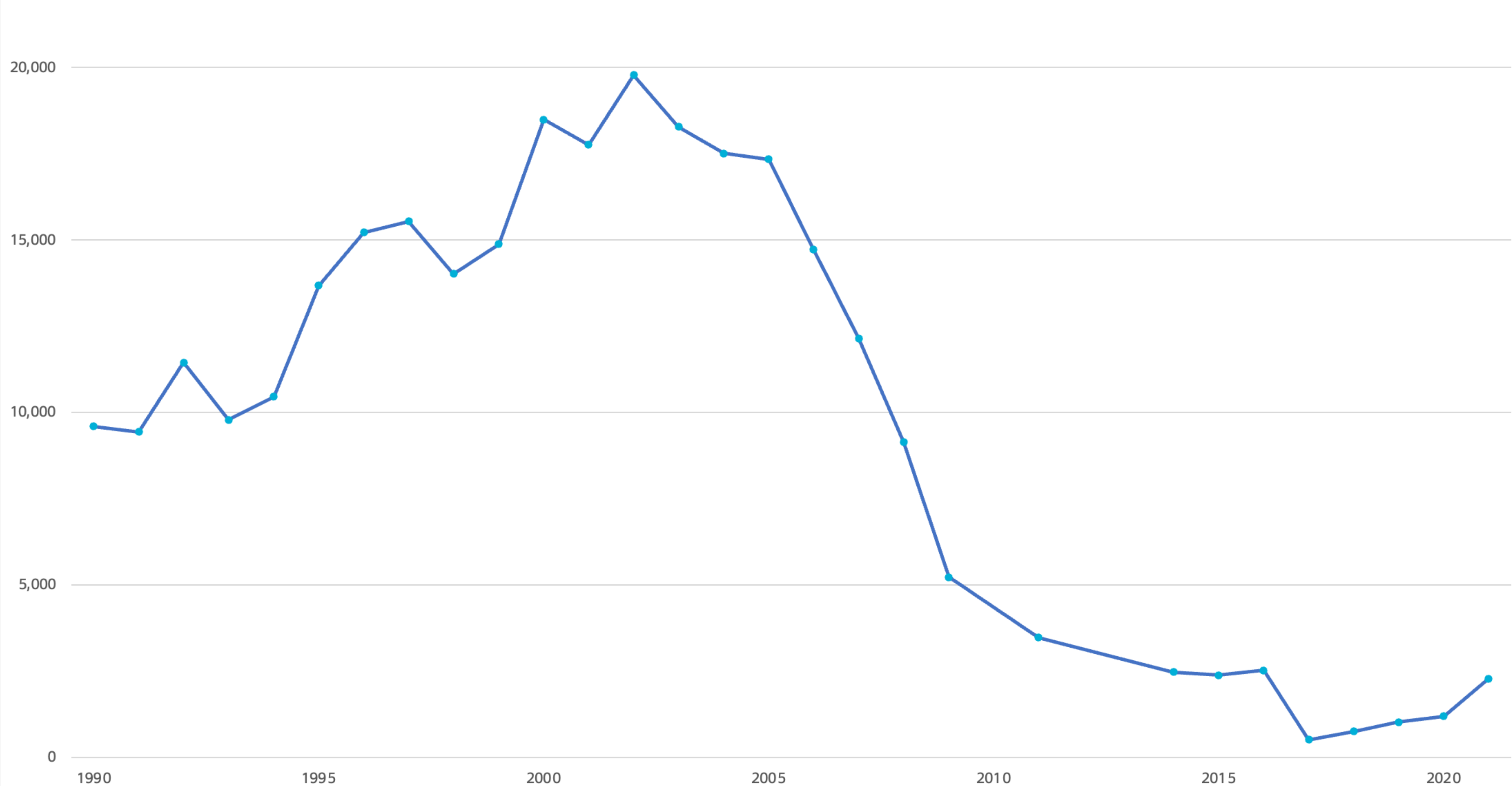


# Puerto Rico: Housing Price Index

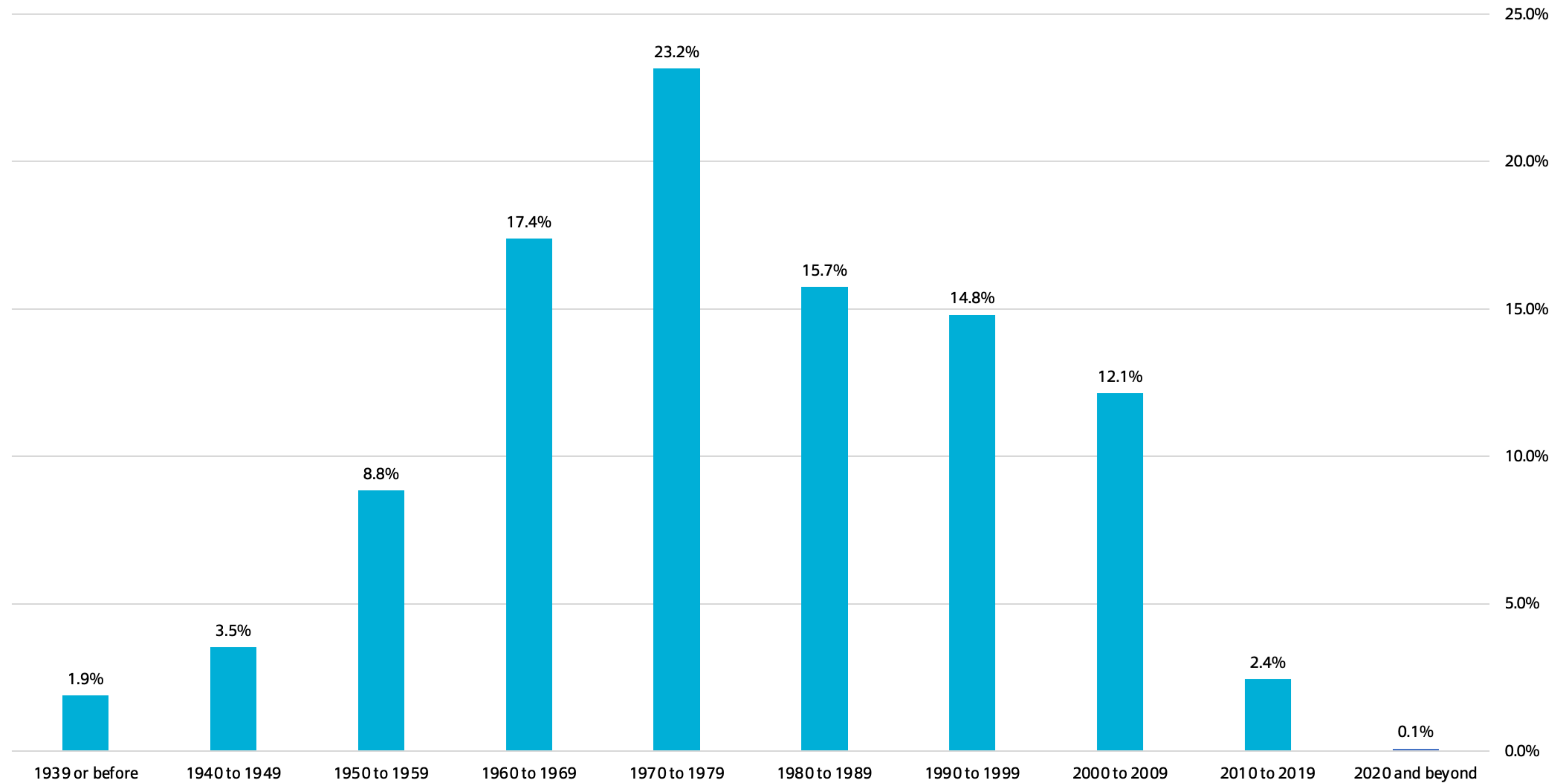


Source: Federal Housing Finance Agency

## Puerto Rico: New Housing Units Built With Construction Permits



# Puerto Rico: Decades Housing Structures Were Built



Source: US Census Bureau, 2021

# Damages Caused by Recent Disasters

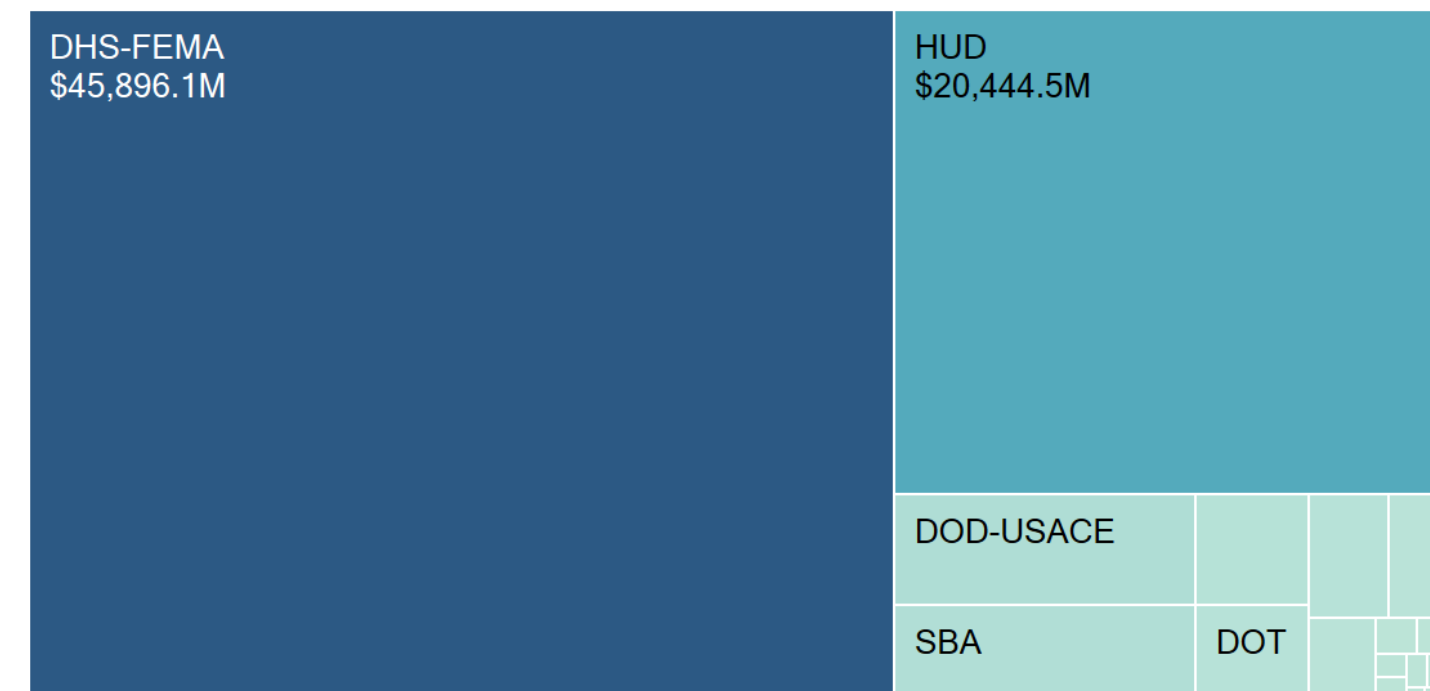
<b>Weather and Related Disasters</b>	<b>Date</b>	<b>Total Unadjusted Costs (\$ millions)</b>
Hurricane Irma	September 2017	\$50,000
Hurricane Maria	September 2017	\$90,000
Hurricane Dorian	September 2019	\$1,610
Southern Earthquakes	January 2020	\$165
Hurricane Fiona	September 2022	\$2,510
<b>Total</b>		<b>\$144,285</b>

