Policy Paper

Puerto Rico's Unfinished Business After Hurricane María

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October 2018

In Memoriam

No one speaks of them, and yet
they were avid to live;
they were more than the wind
which sometimes decides our fate…

They were charming and pure.

Who can guess their names
erased in cemeteries?
Those simple names of yesteryear
that they preferred

like a flower we prefer.

We love the new so much.
These striplings, certainly,
were newer than need be
to shatter a tomb.

—No One Speaks of Them,
Rainer Maria Rilke (1875 – 1926)

Acknowledgments

I would like to acknowledge the help and support of CNE's staff, without which this policy paper would not have been possible. Specifically, I want to thank Camelia Valldejuly, Nuria Ortiz, Rosanna Torres, Nydia Suarez and Ana Martel, for their hard work in this endeavor. Thank you all.

Sergio M. Marxuach

Introduction

It is common for human beings to mark the passing of important life events, such as births, graduations, marriages, retirement, deaths, and in some cases natural disasters, at certain time intervals. We find this custom across nations, cultures, and societies, perhaps an atavistic reminder of when humans lived and were closer to the cyclical and seasonal rhythms of nature.

And so, it is we find ourselves a little bit after a year from the day when Hurricane María wreaked havoc on Puerto Rico and the U.S. Virgin Islands by unleashing the power of nature with a fury unseen in these parts in almost a century. According to data from the Federal Emergency Management Agency ("FEMA"), within hours of Hurricane María's landfall in Puerto Rico, 100 percent of the clients of the Puerto Rico Electric Power Authority ("PREPA") were without electric power service; 80 percent of all PREPA infrastructure was destroyed; 80 percent of the clients of the Puerto Rico Aqueduct and Sewer Authority ("PRASA") were without water service; between 80 and 85 percent of communication towers were not operational; hundreds of miles of roads were closed off by landslides and several dozen bridges collapsed; maritime ports and airports were closed, and remained so for at least five days; and satellite phones were not working at all.[1]

In addition, 92% of hospitals were severely impacted; between 23 and 31 million trees were destroyed or damaged; approximately 527,000 households reported some kind of damage; thousands of small and medium business were closed for months and many went out of business; several hotels and resorts suffered serious damage; and economic activity, as measured by the government's Economic Activity Index, declined by approximately 12% over the three months immediately following the hurricane.[2] According to estimates made by Moody's Analytics, the decrease in real GDP could have been as deep as 15% during the last calendar quarter of 2017, while approximately 35,000 jobs were lost. Furthermore, Moody's estimates that Hurricane María caused about $80 billion in damages to the island's already withered capital stock and at least $25 billion in lost output, which has adversely affected business and household balance sheets.[3]

Then, there was the human toll. Thousands of people were left homeless or living in unsafe conditions, while tens of thousands migrated to the mainland United States. As to casualties, the number of deaths caused by Hurricane María has been the subject a bitter scientific and political debate. The exact number of fatalities is not known. Perhaps, it will never be. Several studies calculate the number of "excess deaths" related to the storm at approximately 3,000 or more, their names known only to their families and in some cases only to God.[4]

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1 United States Government Accountability Office, *2017 Hurricanes and Wildfires: Initial Observations on the Federal Response and Key Recovery Challenges,* GAO-18-472, (Washington, DC: September 2018), pp. 29.

2 Government of Puerto Rico, *Transformation and Innovation in the Wake of Devastation: An Economic and Disaster Recovery Plan for Puerto Rico,* (San Juan, PR: August 2018), pp. 41-44.

3 Bernard Yaros, *The Economics of Puerto Rico's Post María Recovery,* Moody's Analytics, September 2018, pp. 1-4.

4 See, among others, Nishant Kishore and Domingo Marqués, et. al., "Mortality in Puerto Rico after Hurricane María", *The New England Journal of Medicine,* May 29, 2018; and Milken Institute School of Public Health, George Washington University, *Ascertainment of the Estimated Excess Mortality from Hurricane María in Puerto Rico.*

Yet, if we believe that every single life counts, that each life lost affects all of us, because in the words of John Donne, “no man is an island, entire of itself; every man is a piece of the continent, a part of the main”, then, regardless of the actual number, it is only just and proper for us the living to take a moment as we mark one year from the storm’s landfall, to pause and remember our dead before moving on to continue carrying the burden of the living, which Robert Penn Warren called the “awful responsibility of Time.”[5]

Puerto Rico a Year After María

A year after the storm a kind of nervous normalcy prevails in the island. All the critical infrastructure—electricity, water, telecommunications, schools, and hospitals—is functional. The enormous effort and the amount of hard work put into removing millions of cubic yards of debris; patching up the electrical grid and the water treatment system; opening up public schools, which allowed students between the ages of 5 and 17—who on average could not attend an educational institution for 78 days—to finish the school year;[6] rebuilding telecommunication towers; putting hospitals in working order; temporarily fixing damaged housing; unclogging cargo backlogs at ports and airports and opening up impassable roadways and bridges, among a host of other emergency response activities, sometimes under conditions dangerous to life and limb, should be acknowledged and recognized by one and all.

It is also important to note that the island’s economy was already in bad shape before the storm. Prior to the hurricane, GDP was down by about 16% from its high in 2003, and employment and house prices had fallen by 18% and 28%, respectively.[7] In addition, population had declined from approximately 3.8 million in 2004 to about 3.3 million just before the hurricane made landfall, a decrease of approximately 13%.

However, a year after María we can see some green shoots sprouting here and there. Manufacturing operations rebounded fairly quickly, due in part to the sophisticated business continuity plans of the multinational companies that operate in Puerto Rico; tourism activity is showing signs of growth, even though some of the island’s premier hotels and resorts are still closed and undergoing repairs; agricultural activity is slowly picking up after suffering losses estimated at approximately $2 billion; and mobile telecommunication services are operating close to 100%.

Construction and retail commerce are still lagging a little behind, the former mostly due to the slow pace of the disbursement of federal funds for reconstruction; while the retail sector, which recently has shown some signs of life, has been affected by the large number of small and medium businesses that closed after the storm—research economists from the Federal Reserve Bank of New York estimate that approximately 27% of small businesses in Puerto Rico were permanently or temporarily closed some nine months after the storm.[8]

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5 John Donne, “Devotions Upon Emergent Occasions, XVII Meditation”, *The Major Works Including Songs and Sonnets and Sermons,* (Oxford University Press: Oxford, 2008), originally published in 1624, p. 344; and Robert Penn Warren, *All the King’s Men,* (Harcourt: Orlando, Fla., 1996), originally published in 1946, p. 661.

6 Instituto Desarrollo Juventud and Estudios Técnicos, *Study About the Impact of Hurricane María on the Children in Puerto Rico,* September 17, 2018, p. 18.

7 Yaros, supra n. 3, at p. 1.

8 Federal Reserve Bank of New York, *Puerto Rico Small Business and the 2017 Hurricanes,* p. 6.

In general terms, nonetheless, the economy is starting to show the rebound effect expected after a big disruption.[9]

Yet, as we hit the peak of the 2018 hurricane season there is a feeling that not all is well. The economic fundamentals remain fragile and most of the greens shoots we are seeing are probably due to the short-term impact of recovery funds that are slowly starting to flow through the economy. Furthermore, the electrical system remains unstable, the island-wide electric grid held together with a quilt of jury-rigged patches, while the service is unreliable; PRASA recently disclosed that it still needs electrical generators to back-up critical water pumps; while 70 buildings that served as shelters during hurricane María will not be available for the next storm due to the closing of public schools.

