FOR THE LONG HAUL

Public-Private Partnerships for Long-Term Disaster Recovery

White Paper

Southeast Disaster Recovery Partnership

June 2018

The Southeast Disaster Recovery Partnership (SDRP) is a multi-state initiative whose mission is to provide training, resources, information, and industry support that coastal communities need to effectively recover from natural disasters. The SDRP's vision is for the Southeast's coastal economy and environment to have the capacity to recover quickly from catastrophic coastal storms. It is currently funded by the National Oceanic and Atmospheric Administration's Regional Climate Resilience Grant Program.

SDRP Partners

Scott Cave, Atlantic Business Continuity
Mary Conley, The Nature Conservancy
Charles Cyrille, Miami-Dade County
Rick DeVoe, South Carolina Sea Grant
James Green, Strategic BCP
Diana Greene, Myrtle Beach Area Chamber of Commerce
Bob Haywood, Federal Emergency Management Agency
Debra Hernandez, Southeast Coastal Ocean Observing Regional Association
Jennifer Kline, Georgia Department of Natural Resources
Amanda Martin, Southeast Disaster Recovery Partnership / UNC-Chapel Hill
Gail Moraton, Insurance Institute for Business Home Safety
Cathie Perkins, Miami-Dade County
David Perry, South Carolina Emergency Management
Sarah Pickhardt, South Carolina Emergency Management
Elizabeth Ryan, South Carolina Emergency Management
Hillary Sherman, Economic Development Administration
Gavin Smith, DHS Coastal Resilience Center of Excellence / UNC-Chapel Hill
Jessica Southwell, North Carolina Emergency Management
Joe Stanton, North Carolina Emergency Management
Joseph Stringer, Anderson Insurance and Charleston County EOC
Darien Williams, Southeast Disaster Recovery Partnership / UNC-Chapel Hill

The authors of this report are Darien Alexander Williams and Amanda Whittemore Martin.

University of North Carolina at Chapel Hill IRB No. 17-3013

Table of Contents

Executive Summary

The incidence and impact of natural disasters in the United States is increasing.[1] In 2017, disasters affected the lives 46.9 million U.S. residents, 15 percent of the nation's population.[2] At this scale of impact, the public sector does not, and cannot, take sole responsibility for recovery and redevelopment. In addition to sacrifices and investments made by individual households, private businesses invest in their own recovery and contribute to the recovery of families, neighborhoods, cities and towns. In the Federal Emergency Management Agency (FEMA) *Whole Community Framework*, the Agency calls on a variety of community partners, including businesses, to meet the growing emergency management needs of the United States, including disaster recovery.[3]

Building and maintaining partnerships is one of the primary strategies FEMA identifies for implementing the Whole Community Framework. Partnerships that include the public and private sectors have the potential to enhance the efficiency and effectiveness of efforts undertaken by individual firms and public agencies. Working together, partners can advance new efforts that build on the unique knowledge and capabilities present among actors from the public and private sectors.

This white paper examines public-private partnerships (also known as PPPs or P3s) active in long-term disaster recovery. We start by sharing insights about disaster recovery and P3s from existing resources. We then present case analyses of six partnerships, highlighting organizational structures, funding models, and lessons learned that the partnerships have shared with us. The report draws conclusions based on these six cases and makes recommendations for public sector officials, private sector leaders, and existing partnerships that wish to use organized, collaborative approaches to improve long-term disaster recovery.

The disaster response community breaks its work into several overlapping phases, known as the disaster cycle: hazard mitigation, disaster preparedness, disaster response, and disaster recovery. Disaster recovery is the long-term process of redeveloping the physical, social, and economic infrastructure of a community, and occurs over the months and often years following a disaster. Research and media have not explored the role of P3s in disaster recovery as much as they have looked at P3 participation in the mitigation, preparedness, and response phases of the disaster cycle. By learning from examples of P3s active in disaster recovery, stakeholders can facilitate their development in anticipation of potential disaster and assist in their prompt creation after disaster.

Traditionally, the term *public-private partnership* describes major public infrastructure projects. This white paper takes a more expansive look at P3s that operate at large and small scales, engage businesses of different types, and achieve a variety of objectives, including redevelopment, learning and information sharing, and policy and planning.

