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DISASTER RECOVERY

A Managed- Participatory Approach to Community Resiliency

A Case Study of New York State's Response to Extreme Weather Events

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Abstract

Policymakers in New York State have chosen to implement a “Managed-Participatory” approach as part of the state’s recovery from Superstorm Sandy, Hurricane Irene, and Tropical Storm Lee, and its efforts to reduce the state’s vulnerability to future disasters through climate change adaptation. In response to these disasters, policymakers initiated the NY Rising Community Reconstruction (NYRCCR) Program, which is assisting 124 disaster-affected communities to develop and implement comprehensive reconstruction and resiliency plans through a unique combination of bottom-up community participation and state-provided facilitation, technical expertise, and significant financial support. The locality-focused approach, buttressed by rigorous analysis and facilitation of innovative and best practice solutions, is unprecedented in its scale and scope, methodology, and consequential nature of plans.

In this paper we present the case of a “Managed-Participatory” approach to disaster recovery and climate change adaptation. We contextualize the NYRCCR Program, comparing it to other programs involved with delegation of recovery and resiliency responsibilities to regional entities, local governments, and other stakeholders (e.g., the Gulf of Mexico region following Hurricane Katrina). We then discuss the types of horizontal (among community stakeholders) and vertical (between political institutions and local communities) integration mechanisms that were employed, providing evidence in support of such mechanisms as tools to optimize disaster resiliency and climate change adaptation at the community level. It establishes criteria (e.g., staff and organizational dedication, expert-led mechanisms, variety of objective and information types relayed to the public, timeliness of local participation, diversity of motivation techniques, inclusion of neglected groups, and participation enforcement at the very local level) to measure the strength of the community reconstruction plans.



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1. Introduction

On October 29, 2012, Superstorm Sandy struck New York State causing unprecedented damage to many communities. Still recovering from two previous storms — Hurricane Irene and Tropical Storm Lee in 2011 — the amount of destruction revealed the state's vulnerability to the effects of climate change and extreme weather events. In the wake of these storms, Governor Andrew M. Cuomo and his administration, as part of its broader recovery program, established the NY Rising Community Reconstruction (NYRCR) Program in April 2013. Taking program-design inspiration from the New York State Regional Economic Development Councils (REDCs) and an earlier recovery planning process that followed Irene and Lee, the Long-Term Recovery Planning process, the program's vision is a large-scale participatory planning effort that addresses climate adaptation and resiliency.

New York State is directing more than \$700 million of its \$4.5 billion Community Development Block Grant – Disaster Recovery (CDBG-DR) allocation from the U.S. Department of Housing and Urban Development (HUD) to the planning and implementation

of the NYRCR Program. State officials identified participating communities and selected them based on storm damage assessments using data from the Federal Emergency Management Agency (FEMA). The first group of communities included 102 localities, which were formed into fifty planning committees, each producing a Community Reconstruction Plan for a total of fifty plans. In January 2014, the state expanded the program to include a second group of twenty-two localities, producing sixteen additional plans for a total of sixty-six. Planning Committees, consisting of local residents, business owners, and civic leaders – selected and supported by the NYRCR Program staff and outside planning firms – met regularly and hosted public events to develop the community’s reconstruction plans. The committees assessed community needs and identified local assets, culminating in comprehensive local reconstruction and resiliency strategies and projects. Making the process consequential, each NYRCR community was allotted between \$3 million and \$25 million of federal disaster aid to implement eligible projects identified in the community’s plan.

This paper studies NYRCR’s “Managed-Participatory” approach to assisting severely disaster-affected communities and developing comprehensive reconstruction and resiliency plans. The state’s approach attempts to blend key principles of both top-down government intervention and bottom-up community participation approaches in disaster recovery. This paper attempts to disentangle the “managed” and “participatory” elements of NYRCR by comparing them to similar disaster-related reconstruction practices. The findings show that the state’s approach is unique in (1) facilitating the development of plans by harnessing local knowledge, resources, and capacities; (2) supplementing it by providing technical assistance, data analysis, and consultation; and (3) assessing the scale and scope both of the process and the funds allocated for disaster recovery. Unlike previous postdisaster experiences where state-funded community planning programs were largely shepherded by governments, with a significant role for the federal government, the NYRCR Program directly engaged local residents and collaborated with them to design a vision for rebuilding their communities in a tailored and resilient manner. In total, the Program’s combination of citizen involvement and state technical expertise has identified more than 1,100 reconstruction projects in 650 committee meetings and 250 public engagement events. The state is funding about 300 projects totaling \$625 million.

We provide evidence in support of this Managed-Participatory method as a way of strengthening the vertical and horizontal integration of communities. Using a detailed analysis of the literature, we define “vertical integration” as the relationships between communities and different government levels, particularly at the state and federal levels. The NYRCR approach strengthened these vertical relationships through its public outreach and the partnerships it

fostered between the planning committees, the NYRCR Program staff, and associated consulting teams. We define “horizontal integration” as the strength of social ties among community members and stakeholders. The NYRCR’s planning committee and public engagement meetings allowed communities to develop their vision and goals, identify community issues and needs, and recognize local assets and opportunities for increasing resiliency. The process also contributed to stronger community networks through cooperation and intracommunity coordination. As a result, we suggest that the Managed-Participatory approach narrowed the gap between policy-level decision-making and ground-level input, while also increasing civic capacities within the communities.

Finally, we evaluate the quality of the Community Reconstruction plans in terms of the most-frequently used criteria in the literature (discussed in Section 5), and our findings show that the plans produced by the state’s Managed-Participatory method are particularly strong because they are achieved through, and memorialize, a process of systematic local participation; and also because they improve the likelihood of projects being implemented through a variety of mechanisms. We analyze a case study from the NYRCR Program in the Appendix, in order to highlight its strengths. We conclude the paper by discussing the potential implications of a Managed-Participatory approach for future resiliency policy decisions, as well as program limitations and areas for future research.

2. Literature Review

The NYRCR Program incorporates the guiding principles of community-level resilience planning into storm reconstruction and mitigation responses. By embarking on extensive and iterative local-level stakeholder engagement, the program draws upon a rich decades-long tradition that infuses the local stakeholder voice into a traditionally top-down planning realm – that of disaster recovery.¹ The literature on community and stakeholder engagement in the planning process and, to a lesser extent storm recovery and resilience, is vast. In its Managed-Participatory approach, the NYRCR Program combines the two well-documented concepts of bottom-up community participation and top-down facilitation, expertise, and financial incentives, and applies them to disaster response and resiliency planning.

Participatory Planning

Community-level participatory planning has a history dating back to the post-World War II era when communities began to successfully organize to oppose the dominance and insulation of technical expertise in the planning process.² Arnstein put forth a “ladder model of citizen participation,” in which she identified different levels of public involvement and influence in a project’s decision-making processes through the amount of involvement and influence citizens have over it.³ The lowest rung in the ladder

depicts citizens as being “manipulated” with having no control over decisions while the highest rung describes citizens as “empowered” with decision making roles in the development of the project. Arnstein, among others, identified the shortcomings of a purely top-down approach as being unrepresentative of local will, incapable of achieving critical community buy-in, and out of touch with the people most affected by the decisions made.⁴ Many researchers, like Oakley and Mardsen,⁵ also have argued that meaningful participation promotes community empowerment and self-reliance.

The primary argument against top-down strategies is that by failing to collect information from intended beneficiaries and integrate the concerns and needs of communities into project development, projects and programs engender public dissatisfaction and opposition.⁶ And while some top-down models have tried to include some form of stakeholder participation through task forces or public consultation forums, they run the risk of creating an “illusory consensus”⁷ where participation is steered toward predetermined goals. Many scholars have argued that real inclusion requires that citizens have genuine opportunity to influence the processes and outcomes.⁸ As a result of these failures of top-down approaches, the planning practice has shifted towards an empowered participation approach.⁹

Local participation in areas like disaster recovery and adaptation activities has gained increasing policy importance in recent decades, especially after the disappointing outcomes of many top-down community-level interventions.¹⁰ Coles and Buckle asserts that government resources and emergency services are often limited when dealing with disasters and that it is practical and beneficial to rely on the local population’s knowledge, skills, and resources in disaster recovery.¹¹ Research suggests that engaging with a diverse and relatively more broad-based populace and drawing upon local knowledge and capacities can generate more comprehensive information, leading to more robust and innovative solutions to environmental problems.¹²

The literature also suggests that meaningful and consistent community involvement in planning processes positively impacts plan implementation. Burby’s study of sixty local governments in Florida and Washington shows a meaningful effect for a broader array of stakeholders on the likelihood of plan implementation.¹³ In addition, early involvement and encouragement to stay the course can increase the likelihood that community members will closely monitor the plan’s implementation¹⁴ and increase accountability.¹⁵ By keeping local community members informed and involved throughout the process, plans gain legitimacy and government agencies earn the public’s trust.¹⁶

While many scholars have argued in favor of bottom-up decision-making, its popularity and effectiveness as a policy tool has ebbed and flowed over the decades.¹⁷ Participatory planning is critiqued for its challenges in achieving and retaining the

public's interest to join the process. Irvin and Stansbury¹⁸ point out that community members may prefer to leave the decision making to public administrators as the participatory process is time consuming. A study of citizen participation and action by Brody and colleagues in Florida and Washington showed that citizens had little interest in hazard mitigation planning, mainly because they perceived disaster response as a managerial task requiring technical expertise and knowledge.¹⁹ Research also suggests that citizens may be discouraged by the impression that their input has little impact on the decisions and plan outcomes.²⁰ Some even believe that when communities are complacent, there is a strong case for top-down efficiency.²¹