The government has updated its emergency plans but, given the reaction of mayors and other first responders, it is by no means certain the agencies in charge of operationalizing them have the capabilities to do so.[10] It is particularly worrisome that the government seems not to have fully addressed the logistical problems at ports and airports that complicated and delayed relief efforts after María.

The preparedness status of critical infrastructure in private hands, such as hospitals and telecommunication facilities, is unknown due to a lack of publicly available information. In addition, there is no sign that communities in flood zones have taken affirmative actions to mitigate the risk of flooding; while thousands of households around the island still have “blue tarps” over their roofs.

This generalized feeling of frailty and instability is perhaps best summarized in a letter from Governor Ricardo Rosselló Nevares to President Trump sent via Mr. Thomas Von Essen, Regional Administrator of FEMA, Region II, dated August 30, 2018. In that letter, the Governor requests that Puerto Rico be exempt from certain cost-sharing requirements for activities related to debris removal (“Category A”) and the implementation of emergency protective measures (“Category B”). This issue is important because the government of Puerto Rico is undergoing a bankruptcy process and the cost sharing requirements could have a material adverse effect on the government’s finances in the short-term.

According to the letter “almost one year after the event, full power is not restored, and the system is still very susceptible to outages from weather events. The status of the system causes great anxiety for all households and businesses across the island with a continuing negative impact on the economy…an impact that continues to be felt throughout the island even today and that is expected to last for many years.”[11]

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9 The estimate of agricultural losses is from Government of Puerto Rico, *Transformation and Innovation in the Wake of Devastation,* supra n. 2, at p. 43.

10 Inter News Service, “Alcaldes alegan municipios no cuentan con recursos para enfrentar tormenta”, *El Vocero,* July 7, 2018; Marga Parés Arroyo, “Expertos urgen a prepararse por la fragilidad post-María”, *El Nuevo Día,* 8 de julio de 2018.

11 Governor Ricardo Rosselló Nevares, *Letter to President Donald Trump via Mr. Thomas Von Essen,* La Fortaleza, San Juan, PR, August 30, 2018, p. 3.

Furthermore, "Puerto Rico is still in emergency response mode with respect to restoring power, water, other critical services, and removal of debris…Denial of this request will require additional fiscal resources from an already fiscally burdened Puerto Rico that will drastically impact our ability to fully complete the emergency response and closeout of Category A and B projects, which are still underway."[12]

Finally, "both storms created severe threats to public health and safety – a condition that continues to this day…Nearly all water and wastewater treatment plants in Puerto Rico were rendered inoperable, resulting in the release of millions of gallons of untreated waste into the environment, which we are still attempting to remediate. Furthermore…the social service 'safety net' fell apart, and basic resources such as clean and potable water, food and medicine became scarce and turned the emergency on the island into a humanitarian crisis."[13].

In addition to the damage Hurricane María inflicted on the physical infrastructure and economic activity in Puerto Rico, it also disrupted long-standing social and support networks across the island. Each street, neighborhood, community, school, municipality and workplace is a node where diverse and dense flows of human interactions converge. The disruption of those connections and interactions with family and kin, neighbors, schoolmates, and co-workers generates anxiety, stress, and other psychological conditions, which compound the already difficult and stressful post-disaster situation that has been compared to post-traumatic stress disorder ("PTSD").

This psychological toll should not be dismissed lightly as it constitutes a significant challenge to the recovery process. First, because resources—social workers, psychologists, psychiatrists and other mental health professionals—must be assigned to help people suffering from these conditions, something that is oftentimes lost in the bureaucratic fog that arises subsequently to the disaster.[14] But also, because the status quo ante inevitably becomes the referent for reconstruction, something behavioral economists refer to as the "anchoring effect".

In general, people do not want a "new normal" after the disaster, they want, in most cases, to return to the old order of things. As Laurie Johnson and Robert Olshansky have pointed out, after a disaster:

> …there is a tension between change and a return to normalcy. [As several authors have] observed, "There is already a plan for reconstruction, indelibly stamped in the perception of each resident—the plan of the pre-disaster city. The new studies, plans, and designs compete with the old" (Haas, Kates, and Bowden 1977, 268). Using the cases of Chicago, Boston, and Baltimore, Rosen (1986) demonstrated that change is difficult after disasters, despite public intentions for betterment, because there are multiple stakeholders with property interests, complex webs of incentives embedded in real estate markets, structural and topographic constraints, and competition among numerous public and private interests for urban space.[15]

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12 Id.
13 Id., pp.4-5.
14 Agencia EFE, "El Departamento de la Familia busca 200 trabajadores sociales", *El Nuevo Día,* 10 de septiembre de 2018.
15 Laurie A. Johnson and Robert B. Olshansky, *After Great Disasters: How Six Countries Managed Community Recovery,* (Lincoln Institute of Land Policy: Cambridge, MA), 2016, pp. 8-9.

It is important for government bureaucrats, planners and others involved in the recovery process to keep in mind this anchoring effect as the recovery moves along. It is easy to forget in the aftermath of a major disaster that communities are complex systems and "different segments of [a] community will recover at different rates; [while] some may not recover at all."[16] The government, therefore, needs to manage expectations while listening and paying close attention to the needs of each community.

We are dealing with human beings that have a natural desire, in many cases, to return to "the way things used to be." That, unfortunately, may not be possible: the sheer physical devastation of a community may require its relocation elsewhere; old neighbors may have moved to other parts of Puerto Rico; the widow who used to live in the house down the street may have relocated to the mainland to live with one of her children; the convenience store down by the corner may have gone bankrupt; families may have separated; friendships lost; students transferred to other schools; little league teams disbanded; budding love affairs broken; businesses large and small closed forever, and so on and so forth.

The important point is that the recovery process is difficult, complex, and oftentimes painful. Puerto Rico is not a blank slate in which government officials get to move people, communities, and buildings, like so many Lego City structures and action figures:

> Disasters disrupt human settlements, and their effects extend over time. Contrary to popular belief, disasters are not simply instantaneous occurrences, but rather they are perturbations to urban systems that reflect longstanding environmental, economic and social issues. In turn, they exacerbate those issues in the years following the event.[17]

Thus, as we reach the one-year milestone after Hurricane María, the situation on the ground in Puerto Rico remains very complex and extremely fluid. **And while we should not downplay or dismiss the amount of work that has been done since September 21, 2017, we should also not underestimate the magnitude of the tasks that remain ahead.**

Funding the Reconstruction

As Puerto Rico looks to the future it is clear the rebuilding and reconstruction of the island will be a long, hard slog. The breadth and depth of the devastation is simply breathtaking. For example, an electric grid that took almost a half-century to build was essentially destroyed in less than 24 hours. And while the island's physical infrastructure was not in good shape before the storm, as several federal officials, including President Trump, have pointed out, it is also true that Hurricane María was one of the strongest storms on record and would have left massive destruction in its wake regardless of the state of Puerto Rico's infrastructure at the moment it struck.

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16 Id. at p. 9.

17 Robert Olshansky and Stephanie Chang, "Planning for Disaster Recovery: Emerging Research Needs and Challenges", in *Progress in Planning*, Vol. 72 (2009), p. 208.