We distinguish three major goals that we see in P3s for disaster recovery.[4] Some partnerships focus on physical reconstruction, like the redevelopment of housing and infrastructure or the restoration of natural environments. We call this goal the *reconstruction objective*. Other partnerships enable or improve

---

[1] NOAA National Centers for Environmental Information (NCEI) U.S. Billion-Dollar Weather and Climate Disasters (2018), https://www.ncdc.noaa.gov/billions/.

[2] Brock Long, "Lessons learned from the 2017 hurricane season and a vision for emergency management moving forward," 2018 Natural Hazards Resilience Speakers Series, DHS Coastal Resilience Center of Excellence and UNC

Department of City and Regional Planning, April 16, 2018, University of North Carolina at Chapel Hill.

[3] FEMA, *A Whole Community Approach to Emergency Management: Principles, Themes, and Pathways for Action*.

[4] Adapted from Chen et al., "Public-Private Partnerships for the Development of Disaster Resilient Communities."

communication, coordination, training, and learning across the public and private sectors, which we call the *learning/information sharing objective*. Finally, some partnerships focus on developing and implementing policies and plans that facilitate effective disaster recovery, which we call the *policy/planning objective*.

Public-private partnerships achieve these objectives working in a variety of support roles, including economic recovery, housing recovery, infrastructure recovery, environmental and cultural resources recovery, health and social services recovery, and community planning and capacity-building for disaster recovery.[5]

The six partnerships profiled in this white paper reflect this diversity of functions. They are located within and outside the Southeastern United States. The cases include: Safeguard Iowa, SAFER Santa Rosa (Santa Rosa County, Florida), Public/Private Regional Resilience (Northeast Florida), Hancock Resource Center (Hancock County, Mississippi), the New Jersey Corporate Wetlands Restoration Initiative, and the Hurricane Matthew Disaster Recovery and Resilience Initiative (North Carolina).

These six partnerships share some common features, and interviews with their staff revealed strategies for success under a variety of missions and structures that can serve disaster recovery. These takeaways for action include:

1. Both disaster-specific needs and broader missions can catalyze public-private partnerships;
2. Partnerships do not need to focus exclusively on disaster recovery;
3. P3s can deliver resources for small-scale disasters and in low-capacity contexts;
4. Regular communication and engagement sustains partnerships;
5. Some P3s organize as non-profits to access funding sources;

6. Partnerships use active strategies to engage businesses and keep them involved;
7. Most partnerships rely partly on volunteers, who want to see the value of their work;
8. Partnerships pursue public interest objectives and outcomes; and
9. Recovering communities benefit from partnerships but examples are difficult to find.

---

[5] FEMA, *National Disaster Recovery Framework, Second Edition*.

Why Public-Private Partnerships for Disaster Recovery?

Across the United States, the impact and cost of natural disasters are increasing. In 2017, the nation experienced 16 separate disasters that each caused over a billion dollars in damage.[6] These disasters affected the lives of 46.9 million U.S. residents, 15 percent of the nation's population.[7] While the media often reports on these dramatic events around the clock while they occur, popular and political attention may dwindle in the weeks and months after a disaster. As a consequence, we do not often witness the long, hard work of disaster recovery that is key to shaping the vitality of communities as well as their resilience to the next disaster.

Disaster recovery is the last and longest stage in active disaster management (*see* Figure 1. National Disaster Recovery Framework and Stages of Disaster Management). After the life-threatening danger of a hazard has subsided, long-term disaster recovery, the "process of restoring, rebuilding, and reshaping the physical, social, economic, and natural environment,"[8] begins. This period, when physical, social, and economic infrastructure is restored and a sense of normalcy is regained, can take months to years. It is considered the most complex of the stages of disaster.

Disaster recovery provides an opportunity to increase resilience to the next disaster through structural adaptations, land use changes, or organizational capacity-building. However, this opportunity is often limited by financial resources, time pressure, and the tendency to rebuild housing and structures with the same vulnerabilities that they had before the disaster.