Public participation in disaster response and planning has also received criticism on the topic of representation. Day²² argues that community members rarely participate fully and, as a result, plans may not truly reflect community preferences or interests. Meetings have the tendency to be dominated by participants with personal or business interests or who have the luxury of time and resources to participate regularly²³ or are, on average, more educated and wealthier.²⁴ Pearce points out that the poor and other minorities are often overlooked in postdisaster planning processes despite being the most vulnerable and most affected population during and after disasters.²⁵ Day explains that the lack of resources of low-income populations may render them powerless to bring up issues important to them in the public agenda.²⁶

Participatory Planning in Natural Disasters

Academic research suggests that strong intracommunity and intergovernmental ties enables citizens and organizations to adapt more effectively to changing environmental conditions, and government agencies to better respond to local disaster recovery needs. Berke, Kartez, and Wenger posit a horizontal and vertical integration model that explains the interactions between local and national players, and classifies communities by their degree of coherence.²⁷ Horizontal integration concerns ties amongst local people and between local people and community-based organizations such as churches, nonprofit organizations, and local associations. Vertical integration describes the relationship between the community and political, social, and economic institutions at different levels of policymaking. Communities with a low degree of horizontal integration have difficulty organizing for collective action. Those with a low degree of vertical integration may have weak ties with central authorities and thus face problems in controlling external programs in their communities. Other research adds that strong horizontal and vertical linkages can ensure the sustainability of a plan by enabling coordination of resources and information flow across and between local communities and government agencies.²⁸

Inclusive planning and community-level policymaking strategies can also strengthen horizontal relationships,²⁹ create a venue for public officials to educate the local population on poorly

understood problems,³⁰ and build community capacity to acquire knowledge about local hazards and future disaster risks and how to prepare, cope with, and recover from them.³¹ This collective awareness further contributes to a community's resiliency by fostering social relationships among community members and providing them with information on how resources such as available funding, policies, and technical assistance will be used — usually a central issue in a postdisaster environment.³²

Having strong horizontal relationships also helps in terms of creating meaningful partnerships with external resources such as government agencies and nongovernmental organizations, thus strengthening vertical relationships — especially important in disaster response and management. Patterson, Weil, and Patel describe a strong, well-functioning community as one that creates trust among its members and has the ability to induce cooperative behavior and teamwork so as to assess needs and recognize possible solutions, including how to attain the resources needed to address them.³³ In reviewing post-Hurricane Katrina disaster recovery planning in New Orleans, Olshansky and colleagues identified the lack of trust among residents, particularly among racial groups, as a serious barrier to developing and implementing disaster recovery plans. The mistrust also worked as an undermining factor in shaping effective relationships with different levels of government.³⁴

Strengthening vertical integration can also help the disaster-response process. Smith notes that as long as government agencies create the conditions for participation and positive linkages between parties, communities will gain effective power and influence for adapting programs and actions to local needs.³⁵ Through engagement, communities learn about other actors, different formal institutions, and legal frameworks linked with handling hazards and disasters.³⁶ With a good understanding of the vertical structure in which local actors can navigate and where the community lies in it, Kyamusugulwa asserts that “participation can play a transformative role in empowering intended beneficiaries,”³⁷ allowing local community members to communicate their needs to external actors more effectively and potentially allowing for better access to resources and influence in policy modification.³⁸

Smith also points out that state agencies hold a unique position in negotiating with other levels of bureaucracy, representing local communities, and bringing government-driven economies of scale.³⁹ In the disaster recovery realm, states serve as the key intermediaries between federal agency programs and local needs. Olshansky et al. highlight the role of strong state-level leadership as one that finds opportunity in adversity — using disaster efforts as a chance to improve the community through the development and implementation of plans.⁴⁰ An effective leader can create and nurture community organizations after the disaster, but most importantly has the skill to network with other political agencies and articulate the community's needs to those external agencies. In

short, facilitating and managing participation is potentially beneficial to communities that are looking for government-driven economies of scale.

Murphy highlights the interdependency between horizontal and vertical networks by asserting that “resiliency requires community involvement *in addition to* official activities,” and that local government emergency management agencies can increase community or even individual resiliency.⁴¹ Experiences in postearthquake Northridge, California,⁴² and postdisaster Kobe, Japan, and Gujarat, India⁴³ indicate that community-based programs grounded in local knowledge and capacities are more effective in responding to local recovery needs and that communities with strong social ties added to the efficiency of rescue and relief activities postdisaster. The added flexibility and sensitivity to local conditions was a key element to overcoming the barrier of limited local access to basic resources. In general terms, the literature acknowledges that there is a positive relationship between horizontal and vertical linkages and the creation of resilient and less vulnerable communities. This concept is something we focus on in our analysis of the NYRCR Program, specifically in relation with long-term resiliency planning.

While the planning literature is rich with evaluations of both top-down government intervention and bottom-up participatory planning in response to natural disasters, the role of participatory planning in building resiliency is under-studied. We found little evidence of empirical or theoretical work on practices where expert-based planning and community-based knowledge meet to address long-term local vulnerabilities and ways to overcome them. A review of the state’s experience of a Managed-Participatory approach to postdisaster long-term community reconstruction contributes to filling that gap. To give further context to New York State’s experience, a detailed description of the state’s experience is preceded by a comparison to other similar state programs that have addressed postdisaster recovery planning at the community level. A particular focus is given to the experience in the Gulf of Mexico region following Hurricane Katrina.

3. Experiences of State-Level Community Reconstruction

3.1. Hurricane Katrina and the Gulf of Mexico Region

Superstorm Sandy and the other storms that hit New York State were foreshadowed by Hurricane Katrina, which made landfall on the coasts of the Gulf of Mexico in 2005 and ranks as the costliest storm in U.S. history.⁴⁴ Disasters in both places were flood-related, and historically devastating in their scale. This section briefly describes the design and process of community-based reconstruction in Louisiana and Mississippi before moving on to the NYRCR Program.

Community Reconstruction in Louisiana in the Aftermath of Hurricane Katrina

In the immediate aftermath of Hurricane Katrina, Emergency Support Function #14 (ESF 14), FEMA's designated task force for long-term community recovery, was deployed at the request of the state of Louisiana. ESF 14 assisted Louisiana in developing and establishing the Louisiana Recovery Authority (LRA), the state agency that oversaw all recovery and reconstruction operations during ESF 14's period of operation, and which continued in that role after ESF 14 departed six months later. In January 2006, in a joint effort, ESF 14 and LRA implemented the "Louisiana Speaks" initiative, a statewide planning day including nine out-of-state locations for displaced Louisiana residents to participate in recovery planning and share their input. This became Louisiana's initiative for long-term community recovery.⁴⁵

FEMA designated twenty-seven parishes for community recovery work based on their level of damage and their capacity to undertake their own long-term recovery.⁴⁶ Once the parishes were selected, LRA tasked them with establishing "steering committees" in order to prepare reconstruction plans, which was a requirement for drawing from the CDBG-DR funds. The parish steering committees were typically comprised of local government administrative officials (e.g., mayor, director of housing, director of city planning, etc.), staff personnel of the involved public agencies, representatives from nongovernmental entities, and individuals with key roles (e.g., members of the Chamber of Commerce, developers, public figures, etc.). Alongside the steering committees, the LRA also assigned each parish with a planning team, comprised primarily of field-expert individuals (housing, economic development, and infrastructure) selected from among FEMA federal and departmental staff, and in some cases also FEMA vendors. The planning teams were designed to provide the steering committees with technical expertise and assist them in preparing the reconstruction plans. All the parish recovery plans were later consolidated into a uniform plan titled Louisiana Speaks, a regional plan for a more sustainable future, adopted by the LRA in 2007.⁴⁷

In order to attract public participation and ownership in the planning process, the LRA undertook a number of initiatives:

- The Regional Vision Poll, a public outreach project in 2007 to engage 23,000 citizens across the southern shore and ask their opinion on the current state of planning, as well as their expectations for the future.
- "Louisiana Speaks," a state-wide planning day for citizen participation in recovery planning.
- Local-level outreach events in each parish to ask citizens about their priorities and local vulnerabilities. This information was used by the steering committees to define recovery visions and goals.

- Private-sector initiatives, such as charrette design workshops for local citizens to share their input during the planning and design process.⁴⁸

Steering committees eventually submitted the parish plans to the LRA for funding. Each plan included several proposed projects, justified by local vulnerabilities, capacities, and needs. LRA's filtering and ranking process utilized the "project recovery value," a system developed and announced by FEMA in 2006. Value was determined by the project's degree of contribution to the community, measured as whether it was need-based, feasible, sustainable, and created cross-cutting benefits to the community such as economic stimulation, visibility, or improved quality of life. Each project was assigned one of the three recovery values: low, moderate, or high.⁴⁹

Community Reconstruction in Mississippi in the Aftermath of Hurricane Katrina

In response to Hurricane Katrina, the state of Mississippi established the Commission for Recovery and Renewal in order to bring residents together and encourage their participation in long-term community planning.⁵⁰ The Commission used the planning charrette workshop method. Similar to Louisiana, an ESF 14 unit was deployed by FEMA to Mississippi in September 2005.⁵¹ The Commission, which grew into the Governor's Office of Recovery and Renewal (GORR), worked alongside ESF 14 and the Mississippi Development Authority (the state's lead economic and community development) to designate community reconstruction areas and facilitate the formation of local steering committees. GORR became the state agency in charge of the recovery and reconstruction operation after ESF 14 left in June 2006.