# Federal Funds for Post Disaster Recovery

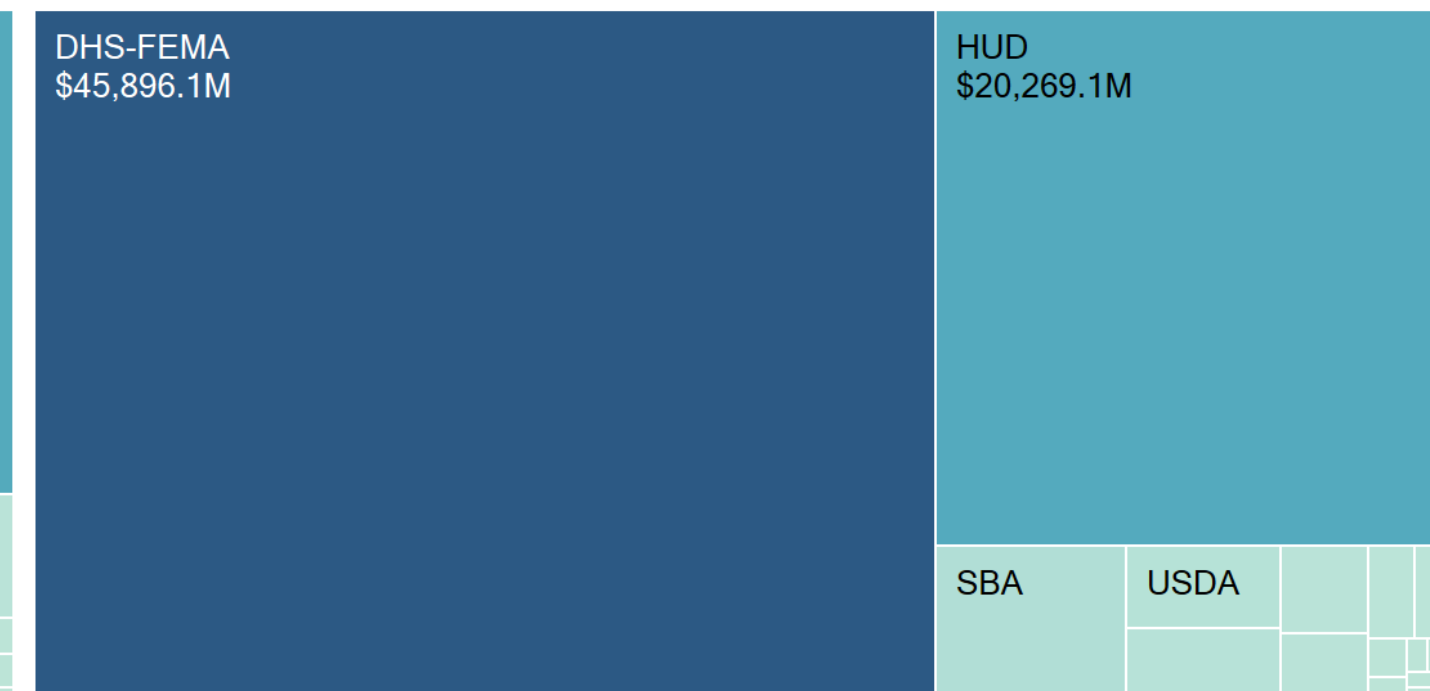
State / Territory: 
 Agency Abbreviation: 
 Bureau Name: 
 Funding Source:

\$74,938,765,533	\$71,955,216,891	\$25,855,546,036
Allocated	Obligated	Outlayed

Agency Allocation



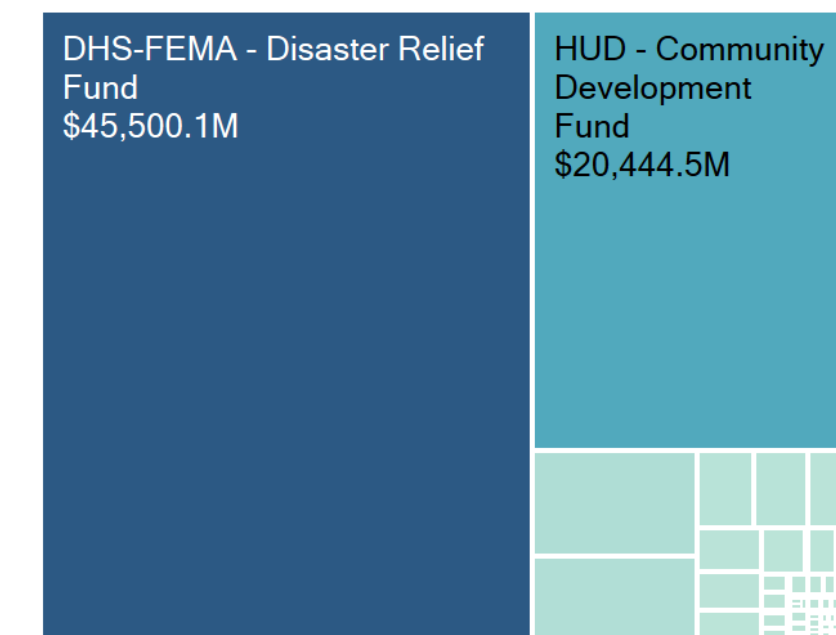
Agency Obligated



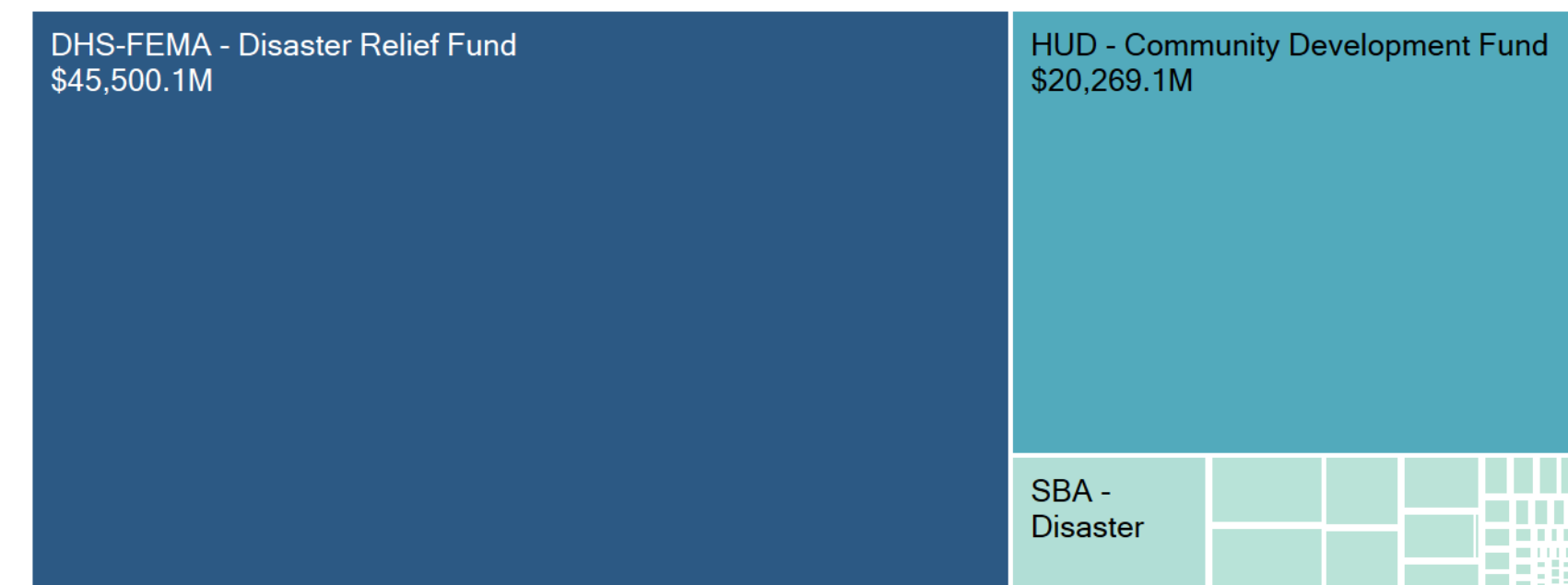
Agency Outlayed



Program Account/Fund Allocation



Program Account/Fund Obligated

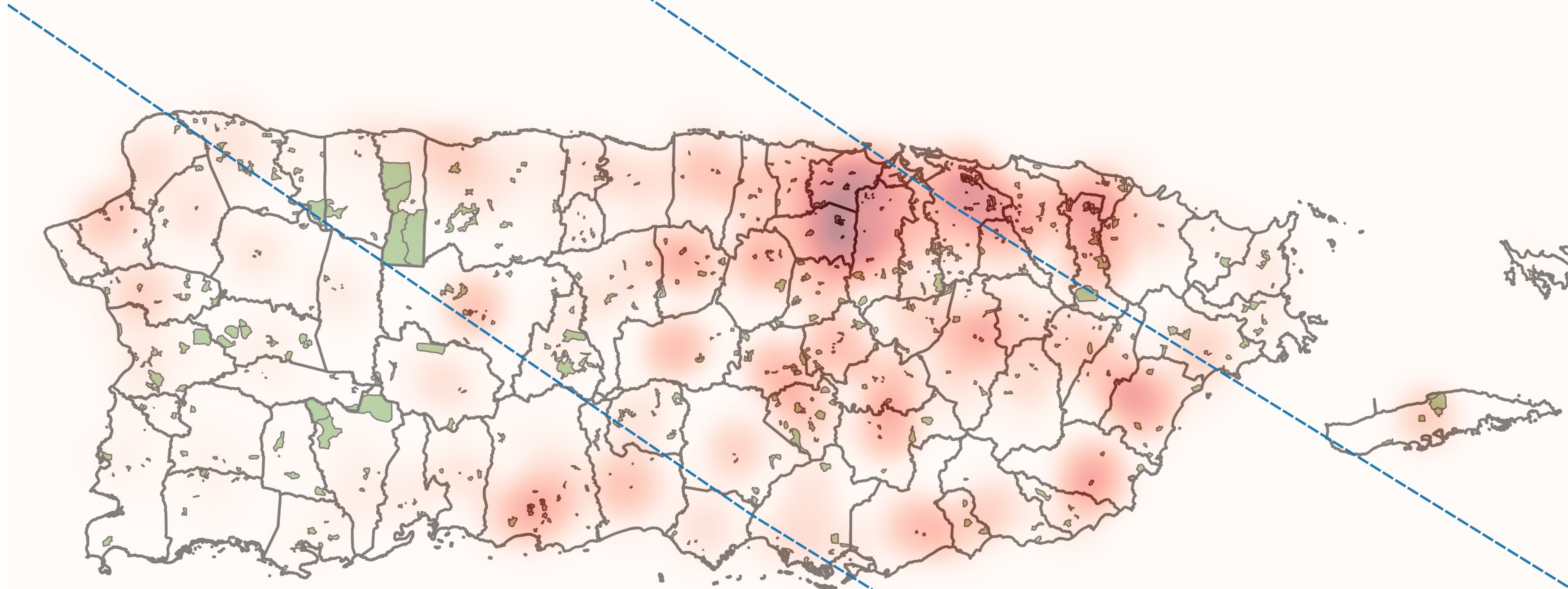
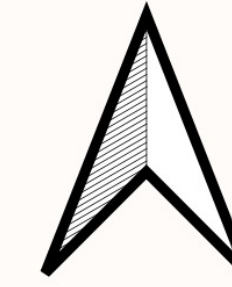


