

## **"Two Cities, One Storm: A Comparative Analysis of Post-Sandy Resiliency Planning in Hoboken and Jersey City"**

Shubahm Adhikari  
Student, Saint Peter's University  
Department of Political Science

Oliver Bellomi  
Student, Saint Peter's University  
Department of Political Science

Dr. Alexander Mirescu  
Assistant Professor, Saint Peter's University  
Department of Political Science  
Jersey City, New Jersey  
amirescu@saintpeters.edu

### **Abstract**

In October 2012, Hurricane Sandy wreaked havoc on the New York City-metro area sister cities of Hoboken and Jersey City, New Jersey. While similarly affected by the super storm, post-Sandy engagement in resiliency planning, risk assessment and lessons learned have been surprisingly divergent. Almost immediately after Hurricane Sandy, Hoboken's political leadership began to robustly seek out assessment and resiliency mechanisms, in an effort to more quickly recover from the severe wind and flood damage and initiate a set of policy directives toward better future preparedness. By virtue of its larger geographic area and population size, Jersey City was statistically more negatively affected by the storm. However, post-Sandy resiliency planning has yet to develop into a significant component of local governance in Jersey City. Through qualitative comparative analysis of these two highly similar empirical cases, this paper seeks to explain that conditions, such as local elections, information-sharing and pre-disaster planning, led to variegated responses.

**Keywords:** Hurricane Sandy - Disaster Risk Reduction - Resiliency Planning - Local Governance Communities of Practice (CoP)

## Introduction

The impact of Hurricane Sandy demonstrated that political, geographic and socio-economic similarities, as well as levels of damage and financial losses, in two highly linked empirical cases do not guarantee for identical results in post-disaster resiliency planning. This study seeks to explain why two metro New York/New Jersey urban centres, Hoboken and Jersey City, display divergent policy approaches in the areas of disaster preparedness, resiliency planning and risk assessment, despite sharing a long list of similarities, such as a common border, party affiliation, intertwined economies, forms of vulnerability and a location on the Hudson River in the metro New York region. All of this would suggest that these two municipalities would integrate common forms of engagement in the adoption and integration of urban resiliency mechanisms into their disaster preparedness frameworks. Hoboken has forged ahead as one the most progressive and forward-thinking American municipality, while Jersey City has yet to embrace any measures in disaster risk reduction. This article seeks to answer the question as to why such variation took place in these two cases?

In recent years, the growing literature on disaster risk reduction (DRR) has increasingly stressed the importance of mechanisms for expanded information sharing, the exchange of lessons learned and the genesis and benefits of local, national and global Communities of Practice (COP) as a means to enhance post-event resiliency.<sup>1</sup> This important sub-sector of DRR focuses on ensuring “the effective interaction between governmental institutions, local-level stakeholders, NGOs and the private sector as an essential characteristic in a world marked by volatility, ambiguity, complexity and frequently rapid change.”<sup>2</sup> The divergent outcomes of the two empirical cases under investigation here highlight the importance and the persistent weakness in information sharing in two bordering urban centres that share a number of striking similarities.

However, there is an additional element to COP that is reflected in the research presented here: the effects at the local-level when municipalities join international information sharing communities. Mayor Dawn Zimmer of Hoboken agreed to join the United Nations International Strategy for Disaster Reduction’s (hereafter, UNISDR), “Making Cities Resilient” campaign, whereas, despite having met with the UN body, neither Jersey City Mayor Jeremiah Healy nor his successor have agreed not to sign on to the Resilient Cities initiative. Hence, this research project seeks to offer a contribution to our understanding of differences in the adoption of local-level DRR mechanisms. This article will demonstrate that local politics does not take place in a vacuum free of external actors and global influence.

## Methodological Approach

The authors have adopted a most-similar case comparative framework, whereby two highly similar cases, confronted with the same intervening variable (Hurricane Sandy), bifurcate most visibly along the dependent variable (variation in resiliency planning). Using qualitative data derived from secondary research, bolstered with limited quantitative analysis and interview materials, we paint a picture of two similar cities that have taken starkly different paths in the aftermath of Super Storm Sandy. One primary conclusion drawn from this study is that even the costliest weather event to strike the New York/New Jersey metro area has not prompted increased information sharing due largely to factors stemming from local governmental practices. In the end, all politics is still local and nowhere is this more visible than in the cases of Jersey City and Hoboken’s reaction to post-Sandy resiliency efforts.

One advantage of engaging in local-level qualitative comparative analysis is the multiplicity of information drawn from several sources that assists the observer in generating a narrative that explains how constraints, influences, catalysing moments, and processes produce the results they do. Hence, from the outset, the authors decided upon a methodological approach that would best expose

---

<sup>1</sup> Randolph Kent, “Communities of Practice in a Futures Context.” *Natural Hazards Informer: Communities of Practice and Disaster Risk Reduction*. Ed. Juan Pablo Sarmiento. No. 5 (July 2012): 10.