Coastal exposure in Mississippi was much less widespread than in Louisiana (notwithstanding the amount of damage), and only four counties were declared for long-term planning by the Governor. For that reason, GORR decided that recovery planning should be carried out at the municipal level, and asked the municipalities to establish the committees and submit long-term recovery plans. Although the committees were at a more local level than in Louisiana, their composition was somewhat similar in both states: members were typically public officials (mayor, heads of public agencies), public sector staff, nongovernmental representatives, and key individuals at the local level. Each municipality also took advantage of a planning team that supported the committees with technical expertise.

Public participation was on the state's agenda from the beginning. According to the Commission's report to the governor in December 2005,⁵² over fifty public forums were held to ask citizens about their vision of the future. In addition, public meetings were held in each of the eleven cities located on the coastline. Output of these outreach strategies was geared towards the public's expectations and priorities at the general level. These outreach events were augmented with the charrette workshops, held by the

Commission immediately after the hurricane, in which experts and public representatives gathered and reflected on the design and content of long-term community reconstruction.⁵³

Academic Criticisms of the Recovery Responses in Louisiana and Mississippi

Despite the unprecedented nature of Hurricane Katrina and the scale of its effects in Louisiana and Mississippi, the academic response to recovery and resiliency operation was not positive. The criticism is geared heavily towards recovery and immediate response, but long-term resiliency efforts were also criticized. One of the most frequently mentioned weaknesses is lack of collaboration between federal, state, and local governments in efforts to mitigate, prepare for, and respond to the hurricane. Specifically, the structure of community resiliency programs in Louisiana and Mississippi gave the main role to the federal government, cutting out states and local governments and failing to leverage their considerable expertise and capacity.⁵⁴ The design of the programs also devalued public input during relief and recovery efforts. A study of recover in New Orleans after five years concluded that recovery should be grounded in the local context with substantive government and public support.⁵⁵ It also showed that the delay in the recovery process was a result of the lack of coordination among the different levels of government. Kates, Colten, Laska, and Leatherman describe the planning for reconstruction in New Orleans as “divided between city, state, and federal governments, each assisted by outside advisors and contractors, with distinctive but often overlapping responsibilities and intentions.”⁵⁶ A year after Katrina, there was still no unified government body overseeing the recovery planning process.⁵⁷ The lack of a centralized agency made it difficult to create a clear rebuilding strategy and vision for recovery.⁵⁸

A similar line of research criticized the governments (at various levels) for not gaining the public’s political trust, which was in turn the result of their poor performance and program design.⁵⁹ But Mississippi scores somewhat better in its community-level resiliency actions than Louisiana, mainly because it attracted more public engagement. In a state-level study, Hassett and Handley argue that Mississippi’s resiliency framework was effective in encouraging productive public discussions.⁶⁰ The success, the authors argue, was due to the state’s lead role (through GORR) in establishing recovery planning forums, gathering community representatives, and mobilizing different resources. This echoes the need for a strong state champion and leader highlighted by Olshansky, Johnson, Horne, and Nee.⁶¹ A similar study indicates that the relatively significant role of the state in Mississippi has led to more local participation, stronger community plans, and higher levels of political trust and support.⁶²

3.2. NY Rising Community Reconstruction Program

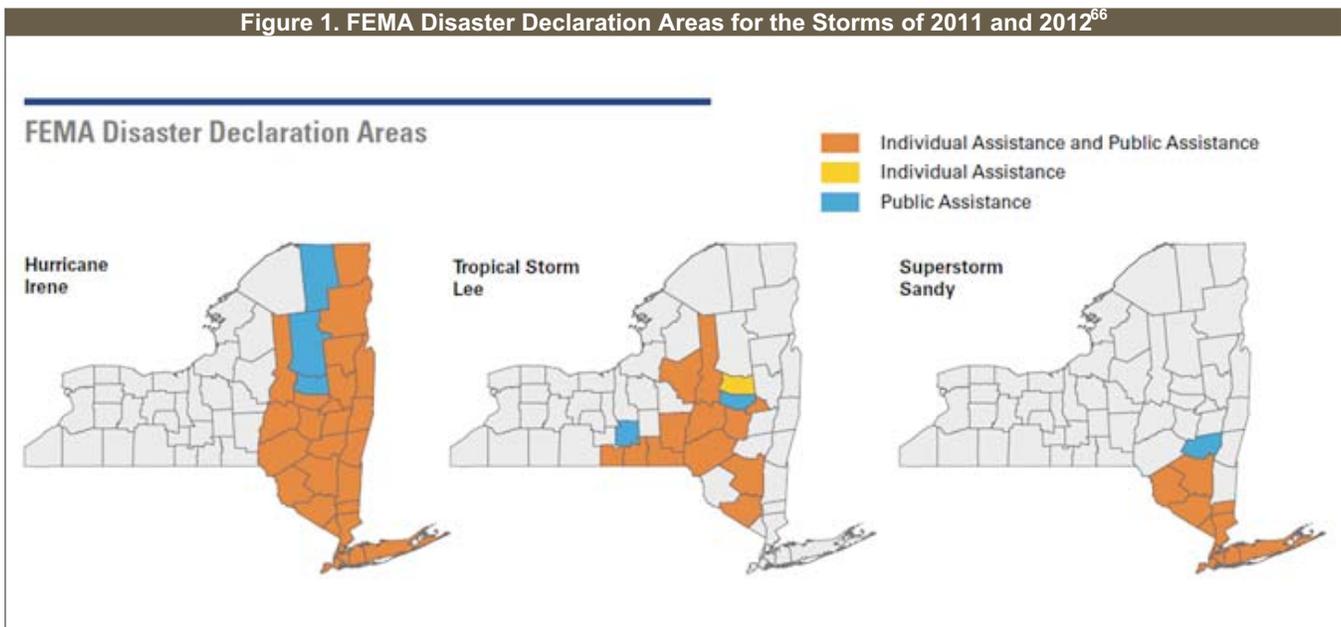
On October 29, 2012, Superstorm Sandy struck the New York metropolitan area, causing unprecedented damage to homes,

businesses, and infrastructure throughout the region. Over 300,000 housing units were damaged or destroyed, over two million utility subscribers lost power, and the state’s infrastructure was severely impacted. Sixty New Yorkers died as a result of the storm. The storm occurred a little over a year after Hurricane Irene and Tropical Storm Lee – both of which had devastated dozens of communities.⁶³ In response, in January 2013, President Obama signed the Disaster Relief Appropriations Act into law. It provided more than \$50 billion to nineteen federal agencies to help communities rebuild after Sandy. Of this federal funding, Congress appropriated \$16 billion to HUD for the CDBG-DR program to address unmet recovery needs in impacted areas along the East Coast. HUD announced in February 2013 an initial allocation of more than \$1.7 billion to the state to facilitate the recovery and long-term rebuilding of impacted communities. That number has grown to over \$4.4 billion with subsequent second and third allocations.⁶⁴ Figure 1 outlines the counties that received a federal disaster declaration for Superstorm Sandy, Hurricane Irene, and Tropical Storm Lee.

The NYRCR Program was officially launched in April 2013, six months after Superstorm Sandy and about two months after the state’s first allocation from HUD. The goal of the program was to empower community members to play a role in the rebuilding and recovery process. Its origins stem from the State’s Regional Economic Development Councils (REDCs), its Waterfront Revitalization of Coastal Areas and Inland Waterways Act, and its initial long-term recovery planning response to Hurricane Irene and Tropical Storm Lee in 2011.

To respond to Irene and Lee, New York State turned to a bottom-up community recovery strategy, inspired by the guidelines of REDCs.⁶⁵ REDCs are regional councils established in 2011 by Governor Cuomo, somewhat inspired by the Empowerment

Figure 1. FEMA Disaster Declaration Areas for the Storms of 2011 and 2012⁶⁶



Zones (EZ) initiative developed in 1994 under his tenure as secretary of HUD. These Councils create five-year strategic economic growth plans for their region, and are comprised of local stakeholders — members of the business community, academia, nonprofits, and local governments, supported by staff from Empire State Development (the lead agency overseeing the Regional Councils). New York State Department of State (DOS) strategic planners also play a role by leading interagency teams that assist the Regional Councils. Each plan contains a comprehensive vision for that region's economic development, regional strategies to achieve that vision, and priority projects. Each plan is subsequently reported on annually.⁶⁷ Dozens of state agency and authority grant funding opportunities and tax credits are available to seekers through New York's Consolidated Funding Application (CFA). The CFA is an online "common application" for economic and community development funding, established in 2011 to facilitate and streamline the process for applying to state grants and tax credits.⁶⁸ REDCs do not directly disburse economic development funding, but projects submitted through the CFA are forwarded to the corresponding Regional Council for its review and recommendation prior to agency review and potential award. Since REDCs were established, the state has awarded more than \$2 billion to economic and community development projects.