Program Account/Fund Outlayed



Source: FEMA State Profiles on Disaster Funding

# Puerto Rico: Damage Hotspots, Hurricane Eye Wall and Special Communities



## Legend

 Hurricane María eye wall

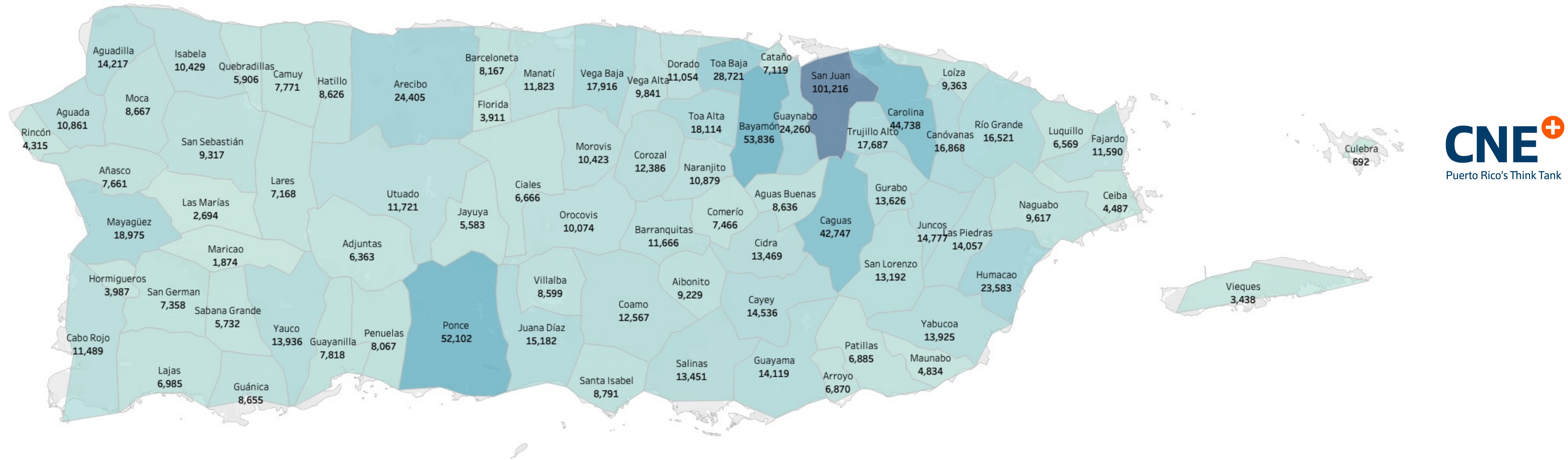
 Municipalities

 Special Communities



# Puerto Rico: FEMA Applicants Reporting Home Damages

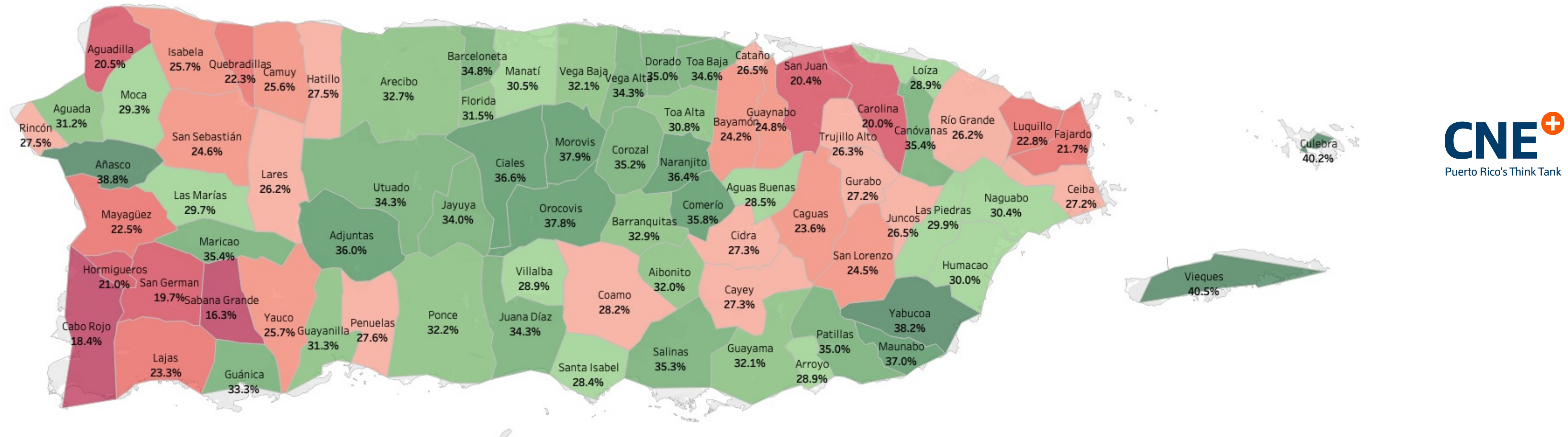
2017-2022 Disasters



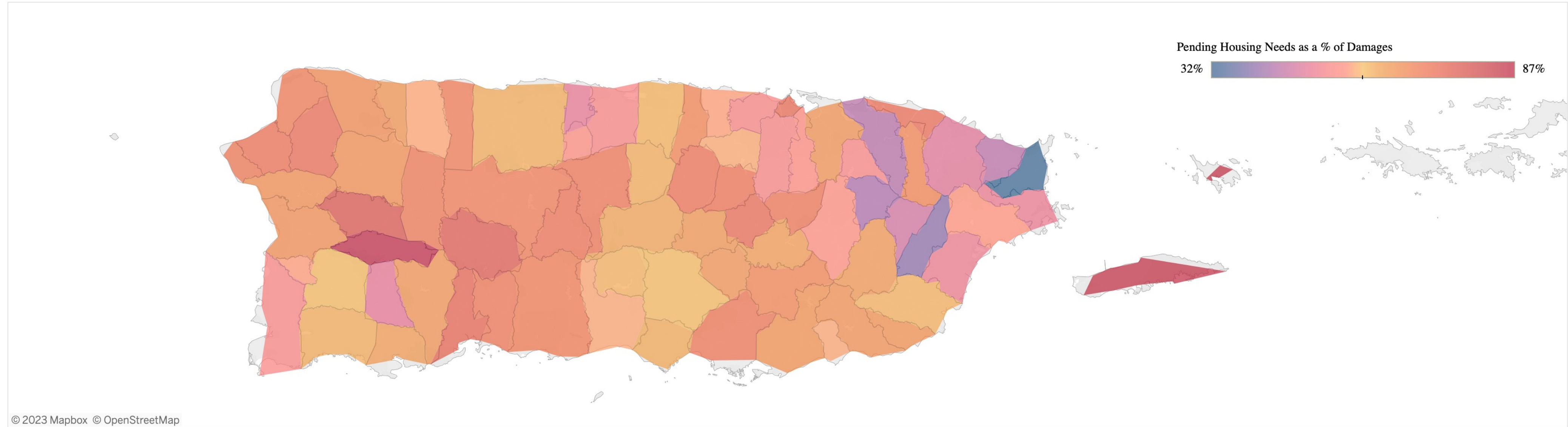


# Puerto Rico: Percent of FEMA Applicants that Reported Home Damages and Received Monetary Assistance

Universe: Applicants without insurance and with incomes <\$30k  