Furthermore, if the condition of a jurisdiction's physical infrastructure prior to a natural disaster is deemed to be a controlling factor in determining eligibility for disaster relief funding, then most US states would not qualify for any significant disaster assistance at all. Every four years the American Society of Civil Engineers ("ASCE") publishes a Report Card for America's Infrastructure describing the condition and performance of the United States' infrastructure by assigning letter grades based on its physical condition and investments needed for its improvement. **In its most recent report, published in 2017, the ASCE gave an overall grade of D+ to American infrastructure, and the same grade to the US energy infrastructure in specific.** [18]

This fact does not justify or excuse the decades of negligent administration by Puerto Rico's elected officials or the lack of adequate maintenance to Puerto Rico's infrastructure, but it does serve to put in perspective the plight of Puerto Rico in light of the difficulties faced by many states and municipalities in the mainland as they all struggle to maintain their aging physical infrastructure in adequate shape.

Then, in addition to the magnitude of the physical damage, there is the issue of cost. FEMA, using a model designed by NOAA, estimates total damages to add up to approximately $90 billion in Puerto Rico and the USVI, while the government of Puerto Rico estimates total damages at around $139 billion.[19] As shown in the chart below, even if we use the lower estimate, Hurricane María would still be the third most destructive storm on record since 1980.

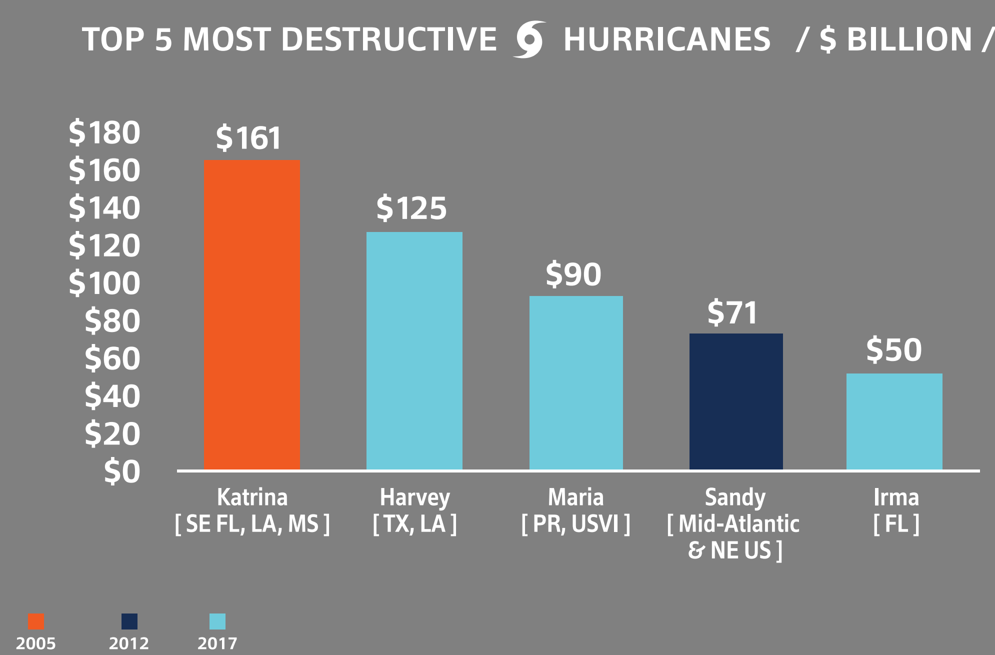

Figure 3: When adjusted for inflation, the 2017 hurricanes are among the top five costliest on record dating to 1980 [source: NOAA National Centers for Environmental Information].

Source: 2017 Hurricane Season FEMA After-Action Report

18 See the American Society of Civil Engineers 2017 Infrastructure Report Card, available at https://www.infrastructurereportcard.org.

19 The FEMA estimate is taken from the *2017 Hurricane Season FEMA After-Action Report,* (Washington, DC: July 12, 2018), p. 1; the estimate from the Government of Puerto Rico is set forth in *Transformation and Innovation in the Wake of Devastation,* supra, n. 2, p. 159.

Congress has appropriated approximately $120 billion for disaster relief spending related to the 2017 hurricanes and the California wildfires. Of that amount, approximately $105 billion, or 87%, were allocated to three agencies: (1) the Department of Homeland Security, mostly for FEMA ($50.7 billion); (2) the Department of Housing and Urban Development ($35.4 billion); and (3) the Department of Defense ($18.6 billion).[20]

At this point it would be useful, perhaps, to define some federal budget concepts before proceeding further with the analysis. First, an appropriation bill is "legislation that provides legal authority to obligate and spend money from the Treasury." Appropriation bills usually stipulate the amount, manner, and purpose of the expenditure items being authorized.

In the case of disaster relief, Congress can appropriate money in several ways, for example, it can appropriate money for a specific agency and let the agency decide how and where it will be spent, as is usually the case with appropriations for the Disaster Relief Fund ("DRF") administered by FEMA; or it can appropriate funds for a specific jurisdiction, as is the case with certain funds for the Community Development Block Grant-Disaster Relief program that have been appropriated specifically for Puerto Rico.

Second, an **allocation** occurs when Congress or an executive agency transfers funds from a global or parent appropriation account to fund a specific program, for example, when FEMA transfers funds from the global DRF to an account to fund expenditures specifically related to disaster relief activities in Puerto Rico.

Third, an **obligation** is a "definite commitment that creates a legal liability of the government for the payment of goods and services ordered or received." Finally, an **expenditure** "is an amount paid by federal agencies, by cash or cash equivalent, during the fiscal year to liquidate government obligations."[22]

In the case of Hurricane María there has been a lot of confusion, perhaps due to the failure to understand the difference among the four concepts set forth above, regarding the amount of resources made available to Puerto Rico for disaster relief and recovery. Estimates of funds **appropriated** for Puerto Rico disaster relief vary from $33 to $45 billion. This variation is due mostly to the treatment granted by different analysts to funds appropriated through the disaster supplemental bills but allocated to programs not directly related to disaster relief activities, for example, $4.8 billion in Medicaid funds; $1.27 billion in nutritional assistance; and several billion in Community Disaster Loans to replace lost tax revenues, the disbursement of which is subject to certain conditions.[23]

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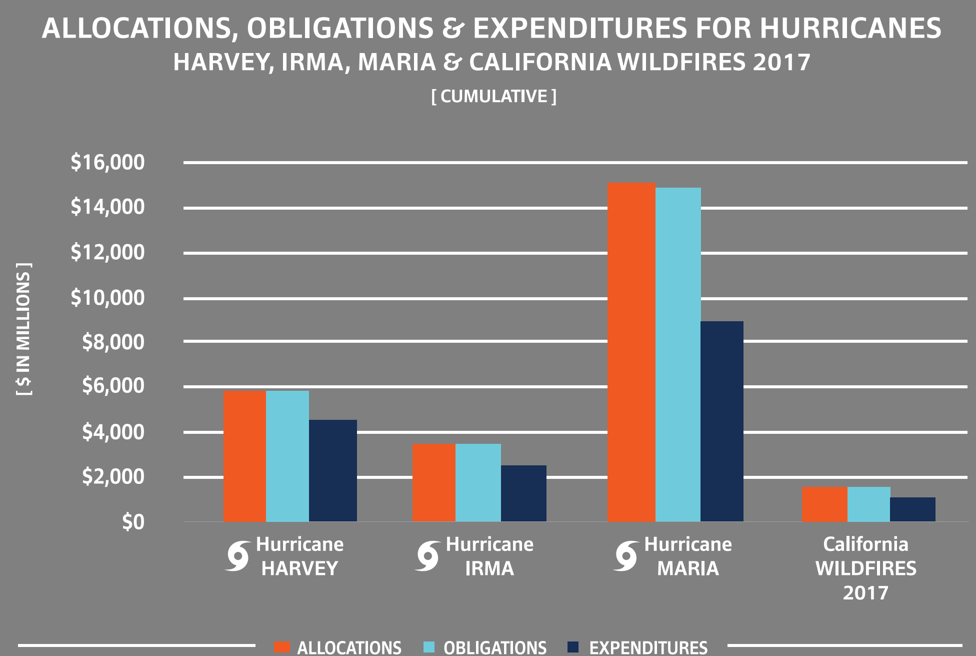
20 GAO, *2017 Hurricanes and Wildfires,* supra n. 1, p. 75.