<sup>2</sup> *Ibid*, 10.

the variegated paths taken by Jersey City and Hoboken. Data was drawn from a combination of primary and secondary sources from the local and New York-metro area based media landscape, municipal documents and interviews conducted with local leaders, members of the business community and local residents. Additionally, some quantitative data was drawn from the 2013 Hudson County census and processed to expose important conditions that confront both cases.

While the current body of DRR literature tends to contain a significant amount of economics- and risks-based quantitative analysis, we have opted for a more narrative-rich, qualitatively based explanation about which conditions led Hoboken down a trajectory of considerably higher and consistent post-Sandy resiliency engagement and which conditions prevented local leaders to imitate its closest geographic neighbours. Research was gathered over the course of 2013-2014 in two primary phases: the first phase concentrated on finding data on Hoboken, which was then followed by a period of empirical focus on the available data on Jersey City. Throughout early 2014, the collected data was processed into the narrative below.

## **Analytical Approach**

With most comparative projects arises the question of case selection and relevance. Why a study of Hoboken and Jersey City? The two cases are strikingly similar: both cities are located directly on the Upper New York Bay and the Lower Hudson River basin with significant parts of both cities exposed to regularly occurring natural hazard events, namely flooding. Indeed, both cities share a highly vulnerable waterfront that had been breached before during Hurricane Irene in August 2011. While Jersey City is larger in geographic size and population, both cities share a highly intertwined local economy, common transit systems (the PATH underground, NJ Bus Transit, Hudson Light Rail tram) and a shared waterfront that was recently made contiguous through a joint effort by both municipalities. Moreover, unlike the more southerly located Bayonne, Jersey City and Hoboken have experienced massive advances in commercial, economic and real estate development characterized by large-scale housing and corporate building projects.

Both urban centres are also deeply connected to the wider economic zone of New York City in terms of labour, finance, culture and transportation. Indeed, all three cities are inextricably linked through a decades old and still continuing expansion of Wall Street banks, investment houses, back office functions and the corporate centres of major financial players, which straddle the Hudson River. Additionally, local-level businesses have expanded across the municipal border: Hoboken-based businesses have established an increasing number of branches in Jersey City, while Jersey City residents contribute significantly to Hoboken’s local economy. While some economic nodes exist away from the Hudson River, financial, business and governmental interests in both empirical cases tend to be heavily concentrated in the considerably more vulnerable Hudson River waterfront zone, where many structures, some essential in emergency response, are located below two metres over sea level.

Finally, both cities have historically been governed by the Democratic Party of Hudson County, often times (though not exclusively) with one mayor supporting the candidacy of his/her Democratic counterpart in the neighbouring city. All this suggests that after such a devastating event such as Hurricane Sandy, municipal cooperation at the level of preparedness and resiliency should have been a commonly shared target. In the face of such overwhelming similarities in vulnerability, economic risk and geography, this article attempts to explain which conditions led to such stark variance in shared or harmonised resiliency planning.

## **Research Setting and Background: Hurricane Sandy - Before and After**

Before Hurricane Sandy made landfall south of the New York metro region in New Jersey in October 2012, both cities had experienced extensive flooding, albeit well below the levels of Sandy, in the aftermath of Hurricane Irene in August 2011. Generally, both municipalities made few efforts beyond a limited strengthening of disaster risk management (DRM) capacities, which typically included “strategies and improved coping mechanisms in an effort to lessen the adverse impacts of

hazards and the possibility of disaster.”<sup>3</sup> Since Irene was largely considered a “manageable” weather event and failed to overwhelm pre-existing levels of preparedness, the introduction of any systematic resiliency planning *ex post facto* did not become a component. Indeed, after Irene, few attempts were made by either Jersey City’s Mayor Healy or Hoboken Mayor Dawn Zimmer to conduct an extensive DRR-based assessment on the vulnerability of property, people and exposure to potential hazards.<sup>4</sup> Local leaders had there left residual risk factors largely unattended.

The lack of initial post-Irene DRR policy engagement becomes yet more glaring when one considers the latent risk driver of geography: both municipalities share a common vulnerability to extreme weather events by virtue of their location on the Hudson River and New York Bay. Jersey City’s Hudson waterfront and downtown districts are not only located at only a feet above sea level, but the concentration of key political offices, hospitals and emergency services, its economic capacity, “Wall Street West” financial institutions and numerous commercial zones drives this vulnerability. Similarly, Hoboken ranks at the top for the largest population exposed to flood risk: 53% of the low-lying city’s population of 50,000 residents lives below five feet above the local high tide line with much of the city’s vital infrastructure at significant risk.<sup>5</sup> One hundred percent of Hoboken’s fire and EMS stations, hospitals, libraries, community centres, rail and ferry stations, sewage plants and major hazardous waste sites are located below the five feet mark with more than 50% of the city’s houses of worship, major roads and schools at similar elevations.<sup>6</sup>

However, when it struck the region on 28-29 October 2012, Hurricane Sandy would completely clear the slate, demonstratively exposing deep levels of unpreparedness and vulnerability in both cities. For the purpose of this study Hurricane Sandy presents us with a significant chronological point of departure, a *tabula rasa*, against which future policy could expectedly be measured and assessed. More importantly, Hurricane Sandy becomes the lens through which this study observes the introduction or lack of resiliency policy at the local level.