Another precedent of the state's participatory planning, specifically related to environmental adaptation, was the passage of the Waterfront Revitalization of Coastal Areas and Inland Waterways Act. The Act provides the opportunity for local governments to prepare their own Local Waterfront Revitalization Programs (LWRPs). Once approved by DOS, the state is obligated to abide by the LWRPs in its waterfront revitalization actions. Similar to the REDCs, the structure of the program is based on collaboration and consensus among local committees, governments, community-based and nongovernmental organizations, and citizens, in identifying the community's vision and preparing an implementation road map for it. The program also aims to "establish a long-term partnership among local government, community-based organizations, and the State."⁶⁹

As a result of these experiences, the Cuomo administration turned to participation-oriented models to encourage similar community engagement in developing long-term strategic recovery and resiliency plans in its response to Hurricane Irene and Tropical Storm Lee.⁷⁰ Specifically, DOS decided to augment the immediate response led by FEMA with a strategy modeled on these engagements. FEMA response teams were adhering to the National Disaster Framework,⁷¹ and while recognizing the value of this framework, state policymakers also wanted to ensure that any recovery plans were also deeply informed by local input.⁷²

Using the structure of the REDCs, DOS led the development of Long-Term Community Recovery Plans for each impacted community. These were designed to act as blueprints for disaster

recovery and longer-term resiliency and their aim was to speed up the recovery process. Each impacted community developed a plan in consultation with the state and federal government. They set out roadmaps for long-term recovery at the local level, laying out visions and projects to fulfill the goal.⁷³

As this process continued, Superstorm Sandy hit the region. While the longer-term recovery response for Irene and Lee communities continued as part of the immediate response to Sandy, the governor established three expert commissions to review and make specific recommendations aimed at improving the state's emergency preparedness and response capabilities and its resiliency to withstand major weather events and other disasters.⁷⁴ Primary among these was the *NYS 2100 Commission*,⁷⁵ charged with identifying strategies to strengthen the state's infrastructure and capacity in the context of more frequent and severe natural disasters. Along with the two other commissions, the *NYS 2100 Commission* submitted findings to the governor in January 2013. The Commission recognized the need for a robust and clear resiliency plan as a critical component of the CDBG-DR funding.⁷⁶ As such, when it came time for the state to write its Action Plan⁷⁷ (published in April 2013) as required by the regulations for drawing down the CDBG-DR allocation, the DOS and the Department of Housing and Community Renewal (HCR) established the "Community Reconstruction Zone" (later named NY Rising Community Reconstruction, NYRCR) planning grants as a key characteristic of the state's response.

The NYS Action Plan was developed while the community responses were evolving. The instructions included which communities to cover and how the Planning Committees should be structured. Later in 2013, the New York State Governor's Office of Storm Recovery (GOSR) was established and tasked with forming the Planning Committees and implementing the NYRCR plans. It was structured with a team of liaisons, called Regional Leads, who were experienced in community planning, economic development, public engagement, and governmental operations in specific areas of the state, tasked with working with individual communities, and a project management and policy team supporting the team of liaisons. Regional Leads were also assisted by Community Planners, who are technical experts that could help communities to create implementable projects with the allotment of funding they were provided. GOSR's staff of planners was supplemented by teams from DOS and the New York State Department of Transportation. Together, Regional Leads and Community Planners already had a significant understanding of the needs of the communities they served and previous experience working with local officials and community organizations.

Community Selection Criteria

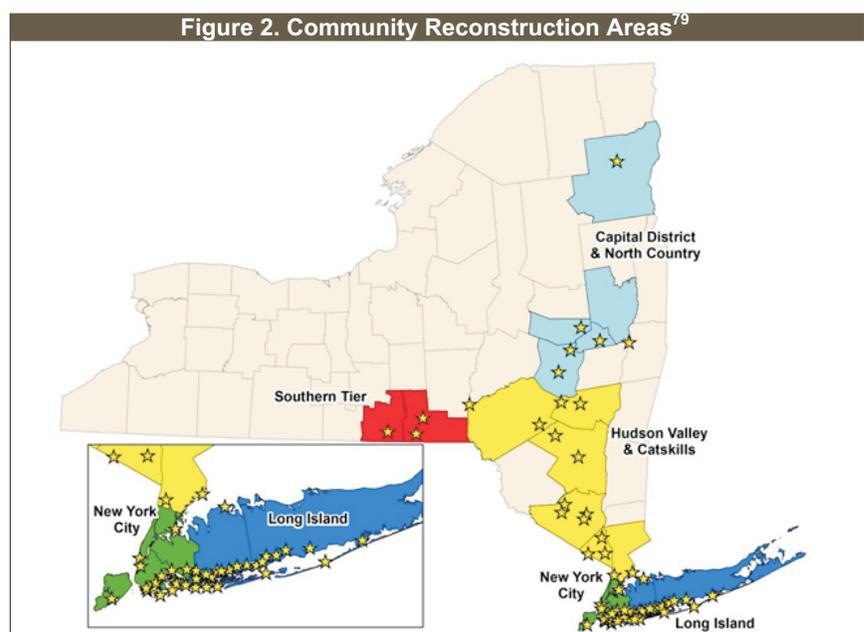
The communities participating in the NYRCR Program were selected using FEMA's Individual Assistance (IA) Full Verified Loss (FVL) total claims from Superstorm Sandy, Hurricane Irene, and Tropical Storm Lee dataset, which was a monetized measure

of damage. The state also considered locality populations measured in the 2010 Census, to include damage-per-head as an additional indicator. Knowledge of other damage in particularly hard-hit communities was also considered in community selection. In New York City, the selection was also guided by the city's Sandy Initiative for Rebuilding and Resiliency (SIRR) Report. The program identified neighborhoods as areas of focus in the report and evaluated them for the amount of damage. Those with a minimum of \$2.5 million in total FEMA IA FVL claims were included. Some localities were grouped together in a single Planning Area in order not to penalize them for their smaller populations — given the amount of damage in their neighborhoods. This led to selection of forty-five Planning Areas in the first round, covering 102 localities — forty-one in Long Island, eighteen in New York City, and forty-three in Upstate New York.

Program staff later reviewed additional storm damage data and updated these selection criteria. In January 2014, the program added another twenty-two localities and sixteen Planning Areas — bringing the total number of Planning Areas to sixty-six. Some localities in Long Island and Upstate New York were selected for the second round because of their high levels of per capita damage despite having FEMA IA FVL claims below the threshold. One additional Long Island locality and fifteen Upstate New York localities were included in the program. In New York City, six other localities were added in the second round as they met the \$2.5 million FEMA IA FVL claims requirement despite not being identified as focus areas in the SIRR Report.

Planning Committees and Process

Planning Committees were key to the Program's citizen participation strategy, and the members were selected by the newly in place NYRCR Regional Leads,⁷⁸ who consulted local elected



officials, prominent community organizations, small business owners, and unelected community leaders and advocates. Key criteria for member selection included optimal representation, giving voice to a variety of local groups — especially those with known disengagement history — and diversity.⁸⁰ Committee members typically included representatives from local organizations, business groups, community boards, civic leaders, and interested citizens.⁸¹ As representatives of the communities, committee members were the main sources of local context and knowledge. However, all meetings held by the Planning Committees were open to the public, and each Committee hosted four public engagement events, with the goal of soliciting community feedback. The Program also attempted to trigger citizen participation through other outreach strategies, including open houses, workshops, and public information sessions.

Besides assessing community needs and opportunities, the Planning Committees were able to influence the outcomes of the reconstruction plans by developing strategies and projects that address local issues and problems in terms reducing disaster risk and enhancing the community's ability to withstand future storms.⁸² Examples of such strategies were ensuring the quality of life and safety of vulnerable populations, improving stormwater management and drainage systems, and providing coastal flood protection.⁸³ The Committees also determined which projects advanced to the final community reconstruction plan based on the research and data provided by the planning firms.

The NYRCR Program hired planning firms in order to assist local Planning Committees with their deliverables. As noted in the Request-for-Proposal (RFP) document published in April 2013,⁸⁴ Planning Committees were required to submit Community Reconstruction Plans, including an action plan, a public engagement plan, a community asset inventory, a risk assessment, an economic needs assessment, a housing needs assessment, and investment and action strategies and projects, in order to be able to apply for CDBG-DR funding available through the NYRCR Program. Since the selection of Program communities was not finalized at the time of publishing the RFP, the document provided an urban and a rural scenario and required the applying firms to present their proposals for both. The NYRCR Program then took on the task of "pairing" firms with communities based on their expertise and local experience. Moreover, in order to ensure achieving economies of scale, Program staff requested firms to provide evidence as to their capability of working with more than one community. The combination of Planning Committees and professional planning firms, along with detailed oversight from NYRCR staff, enabled the state to begin blending bottom-up community participation strategies with technical expertise to produce the communities' reconstruction plans.