21 Walter J. Oleszek, Mark J. Oleszek, Elizabeth Rybicki and Bill Heniff, Jr., *Congressional Procedures and the Policy Process,* (Sage/CQ Press: Los Angeles, CA, 2016), 10th edition, p. 436.

22 GAO, *2017 Hurricanes and Wildfires,* supra n. 1, p. 76.

23 In addition, some federal government agencies have received global appropriations for disaster relief but have not yet allocated funds among Florida, Puerto Rico, and Texas. This situation complicates the calculation of the amount of funds actually appropriated for Puerto Rico.

Given the noise in the appropriations data, perhaps it is more useful to look at allocations, obligations, and expenditures. While the DoD, the USACE, and the HUD all have received significant appropriations and have had an important role in the recovery, we will focus on FEMA, which has published the best available data on spending related to Hurricane María disaster relief activities through its monthly expenditure reports to Congress.



	HURRICANE HARVEY	HURRICANE IRMA	HURRICANE MARIA	CA WILDFIRES 2017	TOTAL
Allocations	$5,778	$3,293	$14,953	$1,443	$25,467
Obligations	$5,762	$3,285	$14,876	$1,435	$25,358
Expenditures	$4,495	$2,461	$8,913	$1,013	$16,882

Source of Financial Information is IFMIS. Total obligations include prior-year deobligations
Source: FEMA Disaster Relief Fund: Monthly Report, as of Agust 31, 2018

As shown in the chart above, and contrary to the mistaken popular perception, **in absolute terms** FEMA has allocated and obligated more funds from the DRF to activities related to Hurricane María than it has for all activities related to Hurricanes Harvey and Irma combined.

Where FEMA has lagged behind in the case of Hurricane María has been in the expenditure to obligation ratio. That is, FEMA has spent a greater proportion of the funding obligated for Hurricane Harvey (78%) and Hurricane Irma (75%) than for Hurricane María (60%). These data provides support to the reports that FEMA has been slow in actually disbursing funds in Puerto Rico, particularly those related to individual assistance, as we will see below.

The composition of expenditures is as important as the amount and rate of spending—perhaps even more so. The chart below, prepared by the GAO, shows the breakdown of DRF obligations by program and purpose for the 2017 hurricanes and the California wildfires.

FIGURE 16:

ACTUAL & PROJECTED DISASTER RELIEF FUND OBLIGATIONS FOR 2017 HURRICANES & CALIFORNIA WILDFIRES, BY PROGRAM & DISASTER

ACTUAL & PROJECTED OBLIGATIONS FOR EACH PROGRAM AS PERCENTAGES OF TOTAL OBLIGATIONS FOR THAT DISASTER [DOLLARS IN MILLIONS]

PROGRAM & PURPOSE	HURRICANE HARVEY	HURRICANE IRMA	HURRICANE MARIA	CA WILDFIRES
INDIVIDUAL ASSISTANCE Provides financial assistance directly to disaster victims for the necessary expenses and serious needs that cannot be met through insurance or low-interest Small Business Administration loans, such as temporary housing assistance, counseling, unemployment compensation, or medical expenses.	47% $2,969	32% $1,371	17% $2,966	4% $60
MISSION ASSIGNMENT Federal Emergency Management Administration [FEMA] work orders that direct another federal agency to utilize its authorities and the resources granted to it under federal law in support of direct assistance to state, local, tribal and territorial governments.	4% $264	12% $503	30% $5,233	60% $1,031
PUBLIC ASSISTANCE Provides financial assistance to state, tribal, territorial and local governments for activities including debris removal; emeegency protective measures; and the repair, replacement, or restoration of disaster-damaged, publicly-owned facilities.	20% $1,269	24% $1,039	33% $5,800	34% $586
ADMINISTRATION Costs for FEMAS's delivery of disaster assistance including the salary and travel costs for the disaster workforce, rent and security expenses associated with field operation locations, and supplies and information technology for field operation staff, among other things.	28% $1,806	31% $1,342	17% $3,040	3% $48
HAZARD MITIGATION Provides funds to state, tribal, territorial, and local governments, among other entities, to assist communities in implementing long-term measures to help reduce the potential risk of future damages to facilities.	1% $43	2% $68	2% $368	0% $0

Source : GAO analysis of FEMA data. / GAO-18-472

Note : These cost figures reflect obligations incurred as of April 30, 2018, and obligations projected through September 30, 2018. Mission assignment obligations include obligations for Urban Search & Rescue.

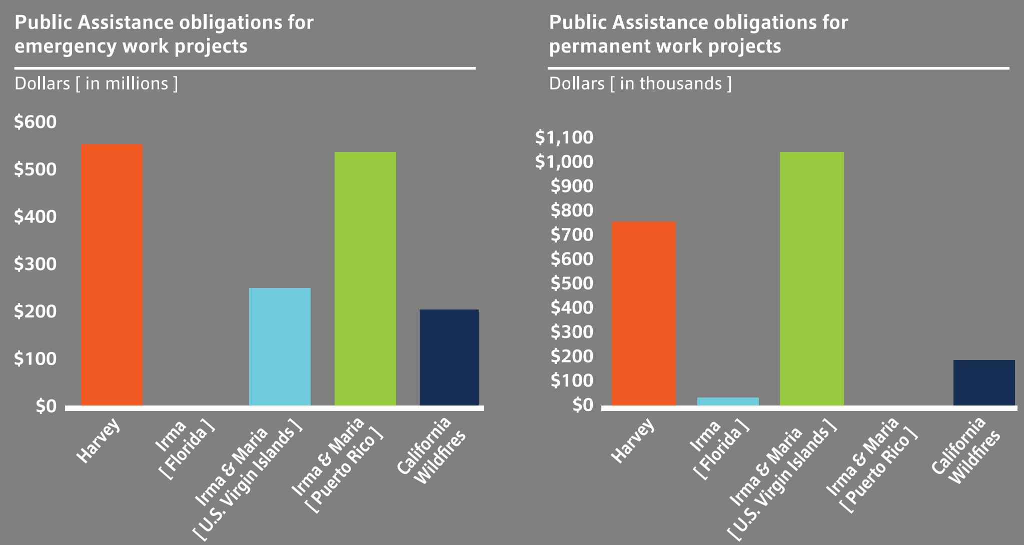
Source : GAO-18-472, 2017 Hurricanes & Wildfires

It is important to note that the portion of total funds obligated for individual assistance programs for Hurricane María's disaster victims (17%) is significantly lower than the portion obligated for individual assistance for the victims of Hurricane Harvey (47%) or Hurricane Irma (32%). The relatively low share of obligations is partly explained by the fact that many families in Puerto Rico do not have "clear" title to the property they inhabit. Without evidence of title they do not qualify for certain assistance programs, as evidenced by the high percentage of applications denied by FEMA.