While active disaster recovery occurs in response to damage caused by a disaster, pre-disaster capacities and conditions shape the recovery process and its outcomes in many ways. For example, the availability of financial resources for recovery and the existing organizational capacity of agencies in the region will dictate the flow of the recovery process. Public and private sector leaders can take action in advance of disasters to build capacity for recovery. Recognizing the need for greater structure for federal disaster recovery, FEMA has identified capacities within the federal government that could be harnessed for disaster recovery. In 2011, FEMA released the National Disaster Recovery Framework, which provides direction for federal agencies and other partners to contribute to disaster recovery across six "recovery support functions," or RSFs, including economic recovery, infrastructure systems, health and social services, housing, natural and cultural resources, and community planning and capacity building.[9]

However, despite significant federal expenditure on disaster recovery, the federal government does not, and cannot, support successful disaster recovery on its own. FEMA's Whole Community Framework recognizes the important contributions of local businesses, non-profits and faith-based groups, residents, and government agencies in keeping a community safe during disaster. These contributions are especially important during the long-term recovery. While successful emergency management is characterized by centralized, top-down approaches, long-term disaster recovery is a more diffuse process that requires commitment from a wide array of stakeholders.

[6] NOAA National Centers for Environmental Information (NCEI) U.S. Billion-Dollar Weather and Climate Disasters (2018). https://www.ncdc.noaa.gov/billions/

[7] Brock Long, "Lessons learned from the 2017 hurricane season and a vision for emergency management moving forward," 2018 Natural Hazards Resilience Speakers Series, DHS Coastal Resilience Center of Excellence and UNC Department of City and Regional Planning, April 16, 2018, University of North Carolina at Chapel Hill.

[8] Smith, Martin, and Wenger, "Disaster Recovery in an Era of Climate Change: The Unrealized Promise of Institutional Resilience."

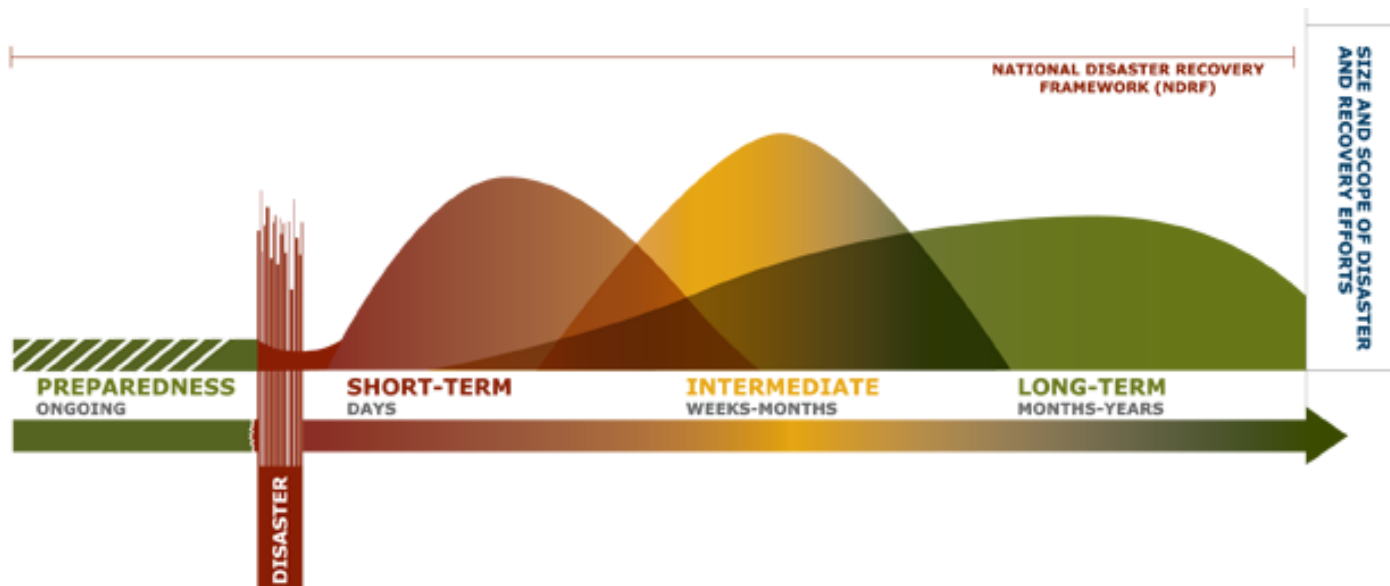[9] FEMA, *National Disaster Recovery Framework, Second Edition*.