2017-2022 Disasters



## How Much is Needed to Address Housing Damages? Pending Housing Needs as a Percent of Total Housing Damages



### Pending Housing Needs = Disaster Damages - Post Disaster Assistance

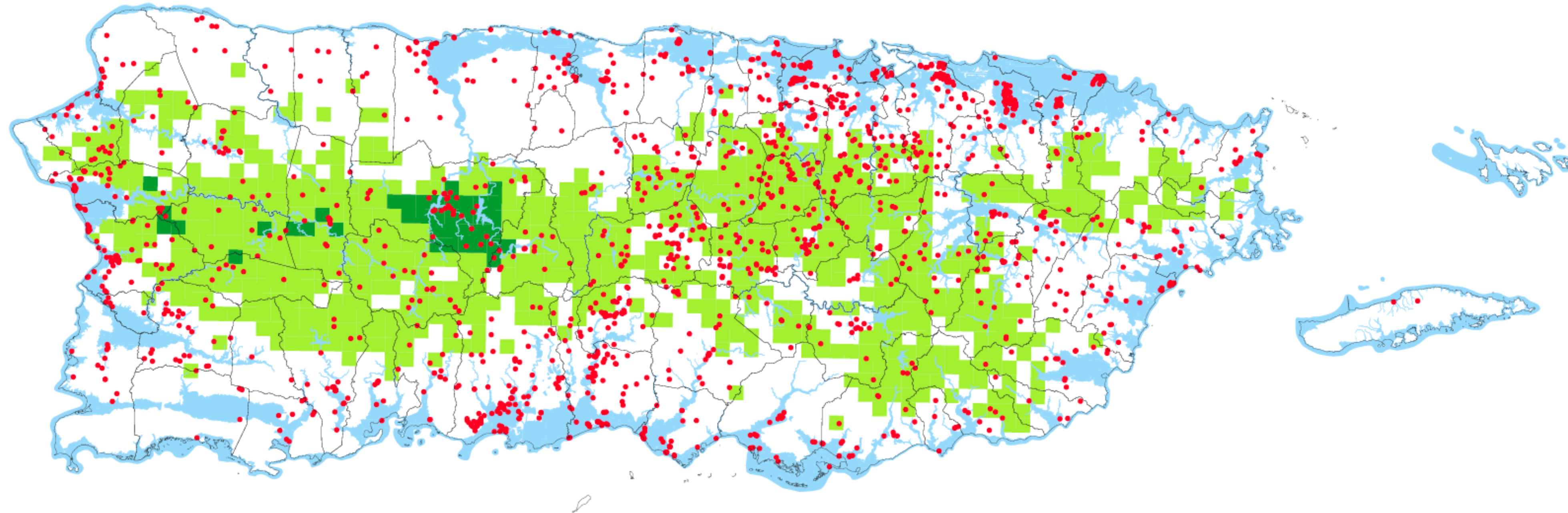
Pending Housing Needs = Estimated Housing Damages for the Uninsured - (FEMA IA Repair Assistance + FEMA IA Replacement Assistance + SBA Real Estate Loans Awarded + Tu Hogar Renace Awards + R3 Program Awards)