It is also notable, as shown in the chart below, that spending on public assistance for permanent work projects in Puerto Rico is significantly lagging behind spending in other jurisdictions:

FIGURE 28:

PUBLIC ASSISTANCE OBLIGATIONS FOR EMERGENCY & PERMANENT WORK FOR EACH OF THE 2017 DISASTERS, AS OF FEBRUARY 2018



Source : Federal Emergency Management Agency's Emergency Management Mission Integrated Environment / GAO-18-472

Note : Emergency work projects include debris removal and emergency protective measures, such as flood fighting activities, evacuation and sheltering of disaster survivors, and providing medical care and transport. Permanent work projects include the repair of damaged facilities such as the repair of dirt roads.

Source : GAO-18-472, 2017 Hurricanes & Wildfires

According to the GAO this lag is largely due to the request by the government of Puerto Rico to use alternative procedures under Section 428 of the Stafford Act for all large Public Assistance permanent work projects. Alternative procedures for permanent work:

> …are designed to give jurisdictions more flexibility in determining how, where, and what to rebuild, particularly after incurring significant damage. Applicants may choose to combine multiple critical facilities and rebuild them in a manner that makes them less likely to incur future disaster damages. In 2013 FEMA began a pilot program to utilize the alternative procedures for debris removal and permanent work projects in the recovery from Hurricane Sandy in New York and New Jersey, as of April 2018, FEMA reported that 29 percent of New York's permanent work projects are under the alternate procedures—approximately $8.6 billion. **However, no state or territory has used alternative procedures for 100 percent of their permanent work projects. According to Puerto Rico's Draft Recovery Plan issued in July 2018, the Commonwealth estimated costs for permanent work projects ranges from $26.7 billion to $37.4 billion.** [24]

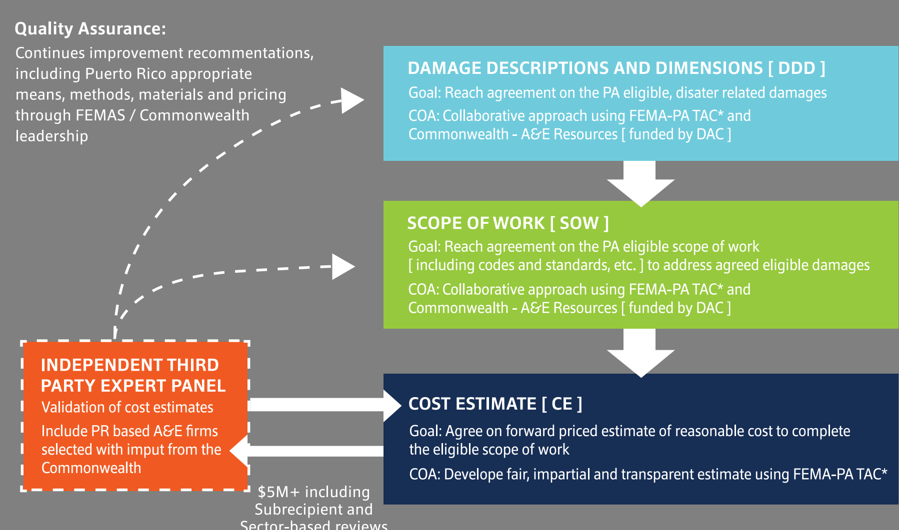
[24] GAO, *2017 Hurricanes and Wildfires,* supra n. 1., at p. 18 (emphasis by the author).

Exercising the option to use Section 428 alternative procedures for all large Public Assistance permanent work projects means that the recovery process in Puerto Rico will flow according to a different schedule than that applicable to other jurisdictions and entails both costs and benefits for the island:

> According to FEMA officials, in the U.S. Virgin Islands and in the states, participation in the pilot program for permanent work alternative procedures will occur for select projects, by applicant request…They added that this approach will provide the flexibility Puerto Rico requires to achieve its post-disaster recovery goals while limiting risk to the federal government… **However, it is unclear whether such flexibilities will eliminate other challenges associated with the PA program, such as reducing delays from challenges to eligibility determinations and supporting a timely recovery…** although the front end of the PA alternative procedures pilot program may take longer than the standard PA procedures, once project formulation (including any identified hazard mitigation measures) and cost agreements are made, the entire sum of the agreed-upon funding level is obligated and made available to the recipient at a quicker rate due to the entire amount of the project being obligated from the outset. [Internal footnotes omitted].[25]

For Puerto Rico, the advantage of using these alternative procedures is that federal money will be obligated in full once there is agreement between the parties on the cost estimate for a particular project. The downside is that if the project is over-budget, it will be up to the government of Puerto Rico, which is undergoing a bankruptcy process, to fund the cost overrun. However, if there are any savings, the government of Puerto Rico could use those savings for other recovery-related activities. The advantage for the federal government is that it limits its exposure to the pre-agreed cost estimate amount.

FIGURE 1:
COLLABORATIVE PROJECT FORMULATION PROCESS



* PA TAC in this role is classified as FEMA administrative costs and is not cost shared [10%] with the Commomwealth
COA = Course of Action; DAC = Direct Administrative Cost; A&E = Architecture and Engineering;
PA TAC = Public Assistance Technical Assistance Contractors

Source : FEMA, Guide for Permanent Work in Puerto Rico Public Assistance Alternative Procedures [Section 428]

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25 Id. at p. 56 (emphasis by the author). On April 11, 2018, FEMA issued the *Public Assistance Alternative Procedures (Section 428) Guide for Permanent Work* to guide recovery from Hurricane María in Puerto Rico after the Puerto Rico governor requested the use of alternative procedures for all large permanent work projects due to the unique circumstances in the territory (i.e., the magnitude of impacts and Puerto Rico's fiscal circumstances).

It is important to note that the process to agree on cost estimates could be fraught with complexity and time consuming. As shown in the chart below, FEMA estimates that the time for agreeing on a fixed estimate may take as long as eighteen months *per project*:

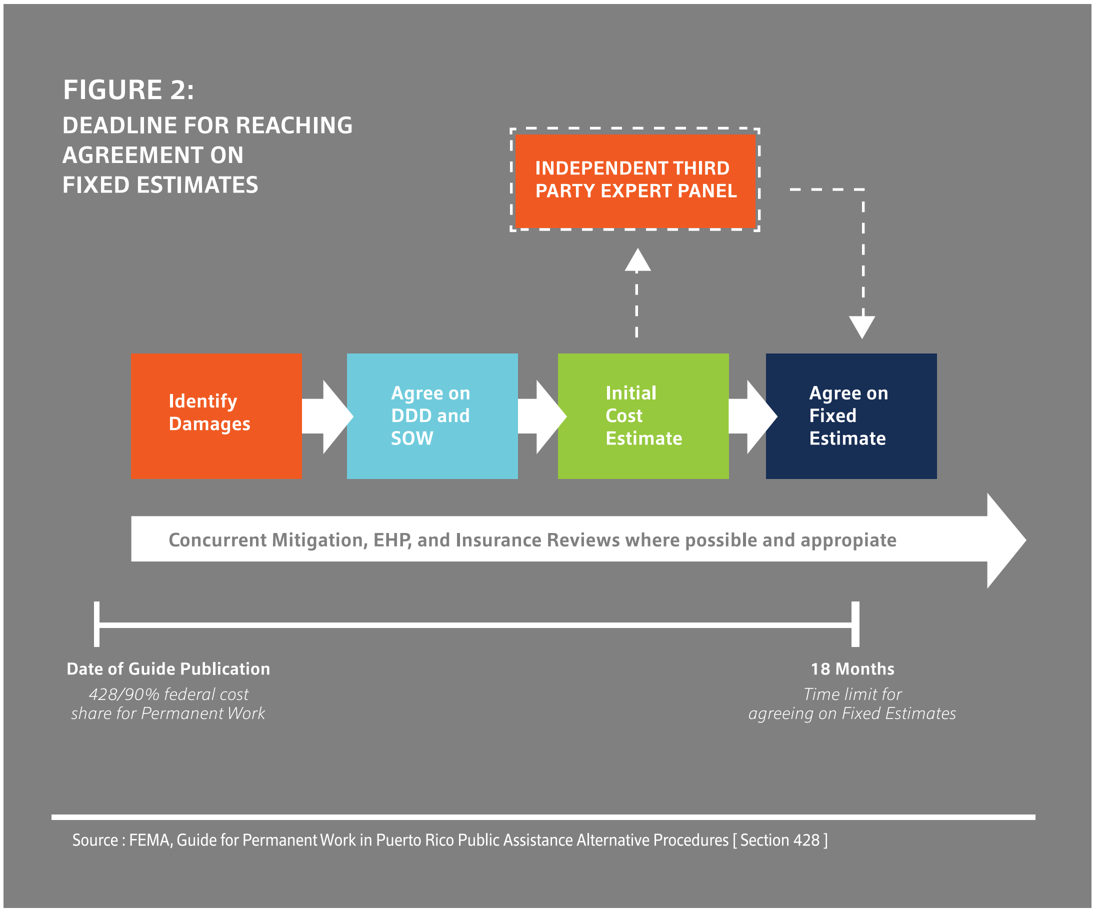

FIGURE 2:
DEADLINE FOR REACHING AGREEMENT ON FIXED ESTIMATES

Source : FEMA, Guide for Permanent Work in Puerto Rico Public Assistance Alternative Procedures [Section 428]

It remains to be seen how the application of Section 428 alternative procedures will affect the awarding of contracts among and between mainland and Puerto Rico-based firms. On one hand, Section 428 may give an advantage to US-based firms since they may have more experience and resources to qualify for projects awarded according to these procedures. On the other hand, the time schedule embedded in and the flexibility afforded by Section 428 may provide local firms with an opportunity to obtain a larger share of a federal contract they may otherwise not have had.

The amount of money obligated to local firms is important to the recovery, as federal spending would provide a stimulus to the Puerto Rican economy as the funds flow through the island's economy. My colleagues at the Center for a New Economy recently published an analysis of federal procurement related to the recovery process in Puerto Rico, which found that notwithstanding federal statutory requirements to hire local firms, only ten percent of federal contracting related to the recovery in Puerto Rico so far has been awarded to local firms.[26]

In sum, a year after María, federal disaster relief funding is flowing to Puerto Rico but at a slower pace than many, including government officials, would like and the total amount appropriated or allocated to Puerto Rico so far is significantly below FEMA's own assessment of the $90 billion needed for reconstruction.[27]

Reconstruction Challenges

In addition to the magnitude of task at hand and the difficulties in obtaining adequate funding, Puerto Rico faces other challenges to its reconstruction, some of which are unique to the island, while others are common to most post-disaster situations.

Beginning with the former, it is obvious that Puerto Rico's subordinate, some would say colonial, political status has been an obstacle to the recovery process. Neither a sovereign country nor a state of the union, Puerto Rico has no authority to negotiate international treaties, no access to emergency financing from multilateral institutions, no monetary policy instruments, limited fiscal policy tools, nominal representation in Congress, and the U.S. Supreme Court has determined it is constitutionally permissible for Congress to discriminate against Puerto Rico in the application of federal programs as long as there exists a "rational basis" for doing so.

The legal basis for Puerto Rico's peculiar political status is Article IV, Section 3 of the Constitution of the United States (known as the "Territories Clause"), which grants Congress the power to dispose of and make all needful rules and regulations for the territories. The US Supreme Court first interpreted this clause in relation to Puerto Rico in the Insular Cases a line of pre-civil rights cases that created a distinction between "incorporated territories" (that is, territories meant to become states of the union) and "unincorporated territories" (that is, territories not destined to become part of the union).

Unfortunately, a full analysis of the political relationship between the United States and Puerto Rico is beyond the scope of this paper. The important points for our purposes are:

> (1) The Insular Cases, the first of which was decided shortly after the Plessy v. Ferguson decision validated the constitutionality of the Jim Crow "separate but equal" regime of racial discrimination, are still considered valid and applicable jurisprudence by the US Supreme Court;
>
> (2) these cases held that only the "fundamental" sections of the US Constitution applied to unincorporated territories because, as the Court in Downes v. Bidwell, 182 U.S. 244 (1901) put it: Puerto Ricans were an "uncivilized race" unfit for "the administration of government and justice, according to Anglo-Saxon principles", among other explicitly racist policy rationales that would shock the conscience of most, though perhaps not all, Americans today; and
>
> (3) after 120 years of US domination, Puerto Rico remains in a state of political and legal limbo, a kind of upside-down world, where the doctrine of "separate and unequal" is the law of the land; the principle of "one man, one vote" becomes "one man, no vote"; and open discrimination against a "discrete and insular minority" is the law of the land.[28]

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26 Deepak Lamba-Nieves and Raul Santiago-Bartolomei, *Transforming the Recovery into Locally-led Growth: Federal Contracting in the Post-Disaster Period,* Center for a New Economy, September 2018.

27 The situation with respect to Community Development Block Grant for Disaster Recovery ("CDBG-DR") funds is quite similar. On February 9, 2018, HUD issued a notice setting forth the guidelines for the use of some $1.5 billion of CDBG-DR funds (See Notice 83 FR 5844) and the action plan required by those regulations was not approved until August 2018. Then on August 14, 2018, HUD issued another notice for the utilization of an additional $8.2 billion of CDBG-DR funds (See Notice 83 FR 40314). The government of Puerto Rico is currently working on the action plan for the use of those $8.2 billion.

28 See, for example, Juan R. Torruella, The Supreme Court and Puerto Rico: The Doctrine of Separate and Unequal, (Editorial de la Universidad de Puerto Rico: Rio Piedras, PR, 1988); José Trías Monge, Puerto Rico: The Trials of the Oldest Colony in the World, (Yale University Press: New Haven, CT, 1997); and Efrén Rivera Ramos, American Colonialism in Puerto Rico: The Judicial and Social Legacy, (Markus Wiener Publishers: Princeton, NJ, 2009).

Given this ambiguous and frankly odd state of affairs, it should not be surprising that some federal officials, due to indifference, ignorance, or perhaps outright bigotry, may not have acted with the diligence required to provide adequate assistance to Puerto Rico before, during, and after Hurricane María.

Furthermore, lack of full representation in Congress presents an obstacle to obtaining funding for disaster recovery activities in Puerto Rico. This is especially worrisome given that the government's reconstruction plan was submitted to Congress without identifying the source of funding for $45 billion, out of $139 billion in total spending, ostensibly needed for the reconstruction.

