Nantucket Coastal Conference June 26, 2019

> Ruperto Chaparro Director Puerto Rico Sea Grant

- 3,000 people dead
 - 64 deaths recognized by the government
- 6 months without electricity
- 3 months without water
- 2 months without telephones

Between 114,000 and 200,000 people leave Puerto Rico annually in the aftermath of Hurricane María
February 2018 400,000 people still don't have power

The resilience of our people was unquestionable. They continued to go about their lives, largely in good spirits.

• Irma – September 7, 2017

- María September 20, 2017
- Back at the UPR October 10, 2017

Got water services at home - October 30, 2017
Got electric power at home - December 15, 2017
Got electric power at Sea Grant offices - April 15, 2018



 Once again we have to come to terms with being one of the Caribbean peoples on the hurricane highway, who, through slavery, colonialism and hurricanes invented resilience. Juan Giusti-Cordero

 Puerto Rico was hit by a natural disaster on top of a fiscal disaster on top of our secular disaster of being a colony: voteless U.S. citizens, political and fiscal oddities. Juan Giusti-Cordero

• We belong but are not part.

Trans-Disciplinary Approach to Economic, Environmental and Social Dimensions:

- Political Status (U.S. Colony)
- Economical Aspects (Third World Country)
- Social Aspects (culture)
- Environmental (natural and built environment)
- Climatological-Geophysical (secluded tropical island)
 Vulnerability (relates to these phenomena)

Natural Disasters Expose Communities to Environmental Impacts:

- Cumulative effects of land management decisions (unregulated growth of urban areas)
- Construction Techniques
- Investment in Educational Programs
- Poverty Reduction
- Social Integration (high level of social capital)

Natural Occurring events consequences are often aggravated by man-made actions which surpass the capacity of built infrastructure to contain.

High levels of material damage Loss of life and means of subsistence (agriculture, tourism, trade) Spread of infectious diseases

Lessons Learned

- Disaster preparedness efforts need to be conducted prior to the event (construction of resistant homes and infrastructure, education, supplies, maintenance to infrastructure).
- Most important allies are: 1) neighbors; 2) family and friends; 3) diaspora; 4) communities of faith; 5) NGOs';
 6) local government; 7) federal government?
 Distribution of goods and services to clientele (coastal communities, fishermen, coastal businesses)

Puerto Rico Sea Grant Efforts Workshops Flood Maps, Breaking Waves Prediction and Hazard Levels (1) HurriPlan: Resilient Building Design for Coastal Communities (3) **Coastal Inundation Mapping (2) Coastal Flood Risk Reduction (1)** Hurricane Awareness (6) **Partners – Natural Disaster Planning Training** Center (NDPTC), NOAA Coastal Services Center (CSC)

- Stafford Act authorizes FEMA to respond to a disaster, limits federal disaster relief money to rebuilding infrastructure as it was before the storm.
- Puerto Rico's electric grid was rebuilt back to the same decrepit state that led to the power outages.
- As the risk of extreme storms rises and populations increases in vulnerable areas, the potential harm and damages from hurricanes will increase.
- Lawmakers are worried about disaster relief money going toward paying back creditors than rebuilding.

- Corruption (Whitefish \$300M, blue tarps \$30M, bottled water \$3M, Cobra Acquisitions \$945M)
- Disasters do most damage to the poor and dispossessed
- Housing inequalities
- Privatize water, electricity, roads and school system
- Disaster capitalism private enterprise profits and the public suffers
- Further privatization, subservience to the banks, breaking of strong public sector unions, depopulation of the island

- Approach from a Trans-Disciplinary Perspective
- Reduce Vulnerability (increase social capacity)
- Environmental Sanitation
- Prevention Planning (neighbors, NGOs, communities of faith, diaspora)
- Natural disasters prevention subsidies

Learn from disasters (do not rush to rebuild)SOCIAL CAPITAL

Many Puerto Ricans fear recovery plan could be greedy land grab





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Best of OQ.

How Puerto Rico Became the Newest Tax Haven for the Super Rich