In September 2013, with NYRCR staff, Planning Committees, and planning firms on-boarded, Round 1 of the NYRCR Program

began. The eight-month planning process included a series of intermediate steps that were designed to ensure that the final deliverable, the Community Reconstruction Plan with implementable proposed projects, was thorough and reflected the desires of the communities. Planning Committees first surveyed storm damages and assessed critical community poststorm issues and developed community visions. Next, they assessed their needs and opportunities and drafted resiliency strategies. From these needs, opportunities, and strategies along with community input, the Planning Committees created a series of implementable projects and policy recommendations. These projects and recommendations were refined throughout several meetings with the additional input of technical experts and engineers from the planning firms and community feedback. Final plans were published,⁸⁵ and the Governor's Office immediately began selecting projects that had a high degree of community support, were feasible, and were within the community's allotment for implementation.

The second round of the NYRCR Program began in June 2014 with the sixteen Round II Planning Committees. The process mirrored the methods for Round I, though there were small adjustments made. For example, because planning firms and GOSR staff had a better understanding of what projects would be eligible under federal funding laws, the Planning Committees did not have to spend much time during the project selection process tailoring their ideas. As a result, the planning process in Round I lasted only seven months.

To reward Planning Committees for their collaborative thinking, the NYRCR Program launched the Rising to the Top competition in both rounds. Additional award funding was offered to be added to community allotments. The total amount offered in both rounds was \$27.5 million. Categories included best use of green infrastructure, regional collaboration, and engagement of vulnerable populations.

4. Managed Participation: Horizontal and Vertical Engagement Mechanisms

The model of horizontal and vertical integration that we employ builds on the model developed by Berke, Kartez, and Wenger.⁸⁶ They define horizontal integration as mechanisms through which local people integrate with one another and also with community-based organizations, self-help groups, and local associations. Vertical integration is the quality of relationships between citizens and policymaking entities and institutions. The research indicates that both horizontal and vertical engagement are necessary for effective community planning because communities with a low degree of horizontal integration have difficulty organizing for collective action, and those with a low degree of vertical integration may have weak ties with central authorities and thus face problems in taking ownership of external programs in their communities. Since our focus is disaster recovery and resiliency, we further define horizontal and vertical integration as follows:

Horizontal integration:

- Inter-relations among members of local communities in terms of social ties, collective action, and responsibility; neighborhood ownership and sense of place; resource mobilization; and awareness of disaster vulnerabilities and community assets.
- Relations between local citizens and organizations, including emergency services, schools, churches, nongovernmental and nonprofit organizations, associations (e.g., homeowner associations), boards of business, Chambers of Commerce, and community groups.

Vertical Integration:

- Connection and access to political, social, and economic institutions and agencies, which may facilitate the flow of resources and adjusting policies in response to disasters and in anticipation of possible future risks.

These institutions are specifically policymaking entities at different levels, including town/city councils; mayor offices; city agencies (e.g., housing, city planning, and social services); county executives; and state governments. The critical role of state governments in bridging the gap between federal resources and local needs is extensively discussed in the literature⁸⁷ and is an important component of the NYRCR model.

New York State: A Managed-Participatory Approach to Community Reconstruction

Based on the horizontal-vertical framework defined above, we argue that the state's approach to resiliency and community reconstruction includes key elements of both components. It is vertically "managed" because the state takes leadership, arguing for and then allocating the federal-level resources to address community-level needs, therefore capitalizing on and improving connections between those communities and the policymaking bureaucracy. It is also horizontally "participatory" because the state facilitates mobilizing local knowledge and voice, reflecting it in the planning process and the Community Reconstruction Plans, and contributing to stronger social ties and more resilient neighborhoods for the future. This is done in the context of a consequential outcome, where successful plans will be funded, with \$3 to \$25 million allotted to implement projects proposed in each community. We named NYRCR's approach to community resiliency Managed-Participatory because the final product of its process — the reconstruction plans — would not be attained through either state management or local participation alone. The process requires them both to work together in order to achieve its goals. The following section unpacks the specific characteristics of horizontal and vertical integration in the planning process of the NYRCR Program.

Horizontal Characteristics of the NYRCR Program

- 1. Institutional Mandates:** HUD requires all recipients of CDBG-DR to include a “citizen participation” plan in their Action Plans. At the very top level, New York State includes six explicit mandates in its Action Plan and Community Reconstruction Policy Manual in order to encourage citizen participation.⁸⁸
- 2. Representation and Scope:** The diverse composition of Planning Committees enabled community members to build and strengthen community networks and be more aware of and involved in understanding local needs, thereby becoming more resilient against future disasters. As noted in the Program’s Policy Manual, “NYRCR Program staff identified potential Planning Committee Members through consultations with established local leaders, community organizations, and municipal officials. Committee members were selected with an eye toward creating Planning Committees representative of the community as a whole. Also considered were issues of geography, diversity, and the necessity to ensure participation of historically disengaged groups. NYRCR Program staff looked to fill potential gaps in the voices represented on each Planning Committee and strived to balance these deficiencies by identifying additional members.”⁸⁹ “Planning Committees, composed of community members, engage with their broader public to encourage participation in the planning process, solicit feedback and ideas for innovative projects, and build support for implementing NYRCR Plans.”⁹⁰ However, despite all these efforts, program staff members identified instances communities with less-engaged or hard-to-reach groups.⁹¹ While these groups may be traditionally reluctant to engage in broader communal action, their absence from the process can be a potential challenge to comprehensive horizontal integration, hence resiliency.
- 3. The Role of Technical Expertise in Encouraging Participation:** Professional planning firms selected to work with the Planning Committees were explicitly required to assist with developing and implementing a community engagement strategy. The New York State RFP document for hiring firms requires the firm “to assist the committee as it organizes, facilitates, and otherwise supports multiple public events. The Firm will support the Planning Committee as it develops an engagement strategy to determine the level, type, format, and purpose of community engagements throughout the planning process.”⁹² The RFP particularly obliged the firms to engage local participation in defining the plan’s

vision, and in general assigned them with specific roles to encourage public participation.

4. **Contribution of the Final Output to Participation:** The plan itself is required by the state to be committed to local participation and capacity-building. Two of the nine required plan components to qualify for implementation are directly related to community engagement:
 - a. “The plan should include an application of new technologies, methods of communication, and engagement forums that access, inform, and educate a large proportion of the population. Special attention should be dedicated towards vulnerable, underserved, and displaced populations. Plans should incorporate community engagement at every step in order to generate consensus in communities that vary widely in minority representation, low- or moderate-income status, disabled or elderly populations, or other groups especially vulnerable to the effects of natural disasters. Generating community support of the planning process should be given as much attention as the planning process itself and should be seen as one of the critical requirements necessary for the successful completion of a plan.”
 - b. “The plan should include working with other vendors and other communities to share best practice and identify project overlap and gaps, and the development of local public officials in planning process best practices and techniques.”⁹³
5. **Alignment of Professional Expertise and Local Needs:** The strategic pairing of professional planning firms and communities based on matching firms’ areas of expertise with communities’ local needs facilitated the flow of information, knowledge, and expertise between firms and community groups and stimulated local-level cooperation. The state assigned firms with strengths in certain areas to communities that were most vulnerable in those areas. By doing so, the state granted the communities with high-level expertise in those areas, but at the same time, helped the firms tap into local knowledge and resources in a smoother and more efficient way based on the match between their strengths and local need.

Vertical Characteristics of the NYRCR Program

1. **State Leadership:** Given the acknowledged effectiveness of state governments in connecting federal-level policy and resources with local-level priorities in disaster recovery,⁹⁴ New York State’s lead role in community resiliency contributed to stronger vertical ties between

different levels of government. It is typical for long-term postdisaster recovery plans to be either led directly or coordinated at the federal level,⁹⁵ both in terms of identifying and facilitating the availability and use of recovery funding, and providing technical assistance. In New York, the state took the lead in overseeing the entire recovery and resiliency operation since the very beginning, as described in Section 3. As an immediate response to Superstorm Sandy, the state established three separate committees to assess the statewide damage and come up with recommendations. *NYS Ready*, *NYS Respond*, and *NYS 2100* were all tasked with reviewing major vulnerabilities and developing recommendations to increase the state's preparedness for future similar disasters. Also, the state's Action Plan highlights its lead role in directing and supervising the recovery and resiliency operation through the chain of administrative delegation from DOS and HCR to NYRCR to local Planning Committees⁹⁶ — all within the context of adhering to HUD's regulations.

- 2. Encouraging Stronger Vertical Ties by Program Design:** Besides the role of the state, the design of NYRCR was also geared towards reinforcing vertical connections by bridging the gap between local-level input and higher-level policymaking. As described in Section 3, the program's design was inspired by the REDC program, which invites councils of local experts (businesses, academia, local governments, and nongovernmental organizations) to develop long-term strategies for their local economic growth.⁹⁷ Following the same path, NYRCR was also designed to bridge the possible gaps between the resources and expertise that federal-level policy offers from one side, and long-term risk, vulnerabilities, and resiliency analysis at the local level from the other side. One inherent challenge of this approach, however, is that, by its nature, it may serve to limit bottom-up community participation: Because these two practices are essentially at odds with one another, there exists a tension between them, and the NYRCR program design necessarily had to strike a balance between the two. The managed aspect of the process imposed a rigid structure by way of mandated schedules of meetings, events, and outputs — while not predetermining the outcomes themselves. The resultant final plans reflect this structure in that each of the completed plans have a uniform format. However, local communities may have made adjustments to the process if given the chance. As an example, different communities may need different numbers of meetings, or hours spent, on different topics depending on their risks, damages, and capacities.