Unlike Hurricane Irene, Super Storm Sandy quickly and thoroughly overwhelmed all local capacities of both preparedness and humanitarian response. Many sections of Hoboken and Jersey City were devastated by the heavy rains, high winds, flooding and storm surge, all which led to the Hudson River overflowing its banks and inundating the river-front districts.<sup>7</sup> The effects of the storm knocked out electrical and communication lines and halted all mass transit, rail and subway system, contributing to metro region’s cumulative transit damages of nearly \$7 billion USD.<sup>8</sup> Next blown power stations, large-scale blackouts, overflowing waste water facilities, most of the crucial traffic arteries in and out of the area were rendered completely inaccessible.<sup>9</sup> In the wake of such large scale damage, local government leaders were left with dealing with the effects of the storm and asking how urban be better prepared for the future.

---

<sup>3</sup> Neville Wright, “Small Island Developing States, disaster risk management, disaster risk reduction, climate change adaptation and tourism,” Background Paper prepared for the Global Assessment Report on Disaster Risk Reduction. UNISDR, 2013.

<sup>4</sup> David Ariosto, “First Irene, then Sandy: Jersey City recovers, again,” *cnn.com* 14 November 2012. <http://www.cnn.com/2012/11/14/us/new-jersey-irene-sandy/>

<sup>5</sup> Deborah Bailin, “Hoboken’s Post-Sandy Resilience: Learning from the Past, Rebuilding for the Future.” Union of Concerned Scientists. January, 2014: 4.

<sup>6</sup> *Ibid.*

<sup>7</sup> “NJ dealing with deluge of rubbish from Sandy,” *USA Today*. 20 November 2012. <http://triblive.com/usworld/nation/2990410-74/trash-tons-cleanup-communities-company-debris-hoboken-issue-jersey-lost#axzz2v9T9y0ki>. Also see, Anne Hull, “A crippled city, frozen in Sandy’s dark aftermath,” *The Washington Post*. 3 November 2012: A1. [http://www.washingtonpost.com/national/crippled-nj-city-is-frozen-in-hurricane-sandys-aftermath/2012/11/02/4ffb7b90-2531-11e2-9313-3c7f59038d93\\_story.html](http://www.washingtonpost.com/national/crippled-nj-city-is-frozen-in-hurricane-sandys-aftermath/2012/11/02/4ffb7b90-2531-11e2-9313-3c7f59038d93_story.html)

<sup>8</sup> Ray Rivera, “Its restaurants empty and its train stalled, Hoboken encounters storm’s increasing toll,” *New York Times*. 17 December 2012: A22.

<sup>9</sup> Ray Rivera, “Social media strategy was crucial as transit copes with hurricane,” *New York Times*. 15 December 2012: A15. <http://www.nytimes.com/2012/12/15/nyregion/social-media-strategy-crucial-for-transit-agencies-after-storm.html? r=0>

## Findings: Key Moments in Post-Sandy Resiliency Engagement

Immediately after the hurricane, city officials in Hoboken and Jersey City were faced with never before seen humanitarian challenges. While aid to tens of thousands of citizens, forced from their flooded-damaged homes, was administered by the National Guard and those local institutions still intact, local decision-makers became the target of deep frustration and serious criticism over lapses in disaster preparedness. Questions over early warning systems, better information sharing, evacuation, relief centres and, more generally, why both Hoboken and Jersey City were so underprepared in mitigating or reducing the effects of the storm began to flood the communication offices of the respective mayor’s offices.<sup>10</sup> Criticism carried on throughout the fall of 2012 and well into 2013, as area businesses struggled to get back on their feet and public transportation remained out of service. We surveyed Jersey City business owners, whose stores and restaurants, many located in Jersey City’s downtown and Hudson waterfront concentration of economic concentration and commercial activity, stayed closed from between two to four weeks after the storm.<sup>11</sup>

Moreover, for households that suffered serious damage, it became increasingly difficult to navigate the complex process of applying for and receiving recovery aid from the Federal Emergency Management Agency (FEMA) and insurance companies. Under a barrage of criticism, the mayor’s offices of Hoboken and Jersey City were, hence, faced with the broader question of why their pre-Sandy capacities were not resilient enough to at least reduce the effects of the storm. However, intervening variables in the chronology of the post-Sandy response would place our two empirical cases on starkly different standpoints.

After the humanitarian response phase had been underway, federal, state and local offices and government leaders slowly began to engage in a public debate about future preparedness and resiliency. However, it was an international body that would be the first to inject the topic of resiliency in the debate. In November 2012, barely a few weeks after the super storm passed, Margareta Wahlstrom, head of UNISDR and Special Representative to UN Secretary General Ban Ki-Moon for disaster issues, visited Hoboken and Jersey City to assess the damage and share information on future resilient measures. UNISDR’s visit is a key intervening moment in the post-Sandy chronological trajectory in that it is the first governmental agency of any kind to offer specialised information on resiliency.