Figure 1. National Disaster Recovery Framework and Stages of Disaster Management

In particular, businesses contribute to disaster recovery in a multitude of ways. The recovery of individual businesses contributes to overall economic recovery. Local businesses provide essential goods and services like gas, groceries, and prescription drugs; it is difficult for residents to remain in or return to a community if the businesses they typically rely on are not open. Jobs at local businesses also provide households the income they need to invest in their own recovery. On a larger scale, the private sector owns a great deal of our nation's infrastructure, from the power grid to communications towers, and disaster recovery often depends on the restoration of these utilities.

Given the important contributions of the private sector to disaster recovery, there are many reasons for public agencies and private businesses to partner with one another. In fact, FEMA recommends building and maintaining partnerships across sectors as one of the primary strategies to implement the Whole Community Framework. Public and private sector organizations have access to different kinds of information and resources and have the latitude to take different types of actions to support recovery. With more robust sources of information, firms and agencies can make more informed decisions about recovery plans and resource use. Communication pathways help disaster recovery stakeholders integrate vertically, by communicating needs from the ground to higher-level decision makers, as well as horizontally, by allowing organizations to work in concert rather that duplicating efforts.[10] Researchers have found that partnerships reduce stakeholder conflict, enhance mutual trust and understanding, and improve disaster resilience.

Partnerships for disaster recovery make business sense, too. Businesses are very sensitive to the amount of time it takes to re-open following a disaster, and partnerships help deliver time-sensitive information to and from businesses as fast as possible. Partnerships can enhance the delivery of outside financial support, personnel, technical assistance, or other resources needed during recovery. In addition, partnerships that include training for businesses and local officials enhance the relationships and capacities required for collaborative disaster recovery, including the networks used to disseminate information and resources. Strong public-private relationships enhance the capability of industry to recover from disasters while minimizing the

---

[10] Smith, *Planning for Post-Disaster Recovery: A Review of the United States Disaster Assistance Framework*.

disruption to suppliers and consumers both in disaster-affected areas and elsewhere.[11]

Traditionally, the term public-private partnership describes entities that develop or run major public infrastructure like transportation facilities and utilities. This white paper takes a more expansive look at partnerships that operate at smaller scales, engage businesses of different types, finance their activities in different ways, and achieve a variety of outcomes that we categorize across three objectives: reconstruction, learning and information sharing, and policy and planning. Some P3s for disaster recovery focus on physical construction, like the redevelopment of housing and infrastructure or the restoration of natural environments. We call this the *reconstruction objective*, one of three major goals that we identify for P3s in disaster recovery.[12] Other partnerships play a more facilitative role, enabling or improving communication, coordination, training, and learning across the public and private sectors. We call this goal the *learning/information sharing objective*. Finally, some partnerships focus on developing and implementing policies and plans that facilitate effective disaster recovery. We call this goal the *policy/planning objective*. Most partnerships for disaster recovery primarily pursue one or more of these objectives, but P3s could also perform other functions during recovery.

Reconstruction Partnerships

Reconstruction partnerships emerge when engineering and construction companies offer their expertise on capital projects following disaster. These arrangements, which may start as pro bono, ad hoc relationships, tend to become more formal when reconstruction project timelines are solidified and prioritized. Committees and task forces may convene private sector partners as consultants on a volunteer basis before bidding and contracting infrastructure projects. Consulting expenses are often covered through internal fundraising and cited as part of larger corporate social responsibility mission.

Other reconstruction partnerships take a more contractual approach, where the public sector formally engages private firms to rebuild public infrastructure. Reconstruction activities can focus on rebuilding damaged sites to their prior state, or they can reshape the built and natural environment for additional resilience to future disasters.

Examples of partnerships focused on reconstruction include:
- Partnerships of home improvement retailers and reconstruction non-profits or local governments that provide a reliable source or low price for redevelopment materials; and
- Partnerships among engineering firms, infrastructure owners, and government agencies focused on the redesign and redevelopment of water, sewer, electric, or other infrastructure after disaster. These partnerships may provide faster, more resilient, or less expensive infrastructure redevelopment.

Partnerships for Learning and Information Sharing

Many public-private partnerships in disaster recovery facilitate communication and joint learning among businesses, government agencies, and non-profits. Communication may focus on sharing the information businesses need from the public sector during recovery, needs in the private sector that government agencies should know about, or capacities in the private sector that could be applied to disaster recovery projects. Many of these partnerships have missions that include learning lessons about the effectiveness of different strategies implemented during disaster recovery, sometimes leading to joint decision-making regarding recovery policy and programs. Some partnerships become "learning laboratories" to identify best practices or gaps in recovery to address before the next disaster.[13] Pursuing the learning and information sharing objective generally requires smaller funding

---

[11] Stewart, Kolluru, and Smith, "Leveraging Public-private Partnerships to Improve Community Resilience in Times of Disaster."