### Municipal Data on Damages, Assistance and Unmet Needs

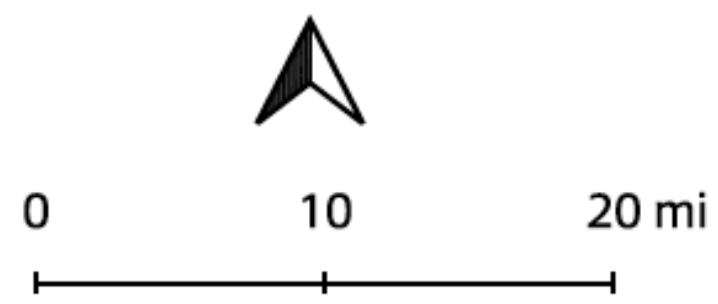
Municipio	Estimated Housing Damages	FEMA IA Repair Assistance	FEMA IA Replacement As..	SBA Real Estate Loans	R3 Program Investments	Tu Hogar Renace Investments	Pending Housing Needs	Percent Pending Housing Needs
San Lorenzo	\$213,056,057	\$5,660,429	\$841,063	\$13,148,400	\$8,368,740	\$14,411,421	137,677,469	64.62%
San Sebastián	\$119,043,825	\$5,023,613	\$270,290	\$7,885,300	\$7,661,725	\$5,353,383	79,174,795	66.51%
Santa Isabel	\$151,619,733	\$4,152,620	\$677,067	\$11,796,400	\$7,821,439	\$10,920,328	93,785,577	61.86%
Toa Alta	\$610,809,698	\$12,378,934	\$3,365,861	\$30,976,600	\$11,370,405	\$19,282,530	354,869,506	58.10%
Toa Baja	\$531,440,255	\$20,196,804	\$2,614,922	\$55,300,900	\$15,057,509	\$32,861,642	284,874,586	53.60%
Trujillo Alto	\$262,416,121	\$6,437,691	\$535,436	\$23,943,100	\$5,287,022	\$15,712,224	141,646,762	53.98%
Utuado	\$220,770,903	\$8,805,582	\$959,133	\$13,659,500	\$5,272,846	\$15,340,434	154,445,879	69.96%
Vega Alta	\$240,083,469	\$8,717,746	\$816,982	\$12,297,500	\$7,849,114	\$11,437,888	162,913,153	67.86%
Vega Baja	\$327,500,740	\$11,251,140	\$2,218,197	\$21,830,200	\$14,006,870	\$25,819,646	200,201,696	61.13%
Vieques	\$242,948,203	\$3,093,898	\$4,422,939	\$5,295,500	\$1,062,202	\$4,925,962	207,933,038	85.59%
Villalba	\$122,646,895	\$4,918,703	\$671,178	\$13,225,200	\$9,064,715	\$9,664,966	75,217,228	61.33%
Yabucoa	\$291,590,930	\$11,242,908	\$2,032,625	\$23,774,700	\$10,646,657	\$32,526,690	179,009,723	61.39%
Yauco	\$105,697,292	\$3,269,500	\$372,367	\$7,881,700	\$6,009,825	\$6,694,138	69,266,668	65.53%
<b>Grand Total</b>	<b>\$18,553,179,921</b>	<b>\$551,131,424</b>	<b>\$88,504,967</b>	<b>\$1,383,756,900</b>	<b>\$633,887,000</b>	<b>\$1,135,219,282</b>	<b>11,545,640,428</b>	<b>62.23%</b>

# Puerto Rico: Housing units to be relocated under the R3 Program and hazard areas

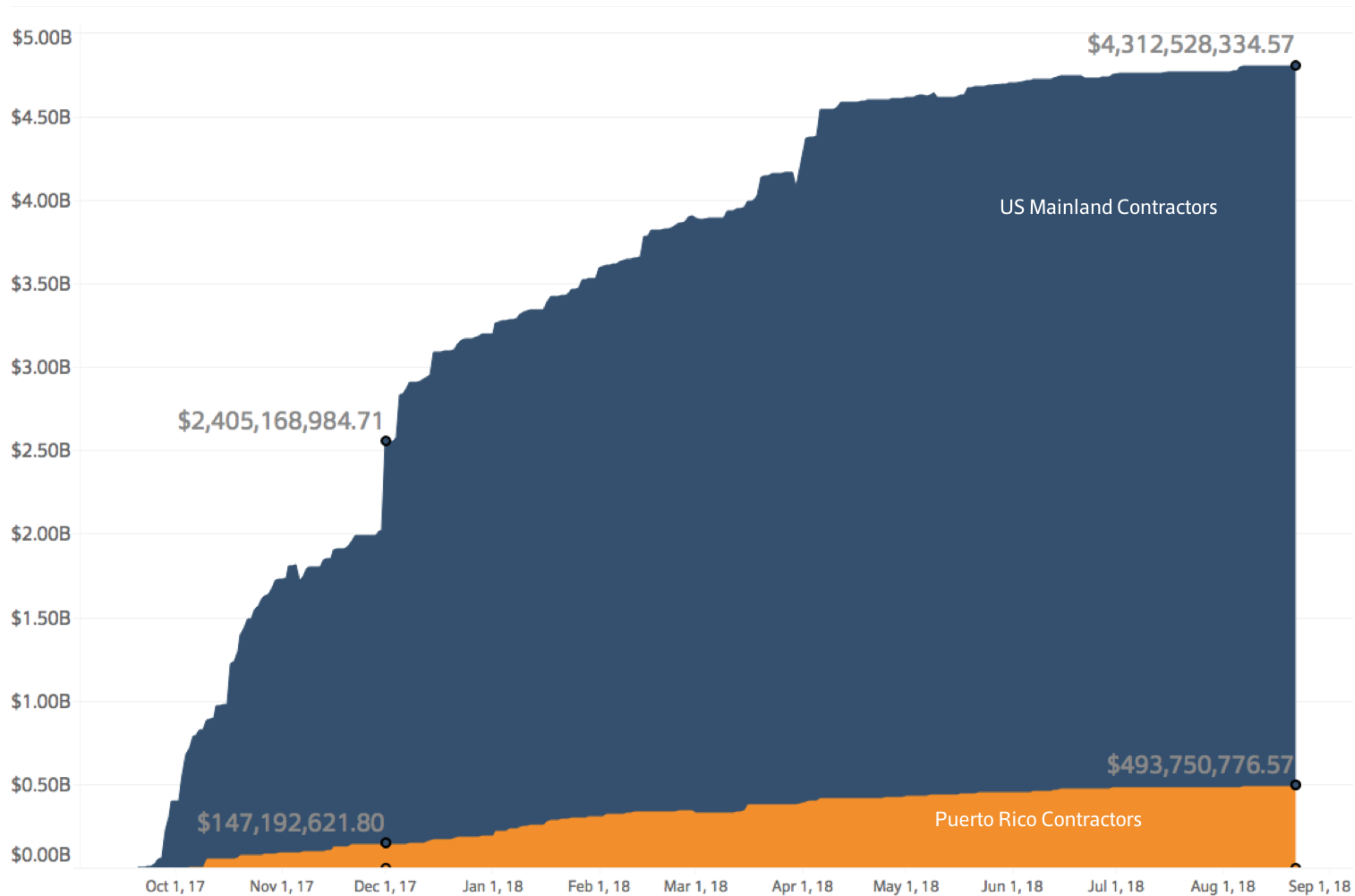
As of February 2022



- Units to be relocated
- Base flood areas
- Landslide activity following Hurricane María
  - Greater than 25 landslides per sq. km.
  - Less than 25 landslides per sq. km.