Hoboken reacted almost immediately to UNISDR’s visit. Within three months of UNISDR’s visit, Hoboken’s mayor expressed the necessity of introducing universal solutions toward resiliency, including improved energy sources for Hoboken’s high-rise buildings and expanded green spaces to mitigate the effects of flooding, as well as the creation of flood walls to protect the more vulnerable lower districts of the city.<sup>12</sup> In March 2013, Hoboken became a signatory to UNISDR’s “Making Cities Resilient” campaign, citing the relevance of the campaign as “an opportunity for us to learn from other communities around the world.”<sup>13</sup> In a short interview with the authors, Mayor Zimmer reinforced the importance of Resilient Cities partnership stating that: “signing on to UNISDR was a key moment that had a positive political effect. Hoboken and its residents are very sensitive to flooding. This was a way to learn more about mechanisms of resiliency.”<sup>14</sup> The Resilient Cities campaign brings together a global community of practice, facilitating the exchange of information on resiliency measures, many of which Hoboken would adopt in the months after Sandy.

---

<sup>10</sup> Chris Kirkham, “Sandy-Weary Hoboken residents criticize city over evacuation warnings,” The Huffington Post. 10 October 2012. [http://www.huffingtonpost.com/2012/10/31/sandy-hoboken-evacuation\\_n\\_2052831.html](http://www.huffingtonpost.com/2012/10/31/sandy-hoboken-evacuation_n_2052831.html)

<sup>11</sup> Interviews with retail business and restaurant owners in downtown Jersey City, Spring 2014 and Fall 2014.

<sup>12</sup> “Hoboken mayor proposes ‘universal solution’ to flooding,” National Public Radio - Morning Edition. 25 February 2013.

<sup>13</sup> “Hoboken joins UN’s resilient cities campaign,” United Nations International Strategy for Disaster Risk Reduction. 27 March 2013. <http://www.unisdr.org/archive/31978>

<sup>14</sup> Interview with Mayor Dawn Zimmer. 27 February 2014.

A review of Hoboken’s post-Sandy policy-making reveals clear linkages to its signatory status with Resilient Cities. In May 2013, Mayor Zimmer joined New Jersey Senator Robert Menendez, Congressman Albio Sires and business owners to announce the voluntary adoption of the Safe Building Code Incentive Act, which foresees increased funding for hazard mitigation.<sup>15</sup> Hoboken signed on to the US Department of Energy’s “Energy Surety Design Methodology,” a quantitative, risk-based assessment platform that studies the effects of prolonged power outage. Researchers will look for ways to shore up the Hoboken grid so it can adapt to and recover from large-scale disruptive events and mitigate the effects of quality of life, economic activity and infrastructure operations after catastrophic events.<sup>16</sup> In August of 2013, Hoboken then officially released its “Community Resilience Plan” as part of the city’s broader “Resiliency and Readiness Plan,” which targeted flood mitigation, storm water management, critical infrastructure, emergency notification and public information sharing, and resilient building codes.<sup>17</sup> Also in August 2014, both Mayor Zimmer and Mayor Healy represented New Jersey for the US Department of Housing and Urban Development (HUD) Hurricane Sandy Task Force. These policy adjustments and initiatives not only correspond to UNISDR’s Making Cities Resilient campaign, but were ultimately praised for their science-based mechanisms that “better prepare [Hoboken] to respond to sea level rise in terms of local planning, leadership, community engagement, multilevel government policy coordination and action.”<sup>18</sup>

After such large-scale natural disaster events, the authors were compelled to investigate to what extent the initial humanitarian response did or did not give way to addressing DRR issues as a long-term institutional response or open new pathways for educating citizens on the importance of future preparedness. As a practice in lessons learned, the divide between Hoboken and Jersey City became clear: Hoboken has displayed an effective, consistent and continuous level of increasingly creative engagement of enhancing DRM practices nearly two years after Sandy, whereas Jersey City’s policy stance on DRR is unchanged to only slightly more enhanced than pre-Sandy. Considering that the next mayoral election cycle will not be held until November 2017, Mayor Zimmer’s current mandate allows several years of deepening Hoboken’s commitment to DRR, which she laid out in her February 2014 state of the city address:

“Flooding is also an important issue for our City. Flash floods have become more and more severe each year and the Sandy storm surge showed just how vulnerable our City is to climate change. Our residents and businesses cannot afford another Sandy on top of all the flash flooding we face every year. I am proud that in partnership with an international team of experts led by OMA, a Dutch firm headquartered in Rotterdam, we have developed a great proposal that could be a model for urban resiliency and help protect Hoboken and parts of Weehawken and Jersey City. With everyone’s support we can accomplish what was considered the impossible: protecting our great City fully from all types of flooding...Along with protecting all of our residents and businesses, it would protect the PATH station, our electrical substations, our hospital, the North Hudson Sewerage Authority, and our fire stations.”<sup>19</sup>

---

<sup>15</sup> Sen. Menendez, Rep. Sires, Mayor Zimmer join together in Hoboken to announce legislation boosting New Jersey’s post-Sandy mitigation dollars,” Congressional Documents and Publications. 10 May 2013.