Second, in June 2016, Congress, acting pursuant to the Territories Clause, enacted the Puerto Rico Oversight, Management and Economic Stability Act ("PROMESA"). This law created a territorial bankruptcy regime that consists, broadly speaking of two elements: (1) the establishment of an oversight board with ample powers to impose fiscal discipline on the territory, in this case Puerto Rico, and (2) a court-supervised process for the orderly adjustment of the territory's debts and obligations. This two-pronged approach to territorial bankruptcy is what Judge Torruella calls the "PROMESA experiment" in a recent Harvard Law Review article.[29] A legal experiment inflicted on the Puerto Rican body politic that is possible only because of Puerto Rico's territorial status.

In general, the origins of the PROMESA experiment can be traced to the establishment of financial control boards by state governments to manage financial crises at the city, municipal, and county level, most notably in the cases of the City of New York, Philadelphia, Washington, DC and Detroit, among other jurisdictions.

These boards usually take over the fiscal and financial policymaking functions of cities or municipalities, with the objective of making the "politically difficult decisions" necessary to get out of the crisis and that presumably democratically elected politicians were unwilling or unable to make. Needless to say, these boards are extremely unpopular and are frequently accused of antidemocratic practices.

In specific terms, we can point to the writings of two legal scholars: Clayton Gillette, of the New York University School of Law and David Skeel, of the University of Pennsylvania Law School, and currently a member of the Financial Oversight and Management Board for Puerto Rico.

In a paper appropriately entitled, Dictatorships for Democracy: Takeovers of Financially Failed Cities, published in 2014 Professor Gillette argues that

> Takeover boards with near-dictatorial powers, including those that coerce or displace the authority of elected local officials, may be the most effective means of addressing the shortfalls and consequences of normal politics. The least contentious models of takeover boards allow them to demand compliance with financial plans and budgets designed outside the usual process of local governance. A substantial literature suggests that particular forms of municipal governance can promote fiscal stability. The more contentious model that I propose here seeks to take advantage

29 Juan R. Torruella, Commentary, *Why Puerto Rico Does Not Need Further Experimentation with its Future: A Reply to the Notion of "Territorial Federalism,"* 131 Harvard Law Review Forum, Vol. 65 (2018), p. 93.

> of that literature, and thus would permit extensive takeover board restructuring of governance to extricate the locality from an entrenched pattern of costly and defragmented decision making. The increased democratic deficit created by such authority certainly presents certain risks, but the temporal limitations on takeover boards and the possibility of city charter amendment means that any restructuring must ultimately receive at least implicit approval of local residents.[30]

This was followed by the joint publication with Professor Skeel of Governance Reform and the Judicial Role in Municipal Bankruptcy, in which the authors argue that municipal bankruptcy proceedings should not be limited to debt restructuring but should also reform the debtor's governance structure, given that, in their view, fiscal distress is usually a product of governance dysfunction. Furthermore, they argue that just like corporate governance reform is an important component of a corporate restructuring under Chapter 11 of the Bankruptcy Code, it is even more important in the case of a troubled city or municipality, since a distressed city "cannot be liquidated or its ownership rights transferred from one group of stakeholders to another."[31]

Finally, on March 15, 2016 they published a white paper entitled "A Two-Step Plan for Puerto Rico", which outlined the main elements of what eventually came to be known as PROMESA.[32] According to Professor Skeel in an interview with The Nation magazine, what Congress "did looks quite a bit like what we were proposing."[33]

Among other things, PROMESA imposes a strong fiscal oversight and management board ("FOMB") over the democratically elected government of Puerto Rico. The oversight board has broad powers over Puerto Rico's fiscal and economic policies, including the power, under certain circumstances, to impose a five-year fiscal plan, have the ultimate say over annual budgets, require the government of Puerto Rico to implement its recommendations, even if the government has previously objected to them, and has the authority to take such actions as it may deem necessary to prevent the enforcement or execution of certain contracts, executive orders, and even certain laws or regulations."[34]

In addition, when Congress enacted the Further Additional Supplemental Appropriations for Disaster Relief Requirements Act, in February 2018 it granted the FOMB additional authority regarding the oversight of funds appropriated for the recovery process, including the authority to review and certify the recovery plan designed by the Puerto Rican government and the power to review contracts in excess of $10,000,000 related to the recovery. **This grant of additional power presents a challenge to the recovery because (1) it bestows on an unelected body of technocrats the right to intervene in the Puerto Rico recovery process; (2) the relationship between the government of Puerto Rico and the FOMB has been antagonistic; and (3) the FOMB does not have the capabilities, expertise, or resources to successfully execute this Congressional mandate.**

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30 Clayton P. Gillette, *Dictatorships for Democracy: Takeovers of Financially Failed Cities,* (2014), *New York University Law and Economics Working Papers,* Paper 369, p. 80-81.

31 Clayton P. Gillette and David A. Skeel, *Governance Reform and the Judicial Role in Municipal Bankruptcy,* Yale Law Journal, Vol. 125: 1150-1237, 2016.

32 Clayton P. Gillette and David A. Skeel, *"A Two-Step Plan for Puerto Rico"* (2016). *Faculty Scholarship.* Paper 1621. http://scholarship.law.upenn.edu/faculty_scholarship/1621.

33 Simon Davis-Cohen, "Meet the Legal Theorists Behind the Financial Takeover of Puerto Rico", *The Nation,* October 31, 2017, https//www.thenation.com/article/meet-the-legal-theorists-behind-the-financial-takeover-of-puerto-rico/.

34 The crypto-fascist concept of suspending the rule of law or the normal processes of democracy *in order to save democracy from itself* is not quite new. See, for example, the German legal scholar Carl Schmitt's book from 1921, *Dictatorship: From the Origin of the Modern Concept of Sovereignty to Proletarian Class Struggle,* (Polity Press: Cambridge, UK, 2018); and Giorgio Agamben, *State of Exception,* (University of Chicago Press, Chicago, Illinois, 2005), part of his multi-volume *Homo Sacer* series on the political history of the West—from Athens to Auschwitz.

To complicate matters further, the government of Puerto Rico filed for bankruptcy under the process set up by PROMESA in May 2017. This filing presents several challenges to the recovery process. First, the unelected FOMB represents the government of Puerto Rico in the bankruptcy process and is required to certify both the government's Fiscal Plan, its annual budget, and the eventual Plan of Adjustment with Puerto Rico's creditors.

Second, to the best of our knowledge, Puerto Rico is the only jurisdiction we have found to simultaneously go through (a) a bankruptcy procedure supervised by a court; (b) a twelve-year economic recession; (c) a fiscal and debt crisis; (d) the imposition of an unelected oversight board; and (e) a large-scale recovery process after a massive natural disaster.

Finally, the FOMB favors the imposition of austerity policies that weaken the capabilities of the government of Puerto Rico to execute complicated public policies, precisely at a time when it needs to implement a complex disaster recovery program in close coordination with the federal government.

This concatenation of unfortunate events raises extremely complex policy issues and questions. For example, how can the government of Puerto Rico prevent bondholders and other speculators from benefiting from the funding appropriated for the recovery? Could FEMA or any other federal agency require or impose stricter controls on the obligation and expenditure of disaster relief funds because Puerto Rico is bankrupt?

Is it ever appropriate to implement austerity policies during a disaster recovery process that is by its very nature fraught with complexity and uncertainty? At which point in the contracting process can the FOMB intervene to "review" contracts? These and other equally difficult questions linger in the background as Puerto Rico moves along the disaster recovery and reconstruction path.