3. **Facilitating Upward Flow of Information:** The NYRCR Program served to strengthen the vertical ties between citizens and policymakers by providing an additional and official channel to institutionalize the flow of knowledge and information about neighborhood-level vulnerabilities and resiliency strategies from the local level up. The importance of resiliency and preparedness at the community-level has been extensively discussed in the literature.⁹⁸ While individual properties, businesses, and buildings should be fortified against future disaster (e.g., postrecovery home elevations), resiliency must also be pursued in neighborhoods and larger communities because risk exposure is not limited to private property. Public goods (e.g., roads, coastal resources); community assets (e.g., environmental or historical heritage); local services (e.g., sport facilities, hospitals); and critical infrastructure (e.g., water pump stations) are also exposed to disaster risk and their resistance against future disasters contributes to more resistant communities. While resiliency is typically one of the general goals in disaster recovery, New York State singled it out as a separate and distinct program and highlighted its significance in bringing government-level economies of scale, creating a new channel for sharing information vertically, increasing civic capacities across all levels of government and administration, and strengthening ties between citizens and policymakers.
4. **Engendering Active Citizen Influence:** The NYRCR Program elevates the role of citizens from merely “informing” resiliency policy to actively steering it towards their community priorities by requiring local Planning Committees to engage with local citizens and organizations throughout the process — from identification of risks and vulnerabilities to suggesting alternatives and solutions, and commenting on final projects and plans.⁹⁹ This is highlighted in the participatory planning literature as the difference between illusory and effective participation: In the former, participation is steered towards achieving goals that may be predetermined by public policy or dominant local interest groups,¹⁰⁰ whereas in the latter, citizens and their representatives have genuine opportunities to influence both the policymaking processes and outcomes.¹⁰¹ This structure enables the general public to reflect its desires up onto the higher rungs of the policymaking ladder and influence the decisions that come from those higher rungs.

Chart 1 summarizes the activities pertinent to horizontal and vertical integration in New York State, alongside those undertaken by Louisiana and Mississippi.

Chart 1 – Horizontal and Vertical Integration Strategies in Community Resiliency

	NY	LA	MI	
Horizontal Integration Mechanisms	Positions Accessible to Citizens	✓	✗	
	Formalized Outreach Plan	✓	✓	
	Committee Meetings Publicized	✓	✗	No information
	Regular Progress Report	✓	✓	
	Other	✓	✗	
	Local Participation in Committee Formation	✓	✗	✗
Representation & Scope	Membership Criteria	✓ ?	✗	No action
The Role of Technical Expertise	Facilitation of Public Engagement	✓	✗	✗
	Reflection on Public Opinion	✓	✗	✗

Need-Based Technical Assistance	Tailoring Expertise to Need	✓	"Paired" firms' expertise with local need to facilitate use of local knowledge and participation of various stakeholders	✗	Individual experts were selected and deployed from among federal and state employees (and vendors) for three positions in housing, economic development and infrastructure--no independent mention of community reconstruction	✗	Individual experts were selected and deployed from among federal and state employees (and vendors) for three positions in housing, economic development and infrastructure--no independent mention of community reconstruction
Final Output	Commitment to Public Engagement	✓	Action Plan required final plans to be committed to public engagement ("access, inform and educate the public")	✗	While plans were prepared with participation of local citizens and organizations, final plans were not particularly required to contribute to further participation or capacity building	✗	While plans were prepared with participation of local citizens and organizations, final plans were not particularly required to contribute to further participation or capacity building
	Commitment to Local Capacity Building	✓	Action Plan required final plans to be committed to local capacity building ("work with other organizations and communities")	✗	While plans were prepared with participation of local citizens and organizations, final plans were not particularly required to contribute to further participation or capacity building	✗	While plans were prepared with participation of local citizens and organizations, final plans were not particularly required to contribute to further participation or capacity building

Vertical Integration Mechanisms			NY	LA	MI
Leadership	Direct State Leadership	✓	State government, through establishing three commissions, and later NYRCT	✗	Initially FEMA (ESF 14), which assisted the State with establishing GORR and MDA
Program Design and Structure	Encouraged Stronger Vertical Links	✓ ?	The program construct encouraged strong vertical links, however, its pre-designed process left less room for local adjustments and alternative approaches – while not predetermining outcomes.	No information	No information
	Independent Organization/Institution	✓	Institutionalized by identifying community reconstruction (resiliency) as an independent program	✗	Community resiliency was not a stand-alone program
Upward Flow of Local Knowledge	Required/Mandated	✓	Action Plan required planning committees to utilize local knowledge and present it to policy-making entities	✓	No information
	Local Participation in Risk Identification	✓	Action Plan required active public engagement in identification of risks and vulnerabilities	✗	Citizens' participation in identification of risks and visions was limited to surveys asking about the future of the State
Active Policy Influence	Public Input Prior to Final Projects	✓	Action Plan mandated public outreach events and meetings for recommendation of alternative projects and to provide feedback on the proposed projects	✗	No action
	Project Evaluation	✓	Planning committees were in charge of ranking the projects (proposed, featured and additional resiliency recommendations)	✗	While plans were prepared with participation of local organizations and citizens, ranking and approval was done by the State according to FEMA's ranking system

5. Stronger Reconstruction Plans

The final products of the NYRCR Planning Process were Community Reconstruction Plans. Strong plans are defined in various ways in the literature,¹⁰⁵ but the common themes most frequently highlighted by scholars include motivating broader citizen participation, improving local capacities, and ability to be implemented. In this section we first break these themes down to their components and put them in the context of horizontal and vertical integration – the former capturing local community engagement and the latter the upward flow of local information and needs, hence implementation likelihood. Next, we discuss aspects of the NYRCR Program that contribute to the definition of a strong resiliency plan, as evidenced by the two plans that we analyze in further detail as case studies.

To reframe the definition of a strong plan, we argue that strong plans are products of strong horizontal and vertical integration mechanisms working together, or in other words, are products of the Managed-Participatory approach. In our initial evaluation of the resiliency plans in New York State, we follow the lead of several authors.¹⁰⁶ Specifically, our indicators for a strong plan, divided into horizontal and vertical indicators, are a combination of those that they have used, reclassified as below.

Horizontal Characteristics of Plans

Strong plans are associated with strong public participation, not only nominally, but also in terms of participation mechanisms and quality. Godschalk's model¹⁰⁷ specifies six main elements that motivate horizontal integration and community networks:

1. **Staff Time and Organizational Dedication:** Broad and active public participation is directly associated with the amount of time the staff spends on promoting citizen involvement.¹⁰⁸ To achieve that goal, the NYRCR Program has specified an independent program for community resiliency with \$700 million in budgets, in order to differentiate between long-term reconstruction and short-term recovery response. Specifically, twenty-three full-time GOSR employees work with the NYRCR Program, including planners, policy analysts, and regional leads.
2. **Expertise:** Public participation is specifically stronger in places where it is also assisted by professionals.¹⁰⁹ The NYRCR Program required the planning firms and state staff to assist the committees in local outreach and community involvement, and to reflect the general public opinion in defining the plans' vision.¹¹⁰
3. **Variety of Objectives:** Different stakeholders can have diverging, or sometimes opposing, interests in a local neighborhood. In order to attract maximum participation on their part, the planning process must

incorporate the most diverse array of objectives, and express them to the community the most in-depth way. As a beginning step, the NYRCR Program ensured that the vision and objectives of every plan were identified and framed with active participation of all committee members (divided into short- and long-term goals).¹¹¹ An average NYRCR Plan includes between ten and twenty goals that crosscut between different sectors and support functions (public health, economic development, etc.).¹¹²

4. **Variety of Information:** The same logic applies to the types of information that are provided to community groups and citizens. In general, information empowers citizens and their representatives in actively influencing the planning process.¹¹³ What motivates local participation even more is the information generated by participants themselves, because it instigates awareness about neighborhood conditions and vulnerabilities.¹¹⁴ To achieve this goal, the NYRCR Program required the plans to memorialize all meetings and their input and outcomes (reflective of the locally provided information) in the plan. Planning Committees generated information about the impact of the declared disaster(s) on their community, and supplemented analytical work carried out by planners to compile lists of community assets. Furthermore, all of this was supplemented by public input gathered at public engagement events. Planning Committees also made sure that meeting notes from public engagement events were available to those who wished to participate.¹¹⁵ Besides this citizen-generated information, Planning Committees were also updated with administrative information by the NYRCR Program staff during each meeting.
5. **Stage of Involvement:** The earlier local participation is included in the planning process, the more participation it attracts. Brody shows that not having engagement mechanisms laid out during the preplanning phase visibly undermines the amount of participation by local groups.¹¹⁶ The key component in the NYRCR Program's preplanning process is to invite all individuals and community groups at the very beginning to public engagement meetings through a variety of mechanisms.¹¹⁷ Local community involvement is a requirement in identifying the critical issues, valuable assets, risks, and neighborhood vision and objectives, all of which occurred early in the planning process.
6. **Motivation Techniques:** Research shows that holding formal public hearing meetings is the most popular technique among public officials and planners to attract

local attention, but jurisdictions that merely relied on these meetings as their central effort obtained less participation in the end.¹¹⁸ Using various techniques and mechanisms significantly improves the rate of citizen involvement in planning. The NYRCR Program utilized multiple local resources and channels to reach the public, including printing flyers and posters, phone and on-line outreach, online meeting, local radio, TV channels, and newspapers. Public engagement events were manifested in various forms (e.g., charrettes and workshops), and in general, the NYRCR Program tried to avoid the traditional “public forum” format.