<sup>16</sup> “Improving the reliability and resiliency of Hoboken’s electric grid in aftermath of Hurricane Sandy,” Targeted News Service. (Washington, DC). 3 July 2013. [https://share.sandia.gov/news/resources/news\\_releases/esdm/#.UyCy1vZ4G8o](https://share.sandia.gov/news/resources/news_releases/esdm/#.UyCy1vZ4G8o)

<sup>17</sup> “Community resilience plan,” City of Hoboken. August, 2013. <http://www.hobokennj.org/resiliency/>

<sup>18</sup> “The post-Sandy resilience of Hoboken, New Jersey: learning from the past, rebuilding the future,” in Science and Democracy Case Studies. Union of Concerned Scientists. January, 2014. <http://www.ucsusa.org/center-for-science-and-democracy/case-studies/hoboken-case-study.html>

<sup>19</sup> “Mayor Zimmer Delivers State of the City Address,” City of Hoboken. February, 2014. <http://www.hobokennj.org/2014/03/mayor-zimmer-delivers-state-of-the-city-address/>

The authors reviewed Mayor Steven Fulop’s 2014 state of the city address. While it addresses several pressing socio-economic issues (unemployment, housing development, public transit and education) in a language indicative of progressive politics, there is no mention of Hurricane Sandy, resiliency or disaster preparedness. For Jersey City, the topic of DRM and DRR are off the table.

One of the Hoboken’s most popular events was the April 2013 Hoboken Resilience Run 5KM, which served to maintain and increase the public’s interest and educate segments of the local and New York metro regional population on the imperatives of resiliency. This joint event, supported by the Permanent Mission of Jamaica to the United Nations, the United Nations International Strategy for Disaster Risk Reduction and Hoboken’s sister city of Port Maria, Jamaica, harnessed the power of sport as a form of educating thousands of citizens and Hoboken residents alike on governmental engagement in providing safer environments and more resilient public services.<sup>20</sup> Some one thousand “resilience runners” participated in the event, which also raised approximately 20,000 USD for hurricane recovery.<sup>21</sup> Moreover, dozens of resident volunteers assisted in the event, which increased citizens’ mobilisation around disaster risk.

In some situations, a lack of information can speak volumes. Our review of policy documents and New Jersey media sources exposed very little in the way of any post-Sandy resiliency in Jersey City. With the exception of Mayor Healy’s attendance at HUD’s Hurricane Sandy Task Force in August 2013, there is strikingly little information available about any significant policy efforts to strengthen Jersey City’s ability to withstand and more quickly recuperate from future storms. When considering its close proximity to Hoboken, both mayors’ affiliation to the Democratic Party of New Jersey and Mayor Zimmer predominating media presence on the issue of resilience, Jersey City’s lack of resiliency-based policy engagement comes yet more interesting. This is further supported by our quantitative analysis. Compared to Hoboken’s 11.21%, over 17% of Jersey City households received major damage with a disproportionate amount of those severely affected in majority Black and Hispanic districts.<sup>22</sup> In light of this information, we turn our focus now to explaining this policy divergence.

Our findings reveal two primary explanatory variables that account for Jersey City’s stark policy divergence from Hoboken’s. Firstly, and most significantly, 2012-2013 was a campaign year for the Jersey City mayor’s office. Campaigns have a tendency of organising salient political issues into a smaller set of ideas that candidates can more easily market to the electorate. Even though Jersey City suffered tremendous damage in Hurricane Sandy’s aftermath, the introduction of a “foreign” concept, such as resiliency, would have been a risk to both candidates, the incumbent Healy and his successor, new Mayor Steven Fulop. Neither candidate adopted a language that addressed the effects of the storm or risked capitalising on an unproven campaign topic. Instead, the mayoral campaign addressed longer-standing issues, such as corruption, education and economic development. Hence, the political cache behind an untested and, in many ways, still cutting-edge approach to disaster management was excluded from Jersey City’s campaign language.