In addition to those challenges unique to Puerto Rico, the island faces other types of challenges common to most if not all post-disaster jurisdictions.

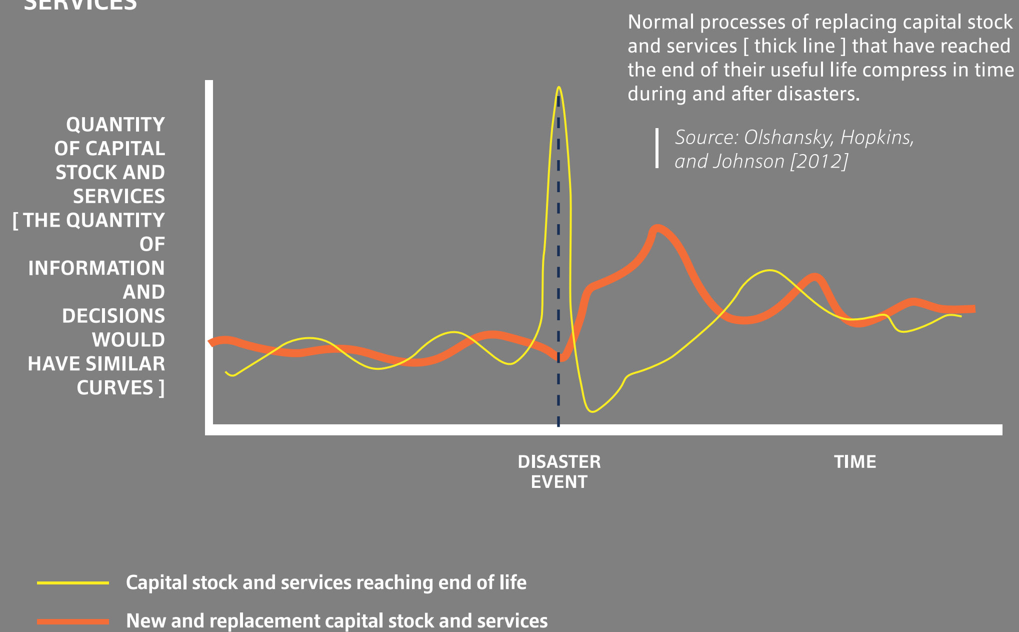
First, according to Robert Olshansky (and others) the key to understanding the difficulties associated with post-disaster recovery is that the planning process for recovery occurs under conditions of "time compression". This means that

> Post-disaster planning is a high-speed version of normal planning, proceeding faster than the speed of flow of the most basic information upon which planning normally depends. This means that none of the participants quite knows what anyone else is doing, nor how their own activity fits into the big picture (because no one yet understands the big picture). Under these circumstances, citizen involvement is particularly challenging to accomplish. So, planners are faced with a dilemma: we know that citizen involvement is crucial to the success of recovery, but we have little guidance for how to adapt current knowledge about participatory processes to the high- speed post-disaster environment.[35]

35 Olshansky and Chang, Planning for Disaster Recovery: Emerging Research Needs and Challenges, supra n. 17, at p. 208.

Furthermore, as shown in the chart below, “time compresses unevenly across various physical, social, economic, and institutional systems in communities. The world of post- disaster recovery becomes a different world, where the community does not function as it does in normal times or in normal places.”[36]

FIGURE 2:
IMPACTS OF DISASTERS ON CAPITAL STOCK AND SERVICES



Source: Johnson and Olshansky, *After Great Disasters: How Six Countries Managed Community Recovery*

Time compression and community dysfunction, in turn, generate economic, political, and social pressures for the government to commence the recovery process as soon as possible, oftentimes, as mentioned above, without enough information, sufficient planning or adequate consultation with the affected communities. In most instances, governments try to fill this information and capability vacuum by hiring large multinational consulting firms that offer ready-made/boilerplate solutions.

The policy problem arises when the consultants’ canned solutions inevitably collide with the reality on the ground, the politicians proceed to ignore them, and instead engage in a delicate policy minuet. Innes and Booher find that in most situations politicians and bureaucrats use the work of such consultants to “provide cover to the political leadership, which choose projects designed to spread the wealth among constituencies.”[37]

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36 Johnson and Olshansky, *After Great Disasters: How Six Countries Managed Community Recovery*, supra n. 15, at p. 11.

37 Judith E. Innes and David E. Booher, *Planning with Complexity: An introduction to Collaborative Rationality for Public Policy*, (Routledge: London, UK, 2018), 2nd edition, p. 20.

Thus, a strange dynamic develops in which consultants pretend to come up with "the solutions" and politicians pretend to "pay attention" to them. Conveniently, the consultants avoid blame for policies that did not follow their advice; while politicians cannot be blamed for any failed policies because they used "expert advice." The losers, of course, are the disaster victims and their communities, which get either: (a) big shiny projects that do not address their real needs; or (b) nothing at all, because they did not belong to a politically favored constituency. In both cases, long-standing community problems are left unaddressed and the recovery lags.

Puerto Rico will also have to address issues related to a variation of the "resource curse" during the recovery process. As often happens after natural disasters, a multiplicity of foundations and NGOs have descended upon Puerto Rico. Most of them come with the best intentions and provide valuable expertise and monetary resources. However, some, a small minority perhaps, are solely interested in obtaining a cut of the recovery dollars, and could care less about Puerto Rico and its people. This is not to argue in favor of rejecting all foundation/NGO assistance, but rather to warn government officials, mayors, and community leaders about the risks of partnering with the wrong organization. Roles and responsibilities should be clearly delineated, preferably in writing, before entering into a partnership with a mainland or multinational NGO.

Furthermore, even in the best of cases, it is necessary to carefully coordinate the work of "third-sector" organizations, for several reasons.

First, NGOs, while helpful in the short term, seldomly provide structural solutions to long-standing problems that existed prior to a disaster and that only became noticed by the public at large during the post-disaster period. In this sense, their help may just serve to perpetuate poverty, marginalization, and discriminatory policies in already in place before the disaster.

Second, oftentimes NGOs bring their own team of experts and volunteer workers, resulting in little or no knowledge or skill transfers to the local communities.

Finally, no matter how well-intentioned or good their reputation may be, most NGOs have little or no knowledge of local conditions. Their knowledge curve could be steep and this lack of knowledge collides with pressures to get help on the ground as soon as possible. The result is often, in more cases than not, that NGO interventions worsen the situation on the ground, instead of improving it, as presumably intended.

Again, the point is not to reject all NGO help, many of these organizations, after all, have proven to be helpful in many difficult post-disaster situations. Rather, the point is to be careful when designing and structuring collaboration agreements with these organizations in order to avoid duplication of efforts, the implementation of half-baked solutions, and unintended material adverse effects on local communities.

Conclusion

As Puerto Ricans mark the first year after Hurricane María's landfall, we pause to mourn our dead and take stock of all the hard work we have done since then. As we look to the future, we seek to understand the magnitude of the task at hand and the challenges that lie ahead. Obtaining adequate funding for the reconstruction effort using largely untested alternative procedures; managing recovery activities in a colonial environment, under the supervision of an often indifferent federal government and an unelected oversight board, while the island's government is undergoing a bankruptcy process; and planning for the recovery in compressed time in an extremely complex policy environment, while the post-disaster vultures circle ominously above, are some of the challenges we face ahead. But, as we look forward, perhaps the one, single task that remains Puerto Rico's most important unfinished business is the reconstruction of those social, family, and community ties broken by Hurricane María.