# Puerto Rico: Accumulated Post María Federal Expenditures y Type of Contractor



# Variables and Sources of Information

Demographic variables	Source
Age groups	US Census Bureau
median age	US Census Bureau
Sex	US Census Bureau
Race	US Census Bureau
Birth and mortality	US Census Bureau
Population with functional diversity	US Census Bureau
Economic variables	Source
Employment for the population aged 16 or over	US Census Bureau
Median age of workers from 16 to 64 years old	US Census Bureau
Employment by industrial sector	US Census Bureau
Wages	US Census Bureau and BLS
Salaries by industry	US Census Bureau and BLS
Labor force situation	US Census Bureau and BLS
Population under poverty levels	US Census Bureau
Low to Moderate Income (LMI) Households	HUD
Transport variables	Source
Number of vehicles per household	US Census Bureau
Mode of transportation to work	US Census Bureau
Workplace	US Census Bureau

Household variables	Source
Number of households and age profile	US Census Bureau
Average household size	US Census Bureau
Household composition/type of household	US Census Bureau
Relationship of families per household	US Census Bureau
Elderly people and grandparents in charge of households	US Census Bureau and PUMS
Housing Variables	Source
Number of homes	US Census Bureau
Housing occupancy rate	US Census Bureau
Uses of vacant homes (types)	US Census Bureau
Units per structure	US Census Bureau
Tenure	US Census Bureau
Years of construction of the houses	US Census Bureau
Lack of basic services	US Census Bureau
Percentage of loan or rent payment in relation to income	US Census Bureau

Housing Variables (Cont.)	Source
Homes available on the market	Online Classifieds Home Inventory; supplemental data by Estudios Técnicos.
Home sales	OCIF; HMDA; hud
Housing Problems	Consolidated Planning/CHAS Data
Section 8	HUD
LIHTC Projects	HUD; Housing Department
Public housing	Public Housing Administration
Fair Housing	US Census Bureau; HUD
Homeless people (housing)	Puerto Rico Statistics Institute
Natural disasters and the recovery process	CNE; Dept. of Housing; Government of Puerto Rico; HUD; RAND
Soil condition variables	Source
Flood-prone and landslide areas	USGS; FEMA
Land use and land available for development	Planning Board
Public infrastructure	AAA; AEE/LUMA; FHWA; Environmental quality board;
<b>Source: State Housing Plan, Presentation for the Technical Advisory Group; Prepared by Estudios Técnicos</b>	

# Variables and Sources of Information

Entity	Reference
CNE	<a href="#">Home Reconstruction Monitoring Dashboard</a>
	<a href="#">Reimagine Puerto Rico: Housing Sector Report (published June 20, 2018 and revised September 21, 2018)</a>
Housing Department	<a href="#">CDBG-MIT Action Plan (draft for public comments: FEB-MAR2023)</a>
	<a href="#">CDBG-DR Action Plan (Irma &amp; María: effective date February 17, 2023)</a>
	<a href="#">CDBG-DR Action Plan (earthquakes; draft for public comments: NOV-DEC2020)</a>
	<a href="#">Dashboard R3</a>
	<a href="#">Dashboard CDBG-DR to LIHTC</a>
	<a href="#">Title Authorization Dashboard</a>
	<a href="#">Social Interest Housing Dashboard</a>
	<a href="#">Rental Assistance Dashboard</a>
	<a href="#">Buyer Assistance Dashboard</a>
PR Government	<a href="#">Build Back Better PR: Application for Federal Disaster Recovery Assistance (2017)</a>
	<a href="#">Transformation and Innovation in the Wake of the Devastation: An Economic and Disaster Recovery Plan for Puerto Rico (2018)</a>
	<a href="#">Puerto Rico Home Investment Partnerships American Recue Plan Program (Home-Arp: draft for public comment dated March 13, 2023)</a>

Entity	Reference
HMDA	<a href="#">HMDA Dataset (available for years 2018-2021)</a>
HUD	<a href="#">Housing Damage Assessment and Recovery Strategies Report Puerto Rico (June 29, 2018)</a>
	<a href="#">Comprehensive Housing Market Analysis (September 1, 2017)</a>
	<a href="#">Consolidated Planning/CHAS Data (available for the years 2000, 2005-2007 and 2006-2019)</a>
	<a href="#">LIHTC Database (data available until 2020)</a>
	<a href="#">Multifamily assistance &amp; Section 8 database (data available through March 30, 2023)</a>
PR Statistics Institute	<a href="#">Homeless count report (data available for the years 2007, 2011, 2015, 2017, 2019 and 2022)</a>
RAND	<a href="#">Modernizing Puerto Rico's Housing Sector Following Hurricanes Irma and Maria: Post-Storm Challenges and Potential Courses of Action (2020)</a>
US Census Bureau	<a href="#">American Community Survey (ACS 2016-2021: 5 years estimates) and 1 yr</a>
	<a href="#">Decennial Census (2020)</a>
	<a href="#">Economic Census (2017)</a>
OCIF	<a href="#">Financial activity report for Puerto Rico (2020)</a>
	<a href="#">Housing market activity (2019-2021)</a>

Source: State Housing Plan, Presentation for the Technical Advisory Group; Prepared by Estudios Técnicos.

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### Frequently Visited

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mi.libertypr.com miluma.lumapr.com elnuevodia.com cdbg-dr.pr.gov

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### Reading List

Puerto Rico's solution to heroin crisis: one-way t... inquirer.com

Trump Wants Big Changes to Legal Imm... nytimes.com

The Ford Foundation's Quest to Fix the World newyorker.com

Economists tested 7 welfare programs to se... vox.com

**¡Gracias!**

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Puerto Rico's Think Tank