Vertical Characteristics of Plans

Strong plans are those that find their way to the government’s implementation agenda rather than being shelved and archived. The characteristics that motivate vertical integration, enhance the chances of implementation, and contribute to stronger plans are discussed below.

1. **Maximum Inclusion:** In order to go up the policy ladder, a community reconstruction plan needs to be reflective of the public opinion, but also tailored to the available resources, channels, and executive limitations. As Burby points out,¹¹⁹ the more “neglected groups” we see in the planning process, the less the chances of implementation. Bringing the often-neglected stakeholders to the table is particularly important because it increases the political effectiveness of the plan without being specifically political. In disaster resiliency, the neglected groups tend to pay the highest prices in the event of future disasters if community resiliency measures are not in place, as they are usually the least-informed and resourceful of groups. The NYRCR Program’s inclusion mechanisms cover both the committee-selection phase and public engagement events and aim for maximum inclusion. The “organic” method of selecting the members allows for ethnic, racial, or religious minority groups, the lower-income, the elderly, and the disabled to be represented by the committees.¹²⁰ However, despite this, it is hard to quantify if other groups that have traditionally been disengaged or harder to reach remained outside of the process.¹²¹ The NYRCR Program did make a comprehensive effort to inform all these groups and invite them for public engagement meetings through a variety of outreach methods — described in the last section.
2. **Local Translation of State-Level Mandates Through Participatory Planning:** As a part of meeting the federal government requirement for all CDBG-DR recipients to provide a clear description of their public engagement

strategies, NYRCR strongly encourages local planning committees to involve community members in the process of planning.¹²² As described earlier, this is meant to facilitate the transition of local priorities towards policymaking entities. But research shows that official mandates at the federal and state level cannot be sufficient in reaching a strong plan without local-level enforcement.¹²³ Even if a requirement is highly prescriptive and detailed about its public engagement guidelines, the lack of local capacities and mechanisms may still compromise the implementation phase. To augment the already-in-place state-level requirement with local action, the NYRCR Program assigned a group of regional leads to each reconstruction region (New York City, Upstate New York, and Long Island) to supervise the entire process from local committee formation through submission of plans and postplanning. In addition, it requires the committees to document and report on their public engagement events and how their outcomes are reflected in the process and in the final plan.

- 3. Tailoring Projects to Available Funding Sources:** GOSR worked to ensure that strategies and projects proposed in the plans were not only effective from a perspective of resiliency, but also feasible and likely to be implemented. To promote these goals, GOSR staff reviewed proposed projects to determine whether they would be eligible for funding through the CDBG-DR program, which is the source of funds that supports the NYRCR. GOSR also submitted proposed projects to the State Agency Review Teams, or SARTs. The SARTs are regional groups of state agency representatives assembled originally to provide feedback on REDC proposals. The SARTs reviewed proposals, offered suggestions based on their subject-matter expertise, and also provided information about what permits or regulatory approvals might be required to implement a project.

To summarize, strong community resiliency plans are those that engage horizontally, and are vertically implementable. Horizontal engagement is motivated by staff and institutional dedication, expert-led mechanisms, variety of objective and information types relayed to the public, timeliness of local participation, and diversity of motivation techniques. Vertical likelihood of implementation is enhanced by inclusion of institutional actors and translation of state priorities through community participation. In addition to these components, the Program's approach adds new features that can further enrich the definition of a strong plan.

What the NYRCR Program Adds to a Strong Plan

New York State's Managed-Participatory approach has produced reconstruction plans that go beyond the conventional definition of strong as discussed in the literature. Below, we summarize the most significant dimensions that it can add to our understanding of a strong resiliency plan.

The Process Alongside the Output: While it is not unusual for community plans to be developed in collaboration with local communities, what they ultimately set out is a list of final recommended projects, often without a funding source identified. Few plans manage to document the participation process and the path through which the planning team reached those final points. The NYRCR process, however, emphasizes the importance of the process by mandating the Planning Committees to dedicate a separate section of the plan to documentation of committee meetings, public engagement events, meeting outputs, and the material produced in participation with the public. The public engagement section of NYRCR plans lays out the planning timeline from the disaster landfall to establishment of the local committee, the meetings, the planning workshops, and the identification of projects. In a way, the plans not only suggest projects to improve resiliency and preparedness in communities, but memorialize a large-scale process of public engagement as well; potentially acting as a roadmap for other communities as they respond to future catastrophic events.

Realistic Recommendations: Depending on the balance between expert knowledge and public opinion, community plans may risk proposing too narrowed-down projects (what planners may recommend) or too ambitious ones (what local citizens may produce), both of which reduce the chances of the projects to be implemented.¹²⁴ The more realistic the projects, the more adaptable they will be to the existing funding and implementation channels. Typically, state governments filter through the proposed community projects using ranking mechanisms (as described in the case of Louisiana and Mississippi, who employed FEMA's recovery value system) in order to fund the most beneficial and realistic ones. The NYRCR process uses a built-in ranking mechanism, required in all plans, that shows each project's contribution to reducing hazard risks in the community, and thus facilitates the funding process. Specifically, community plans are required to use the DOS risk assessment tool to assign risk scores to major community assets, considering the three factors of hazard, exposure, and vulnerability. The final risk score is the aggregate of all three, and the projects that address the high-risk assets will have higher risk-reduction scores, designed to contribute to community resiliency.¹²⁵ Since using the tool and assigning risk scores may go beyond a local community's capacity, this is one of the areas in which regional leads and planning experts provide the committees with technical assistance. The risk-assessment component adds more detail to the proposed projects, and makes

them more realistic and easier to arrange for funding by the state. Further, as noted above, GOSR and its state agency partners in the SARTs reviewed projects for feasibility and eligibility for funding.

Motivating Further Local Organization: The strongest plans are expected to engage the public to the fullest capacity and be developed in collaboration with local communities. While the level of success in engaging the public differs from plan to plan based on their characteristics and strategies, there is very little mention in the literature of local citizen organization after the planning phase ends. In other words, strong plans should also institutionalize active participation within the communities for which they were developed. There is extensive academic research on the positive impact of community self-organization on postdisaster response (e.g., Smith¹²⁶), so plans that contribute to that goal also create stronger communities.

Community Empowerment: Along the same lines, strong plans also add to the existing capacities of local communities. In the most conventional way, they are expected to create safer neighborhoods with resilient infrastructure and built environment. What usually receives less attention are the nonplace-based aspects of community resiliency, i.e., the community itself. Regarding place-based resiliency, NYRCR plans attempt to contribute to safer neighborhoods through various types of resiliency projects such as coastal protection, utility upgrading, environmental maintenance, public service improvement, and disaster-specific facilities. But on top of these, the plans also instigate social resiliency. By providing a success story of local participation being translated into a community plan, they strengthen social cohesion and trust, and motivate citizens for future mobilization. The process of project identification also familiarizes the public with the existing policy and funding channels for disaster resiliency. NYRCR plans also entail projects that intentionally target community awareness and education about natural hazards and how the risk can be avoided through changes in individual and communal behavior.¹²⁷

In order to better demonstrate the above characteristics of reconstruction plans in the state, we discuss a case-study plan in further detail in the Appendix.

6. Conclusions and Policy Contribution

Our goal in this paper was to introduce New York State's NYRCR Program and make the case for its unique Managed-Participatory approach to disaster resiliency. Benefitting from the state's legacy of participatory action – manifested in EZ and, more directly, REDC programs, as well as the nascent recovery efforts after Irene and Lee – NYRCR was strongly invested in community participation from inception with the goal of optimizing statewide resiliency efforts. Specifically, NYRCR combined the horizontal mechanisms of public participation with a vertical state-level management according to our definition.

To analyze the characteristics of NYRCR in meeting the goals of horizontal and vertical integration, we first turned to the indicators that were most frequently used in the literature, including:

- Staff and organizational dedication,
- Expert-led mechanisms,
- Variety of objectives and of information types relayed to the public,
- Timeliness of local participation,
- Diversity of motivation techniques,
- Inclusion of neglected groups, and
- Participation enforcement at the local level.

Our analysis showed that while New York State meets all these criteria for producing strong community plans, it also adds new features that can further enrich the definition of a strong plan. Those added features are:

- Documenting the planning process as well as the final output,
- Recommending realistic and implementable projects,
- Motivating self-directed community organization, and
- Leaving communities with additional resiliency capacities.

Academic and empirical evidence tells us that disaster recovery generally receives far more attention by the federal and state governments than resiliency, or reducing community-level vulnerabilities to natural hazards.¹²⁸ Hazards may be discussed in policy circles and local communities, but usually they do not become serious concerns until after the disaster occurs. Introducing the Managed-Participatory approach and the findings of this paper are steps towards highlighting the significance of community resiliency both as a policy consideration and as a culture. Resilient communities, physically and socially, are products of focused policy processes, and policymakers need to be constantly reminded to take resiliency into consideration as a cross-sectional policy guideline.