The second variable deals with the larger issue of types of leadership. While both mayorships shared affiliations with the New Jersey Democratic party, parties are often fraught with internal fractions and competing camps. Mayor Zimmer has long been considered to be a more progressive leader among New Jersey Democrats, whereas Healy, with his decades of public service as prosecutor and Jersey City judge, represented a more mainstream approach to Democratic policy. In the months after Sandy, New York City Mayor Mike Bloomberg and Zimmer became the most vociferous supporters of urban resiliency, a policy and media presence that the Healy administration failed to capitalise on, despite a municipal press release describing the effects of the storm as

---

<sup>20</sup> “Hoboken Resilience Run 5K,” City of Hoboken. April, 2013. <http://www.hobokennj.org/resilience5k/>

<sup>21</sup> “UN Staff run for resilience, recovery and solidarity,” United Nations International Strategy for Disaster Risk Reduction. April, 2013. <http://www.unisdr.org/we/inform/events/31926>

<sup>22</sup> “CDBG disaster recovery action plan,” New Jersey Department of Community Affairs. 2013. <http://www.state.nj.us/dca/announcements/pdf/CDBG-DisasterRecoveryActionPlan.pdf>

“unprecedented.”<sup>23</sup> After Sandy, Healy sought to strengthen some aspects of the Office of Emergency Management (OEM), but neglected to integrate aspects of resiliency or preparedness for future storms into any post-Sandy policy. In 2013, Jersey City voted in a new mayor, Steven Fulop, who handily defeated Healy using progressive issues, such as improved transportation, smarter housing development policy, reforms in education and social and economic inclusion of poorer districts. Under this new administration, Jersey City may adopt its first disaster resiliency plan and join its regional neighbours in creating a more prepared New York City metro area, but to date no such efforts have arisen.

## Discussion

This local-level comparison points to a broader set of issues that continues to challenge the current body of literature and scholarly debate on disaster risk reduction. Firstly, our study concludes more broadly the still low level of resonance and policy receptivity for DRR. This has immediate consequences for the wider DRM community. Our research demonstrates that even after large-scale natural disasters, such as Hurricane Sandy, local governments do not automatically embrace the various mechanisms of preparedness, mitigation and resiliency. While federal structures arranged for high-level forums, studies and panels on disaster and resiliency, this has not measurably translated into broad local-level policy integration. This is an especially interesting development, considering the high level of damage in human, economic and material terms that Super Storm Sandy generated. This fact becomes even more startling, since the New York metro area was struck not by one but two large-scale tropical events. Hence, researchers will need to focus factors beyond the actual disaster event to see what incentivizes political action. While the research outcomes presented here suggest some correlation between the concentration of economic and commercial sectors in vulnerable nodes of Hoboken and Jersey City may explain at least Hoboken’s promotion of resilience, that causal relationship, while necessary, is not sufficient in explaining diverging outcomes.

Another topic that requires further scholarly attention is that of the interplay between DRM and DRR and elite agency. Our study clearly points to the fact that municipal engagement of DRR is likely not the immediate result of negotiated response or demands made by civic groups or local-level NGOs. Rather, the DRR policy trajectory takes on a more top-down quality. While the ultimate benefactors are local commercial stakeholders, public service institutions and municipal residents (or do not drive), decisions adopting policies of disaster preparedness and mitigation appear to be the result of political elites working under a different of available information.

This leads us to another crucial issue: the role of external actors in advancing DRR policy at the local level. While a more comprehensive, larger-N study on those global cities’ whose mayors have worked with international DRR actors is still outstanding, this study adds to the growing discussion that exogenous factors can impact policy at the most local level of analysis: municipal behaviour and performance. Through a series of meetings, projects, and information-sharing collaborations, UNISDR was instrumental in providing the Office of the Mayor of Hoboken with a toolbox of mechanisms that might not have been otherwise readily available. The international/local nexus further enhanced civic mobilization, as exemplified by the Hoboken Resilience Run 5km. However, UNISDR is not the only external source for DRR information. Other international actors specializing in resiliency have emerged in the last two years, which have expanded the palette of available policy mechanisms. These include national development agencies, such as USAID and the UKAID/DID, and privately funded institutions, like the Rockefeller Foundation, which initiated its “100 Resilient Cities” in December 2013. Hence, with more external DRR agents advocating and assisting local-government in resiliency, we can expect greater incentives coming from this relationship than others.

---

<sup>23</sup> “Obama calls Healy - White House wake up call to aid after Hurricane Sandy wreaks havoc,” City of Jersey City. Press Release. 30 October 2012. [http://www.cityofjerseycity.com/uploadedFiles/Public\\_Notices/Press\\_Releases/Obama%20calls%20Healy.pdf](http://www.cityofjerseycity.com/uploadedFiles/Public_Notices/Press_Releases/Obama%20calls%20Healy.pdf)

## **Conclusion**

While social scientists and development specialists still have much to research on what causes local municipalities to support and introduce policies that make their communities better prepared and more resilient to disasters, our comparative study reveals a narrative of stark divergence between two highly similar empirical cases. While all politics is local, the municipal-DRR relationship is a unique one. While some local-level and endogenous factors may have a correlational affect on DRR policy trajectories, international agents effectuate not only more measurable change, but can incentivize mayors to adopt durable, longer-term policies. To be sure, it is a complex relationship, but one that will require further scholarly analysis.