Besides emphasizing the importance of aiming policy decisions towards resiliency, the state's experience also presents a new model for leading disaster resiliency operations. As discussed in Section 4, disaster recovery and resiliency typically initiates at the federal level and is then relegated to states or cities. The Managed-Participatory approach, however, provides successful evidence for state-level leadership and budgeting. While the state closely collaborated with FEMA on several grounds (individual and public assistance and damage estimation), it took leadership of its community reconstruction program, and facilitated production of strong resiliency plans and active public engagement. State leadership also improved both horizontal and vertical connections across the state through mechanisms discussed in Section 5. This

model provides insight for future policy decisions in the area of resiliency leadership and its optimal scale.

Stronger resiliency plans are more cost-effective, because they end up proposing a greater number of implementable projects, which in turn leads to more efficient use of public funds and staff time. Through employing the Managed-Participatory approach and the mechanisms previously discussed, the state adds to the strength of its plans by emphasizing the process as much as the final product, and working with the communities to propose the most realistic projects. The model, therefore, can be the foundation for replicable long-term resiliency policy and inform governments at the federal, state, and local levels.

7. Limitations and Future Research

While our analysis demonstrates that the NYRCR Program successfully integrated both horizontal and vertical characteristics of community planning and engagement through a Managed-Participatory planning process to create stronger plans and increase community resiliency, the benefit of hindsight provides us with some lessons about how the process might be improved and areas for additional research.

Optimizing Community Representation and Diversity in the Planning Process

As discussed in previous sections, the NYRCR Program sought optimal representation of community members throughout the planning process by engaging established local leaders, community organizations, and municipal officials in Planning Committee member selection and by rigorous and various outreach efforts and public engagement meetings designed to be as inclusive as possible. Despite these best efforts, we know anecdotally that there were groups in NYRCR communities that were resistant to engaging fully. Indeed, one of the academic critiques of participatory planning is that participation is dominated by the so-called “joiners,” those who are already civically engaged, or individuals with the time and resources that enable regular participation. The organic method of selecting Planning Committee members used by the NYRCR regional leads, while designed to optimize inclusion, could err toward identifying individuals who are already engaged or otherwise well connected in the community, since it primarily taps into existing community networks and institutions. Engaging more self-contained and insular groups was a challenge encountered in the NYRCR program, and it will almost certainly continue to be a challenge in future participatory planning endeavors. Additional study of the outreach and engagement strategies used in the NYRCR program and other participatory planning processes, with a focus on particularly difficult-to-engage groups, and their impacts on the strength of resulting plans will help to inform and improve future participatory planning efforts.

Balancing Top-Down and Bottom-Up Planning Practices

This paper establishes that the NYRCR Program is unique, particularly in the realm of disaster resiliency planning, in its integration of top-down (managed) and bottom-up (participatory) planning practices. Because these two practices are essentially at odds with one another, there exists a tension between them, and the NYRCR program design necessarily had to strike a balance between the two. The managed aspect of the NYRCR planning process imposed a rigid structure by way of mandated schedules of meetings, events, and outputs — while not predetermining the outcomes. The resultant final plans reflect this structure in that each of the sixty-six NYRCR completed plans have a uniform format. A major benefit of this managed structure was the expediency with which the planning processes were carried out — expediency of response being of particular value in the disaster recovery and resiliency realm; plans from communities in phase one of the NYRCR program took eight months to complete and plans from phase two communities were completed in seven months. It could be argued that the downside of this structured approach is that it may have resulted in plans with a narrower realm of outcomes. A less structured process may have allowed for greater diversity in approaches and, in turn, potentially more creative solutions to community-specific problems. However, it may have increased the chances for failure for the committees and/or proposals that fell outside the universe of eligible activities for this funding stream. Studying the success of the NYRCR plans, with both performance metrics described in this paper and more qualitative research about community buy-in and satisfaction (i.e., surveying community members involved in the planning process, and those who were not), and comparing results with metrics and information on other more and less bottom-up planning processes could yield great insight into striking the appropriate balance between top-down and bottom-up elements of planning.

Appendix¹²⁹

To provide examples of strong resiliency plans, we analyzed a case-study from New York City to highlight the diversity of its committee member composition, frequency of public engagement events, level of local participation, the added value of the planning firms in attracting public attention, variety of public outreach techniques, and the additional resiliency capacities created in the neighborhood.

Canarsie

Located in Southeast Brooklyn, Canarsie is exposed to three bodies of water – Jamaica Bay, Paerdegat Basin, and Fresh Creek. The neighborhood is home to approximately 90,000 residents, most of whom are of Caribbean origin.

Superstorm Sandy left the neighborhood with widespread damage. The high storm surge led to the flooding of homes and streets. Floods were exacerbated by sewer backup. Power outages were also rampant, temporarily closing down businesses and preventing residents from accessing supplies and support services.

The NYRCR Program started the planning process in Canarsie in July 2014 as a part of Round II Planning Area designation. The Program allocated a total of \$11.9 million to Canarsie to fund eligible projects proposed in the community's reconstruction plan. Canarsie's NYRCR Planning Committee was in charge of directing the planning process, with seven members and two co-chairs, all of whom voluntarily represent various constituencies: two religious leaders representing the Jewish community, representatives of community associations and business owner associations, and active residents concerned about the well-being of the neighborhood. Overall, the committee held ten Planning Committee Meetings during the course of the planning process, all of which were open to the public.

Besides its regular meetings, the Committee also held four public engagement events in July, September, November, and December 2014. With the assistance of three planning consulting firms that the Program hired, the committee managed to engage fellow community members through an open house style event that included dynamic discussions and interactive displays. The first public engagement event presented the Planning Committee's preliminary community vision, assessment of community assets, critical issues, and needs and opportunities. These were displayed on big drawing boards, on which local citizens could directly draw and write to provide their feedback. The second public engagement event allowed for the community members to vote on resiliency strategies that the Planning Committee had drawn up. Similarly, the third public engagement event asked the public to rank and vote for up to three Proposed and Featured Projects. The events provided valuable feedback that helped shape the final NYRCR plan. The last public engagement event was to present the full NYRCR plan to the community and ask for feedback. Minutes and descriptions of all four meetings are documented in the final plan.

To promote the public engagement events, flyers were distributed at local schools, religious centers, commercial corridors, and public transport hubs such as the L Train's subway station. The Planning Committee also partnered with community-based organizations (CBOs) to circulate flyers and display posters at storefronts. Promotional materials were written in English and Haitian Creole. Email blasts about the public engagement events were also sent out to community centers, local not-for-profits, schools, religious institutions, elected officials, local businesses, and residents in both languages. Online and print advertisement campaigns were launched through two local media outlets, *The Canarsie Courier* and *Caribbean Life*. Social media outreach was also done through the NYRCR's website, Facebook, and Twitter accounts.

After over seven months of planning, committee meetings and public engagement events, the Canarsie Planning Committee identified its short-term goals as:

1. Improve safety;
2. Increase resources for youth;
3. Improve transit and access to natural assets;
4. Integrate green infrastructure improvements to guard against flooding; and
5. Install resilient infrastructure for homes and public spaces.

Long-term goals included

1. Revitalize commercial corridors;
2. Reduce sewer backup into homes;
3. Establish community space for residents; and
4. Create a completely self-reliant neighborhood.

The variety of public outreach techniques helped the committee maximize public engagement, which led to a diverse and all-encompassing set of short- and long-term goals aligned with the interests of all participating groups. In addition, the plan includes three proposed projects specifically aimed at creating community awareness and strengthening community cohesion. In line with its short-term goal of increasing resources for youth, the plan proposed two projects that aim to educate Canarsie's youth about the environment and resiliency – the Canarsie Youth Environmental Education Program and Canarsie Corps Program. Another proposed project that aims to develop community cohesion, especially in times of disaster, is the Recovery Community Center. The center will be the hub to coordinate local relief services and supplies following disasters, which is a channel to direct further local participation after NYRCR leaves Canarsie.

The final plan is available here:

https://stormrecovery.ny.gov/sites/default/files/crp/community/documents/canarsie_nyr-cr_3-2_final.pdf.

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122. *State of New York Action Plan for Community Development Block Grant Program Disaster Recovery.*
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124. Burby, "Making Plans that Matter."
125. For more information about the risk assessment tool, see *New York State Coastal Management Program 309 Assessment and Strategies* (Albany: NYS Department of State, May 2015), http://www.dos.ny.gov/opd/pdf/Draft%20309%20Submission%20May_19_2015.pdf.
126. Smith, *Planning for Post-Disaster Recovery.*
127. As a good example, the Governor's Office of Storm Recovery (GOSR) awarded \$300,000 to the Research Foundation of the City University of New York (CUNY), to conduct a feasibility and planning study named "Go to High Ground" (GTHG). The project is a public awareness study that would serve as a continuous information campaign to visually educate the residents of Staten Island about storm surge. For more information, see *East & South Shores Staten Island NY: Rising Community Reconstruction Plan* (Staten Island: NYRCR Staten Island East & South Shores Planning Committee, March 2014): 116, http://stormrecovery.ny.gov/sites/default/files/crp/community/documents/stateniland_nyrcr_plan_20mb.pdf.
128. Susan L. Cutter, et al., "A place-based model for understanding community resilience to natural disasters," *Global Environmental Change* 18, 4 (October 2008): 598-606.

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