## References

- Bailin, D. (2014). Hoboken's post- sandy resilience. Retrieved 02/27, 2014, from <http://www.ucsusa.org/center-for-science-and-democracy/case-studies/hoboken-case-study.html>
- City of Hoboken. (30 October 2012) Obama calls Healy - White House wake up call to aid after Hurricane Sandy wreaks havoc. [http://www.cityofjerseycity.com/uploadedFiles/Public\\_Notices/Press\\_Releases/Obama%20calls%20Healy.pdf](http://www.cityofjerseycity.com/uploadedFiles/Public_Notices/Press_Releases/Obama%20calls%20Healy.pdf)
- . (2013). "Hoboken Resilience Run 5K." <http://www.hobokennj.org/resilience5k/>
- . (2014). "Mayor Zimmer Delivers State of the City Address." <http://www.hobokennj.org/2014/03/mayor-zimmer-delivers-state-of-the-city-address/>
- Donohue, Mary Ann. (2013). Hurricane sandy devastates new jersey: Jersey shore medical center meets the challenge. *New Jersey Nurse*, 43(1), 6. Retrieved from <http://search.proquest.com/docview/1265617758?accountid=28700> Hoboken Community Resilience Plan. Retrieved 02/26, 2014. <http://www.hobokennj.org/resiliency/>
- Gerace, J. (2013). Keeping N.J. residents connected in sandy aftermath. *Njbiz*, 26(2), 11. Retrieved from <http://search.proquest.com/docview/1313495017?accountid=28700>
- Helderman, R. S. (2014, Jan 19, 2014). Mayor of hoboken, N.J.: Christie aides tied sandy fund requests to support for project (posted 2014-01-19 03:30:39). *The Washington Post*. Retrieved from <http://search.proquest.com/docview/1490422911?accountid=28700>
- Hoboken mayor proposes 'universal solution' to flooding (2013). *Washington, D.C., United States: National Public Radio*. Retrieved from <http://search.proquest.com/docview/1312317416?accountid=28700>
- Hull, A. (Nov 3, 2012). A crippled city, frozen in Sandy's dark aftermath. *The Washington Post*. Retrieved from <http://search.proquest.com/docview/1125484489?accountid=28700>
- Hurricane preparedness page. Retrieved 02/26, 2014, from <http://www.cityofjerseycity.com/resident.aspx?id=13597>
- Hurricane sandy service update: Verizon continues to make steady progress restoring services for New Jersey, New York City, long island customers. (2012). Retrieved 03/02, 2014, from <http://newscenter2.verizon.com/press-releases/verizon/2012/verizons-steady-service.html>
- Hurricane sandy: At general assembly, UN chief highlights challenges and lessons learned. (2012). Retrieved 02/27, 2014, from <http://preventionweb.net/go/29587>
- Improving the reliability and resiliency of Hoboken's electric grid in aftermath of hurricane sandy. (2013, Jul 3, 2013). *Targeted News Service*. Retrieved from <http://search.proquest.com/docview/1381570833?accountid=28700>
- Jersey city OEM announces emergency preparedness plans for hurricane irene. (2011). Retrieved 02/27, 2014, from [http://www.cityofjerseycity.com/uploadedFiles/Public\\_Notices/Press\\_Releases/Hurricane%20Irene%20Preparedness%20Press%20Release%2008.25.2011.1.pdf](http://www.cityofjerseycity.com/uploadedFiles/Public_Notices/Press_Releases/Hurricane%20Irene%20Preparedness%20Press%20Release%2008.25.2011.1.pdf)
- Jersey city OEM announces emergency preparedness plans for hurricane sandy. (2012). Retrieved 02/27, 2014, from [http://www.cityofjerseycity.com/uploadedFiles/Public\\_Notices/Press\\_Releases/Hurricane%20Sandy%20Preparations.pdf](http://www.cityofjerseycity.com/uploadedFiles/Public_Notices/Press_Releases/Hurricane%20Sandy%20Preparations.pdf)
- Kaplan, T. (Nov 13, 2013). Using hurricane sandy as a lesson for future elections. *New York Times*. Retrieved from <http://search.proquest.com/docview/1450154958?accountid=28700>
- Kaye, K. (2012, 11/04). Did hurricane center drop ball with sandy warning? *Sunsentinel*
- Kirkham, C. (2012, 10/31). Sandy-weary Hoboken residents criticize city over evacuation warnings. Message posted to [http://www.huffingtonpost.com/2012/10/31/sandy-hoboken-evacuation\\_n\\_2052831.html](http://www.huffingtonpost.com/2012/10/31/sandy-hoboken-evacuation_n_2052831.html)
- La Gorce, T. (2013, Oct 27, 2013). Oral histories of hurricane sandy. *New York Times*. Retrieved from <http://search.proquest.com/docview/1445253085?accountid=28700>
- Lautenberg statement for FCC field hearing in Hoboken on super storm sandy. (2013). Lanham, United States, Lanham: Federal Information & News Dispatch, Inc. Retrieved from <http://search.proquest.com/docview/1284401721?accountid=28700>
- Mann, T. (2012, Oct 29, 2012). Evacuations as hurricane edges closer. *Wall Street Journal*. Retrieved from <http://search.proquest.com/docview/1115522634?accountid=28700>

- McDonald, T. T. (2012). Chaos in Jersey City as flood waters rise, officials investigate reports of building collapses. Retrieved 03/02, 2014, from [http://www.nj.com/hudson/index.ssf/2012/10/chaos\\_in\\_jersey\\_city\\_as\\_flood.html](http://www.nj.com/hudson/index.ssf/2012/10/chaos_in_jersey_city_as_flood.html)
- McLaughlin, M. (2012, Nov 2, 2012). Race to reach starving survivors of sandy. The Scotsman. Retrieved from <http://search.proquest.com/docview/1125258853?accountid=28700>
- New Jersey Department of Community Affairs. (2013). CDBG disaster recovery action plan. Retrieved 02/24, 2014, from <http://www.state.nj.us/dca/announcements/pdf/CDBG-DisasterRecoveryActionPlan.pdf>
- New Jersey recovery from superstorm sandy: By the numbers. (2013). Retrieved 03/02, 2014, from <http://www.fema.gov/news-release/2013/10/07/new-jersey-recovery-superstorm-sandy-numbers>
- Osborne, J. (2012, Nov 19, 2012). Volume of hurricane sandy debris at jersey shore overwhelms officials, cleanup crews. McClatchy - Tribune Business News. Retrieved from <http://search.proquest.com/docview/1170557762?accountid=28700>
- Payne announces \$2.5 million grant awarded to jersey city hurricane sandy first responders. (2013). Lanham, United States, Lanham: Federal Information & News Dispatch, Inc. Retrieved from <http://search.proquest.com/docview/1318525939?accountid=28700>
- Preparations hasten for hurricane Sandy's landfall. (2012, Oct 27, 2012). Gannett News Service. Retrieved from <http://search.proquest.com/docview/1115584646?accountid=28700>
- Queram, K. E. (2012, 12/09). In wake of sandy, hurricane center considers policy changes. Halifax Media Group
- Rivera, R. (2012, Dec 17, 2012). Its restaurants empty and its trains stalled, Hoboken encounters storm's increasing toll. New York Times. Retrieved from <http://search.proquest.com/docview/1239030788?accountid=28700>
- Rouse, K. (2013, Aug 23, 2013). NJ transit sent updates to Christie before sandy. The Record. Retrieved from <http://search.proquest.com/docview/1427014941?accountid=28700>
- Sandy: The aftermath. Offices, forms, safety tips and more to help residents recover. (2013). Retrieved 02/26, 2014, from <http://www.cityofjerseycity.com/resident.aspx?id=11624>
- Sen. Menendez, Rep. sires, Mayor Zimmer join together in Hoboken to announce legislation boosting new jersey's post-sandy mitigation dollars. (2013). Lanham, United States, Lanham: Federal Information & News Dispatch, Inc. Retrieved from <http://search.proquest.com/docview/1350224052?accountid=28700>
- Status of building codes in New Jersey and New York: The future of resilience in a post-sandy environment. Retrieved 02/26, 2014, from <http://www.disastersafety.org/wp-content/uploads/Post-Sandy-Building-Codes-IBHS.pdf>
- Tom Watson. A year after sandy, new initiative aims to help 'resilient' cities prepare for disaster. Retrieved 02/26, 2014, from <http://www.forbes.com/sites/tomwatson/2013/10/30/a-year-after-sandy-new-initiative-aims-to-help-resilient-cities-prepare-for-disaster/>
- UNISDR. (2012). “Pre-disaster recovery planning.” Retrieved 02/27, 2014, from [http://www.preventionweb.net/files/31963\\_predisasterrecoveryweb.pdf](http://www.preventionweb.net/files/31963_predisasterrecoveryweb.pdf)
- UNISDR. 2013. “UN Staff run for resilience, recovery and solidarity.” Retrieved 09/01/2014. <http://www.unisdr.org/we/inform/events/31926>
- United States Department of Housing and Urban Development. (2013). Hurricane Sandy Rebuilding Strategy: Stronger Communities, A Resilient Region.
- US: Hoboken joins UN's resilient cities campaign. (2013). Retrieved 02/27, 2014, from <http://preventionweb.net/go/31981>
- USA Today. (2012, Nov 20, 2012). N.J. dealing with deluge of rubbish from sandy. Tribune - Review / Pittsburgh Tribune - Review. Retrieved from <http://search.proquest.com/docview/1177879720?accountid=28700>
- USA Today. (2012, Nov 20, 2012). N.J. dealing with deluge of rubbish from sandy. Tribune - Review / Pittsburgh Tribune - Review. Retrieved from <http://search.proquest.com/docview/1177879720?accountid=28700>
- Zernike, K. (2013, Feb 13, 2013). Hoboken mayor seeks storm protection more suitable for high-rise buildings. New York Times. Retrieved from <http://search.proquest.com/docview/1286873872?accountid=28700>