[12] Adapted from Chen et al., "Public-Private Partnerships for the Development of Disaster Resilient Communities."
[13] Ibid.

commitments compared with capital reconstruction projects.

Examples of partnerships focused on learning and information sharing include:

- Partnership of local business organizations, emergency management officials, and economic development agents to ensure that local business needs are addressed during disaster recovery;
- Partnership of utilities and public officials who together identify redundancies in infrastructure that could improve disaster recovery; and
- Partnership of construction firms and job training programs to provide skilled and unskilled labor during disaster recovery.

Partnerships for Planning and Policy

Finally, some public-private partnerships focus their efforts on shaping plans and policies for disaster recovery and resilience. These partnerships may generate comprehensive plans for communities or recovery plans specific to an industry or sector. Or, partnerships may work to generate policy recommendations for a decision-making body, or advocate for the implementation of recommendations through policy or planning. If plans or policies seek to address or balance a diversity of interests, a partnership made up of a wide variety of public and private stakeholders is better positioned to meet that objective.

Examples of partnerships focused on planning and policy include:

- Partnerships with universities and local non-profits or governments to increase capacity for disaster recovery planning, financing, or implementation;

- Partnerships that include professional design, planning, or policy consulting firms that perform ongoing work in support of disaster recovery and resilience; and
- Partnerships that bring in the private sector to engage questions of local, state, or federal policy and support the implementation of policy recommendations.

Cases of Public-Private Partnerships for Disaster Recovery

This section examines cases of public-private partnerships that work in economic recovery, infrastructure, health and social services, housing, natural and cultural resources, and community planning and capacity building. These six areas of disaster recovery are parallel to the Recovery Support Functions identified in the National Disaster Recovery Framework, although the cases themselves are not part of the NDRF RSFs.

Methods

Cases were identified through consultation with the Southeast Disaster Recovery Partnership, FEMA's public-private partnership case collection,[14] and related public-private partnership and disaster recovery literature and resources. It was difficult to find examples of P3s that focus on disaster recovery. These partnerships may be relatively rare, or they may operate with little publicity or exposure. The cases in this report include some partnerships with an explicit disaster recovery mission, some with a general resilience focus and a particular role in disaster recovery, as well as some that have had private sector involvement but are not currently run as P3s. The authors conducted semi-structured interviews with representatives from each of the partnerships, reviewed mission statements and publications, and examined media, reports, and other publications that documented the partnerships' work. Elements analyzed for each case include: initiation of the partnership, mission and goals, program and operation, organizational structure, funding sources and scale, and challenges. The following partnerships are featured:

Partnership	Location	Recovery area
Safeguard Iowa Partnership	Iowa	Economic recovery
Public Private Regional Resilience (P2R2)	Northeast Florida	Infrastructure
SAFER Santa Rosa	Santa Rosa County, Florida	Health and social services
Hancock Resource Center	Hancock County, Mississippi	Housing
New Jersey Corporate Wetlands Restoration Partnership	New Jersey	Natural and cultural resources
Hurricane Matthew Disaster Recovery and Resilience Initiative	Eastern North Carolina	Community planning and capacity building

---

[14] Available at https://www.fema.gov/public-private-partnership-models

Safeguard Iowa Partnership - Economic Recovery

FEMA defines economic recovery as "the ability to return economic and business activities (including agricultural) to a state of health and develop new economic opportunities that result in a sustainable and economically viable community."[15] Public-private partnerships that focus on economic recovery can support the recovery of physical infrastructure that economies rely on, or they can facilitate channels for sharing information, financing, and other resources between and among the business community and government.

Located in the upper Midwest, the Safeguard Iowa Partnership (SIP) is a coalition of public and private sector leaders that builds the capacity of the private sector to survive and rebound during disaster and support the community in emergency response and recovery. SIP came into existence after major flooding across the Midwest in 2007. Iowa Governor Chet Culver asked state emergency management officials and infrastructure planners about how government could better connect with the private sector in the event of a disaster. State officials brought this question to the Iowa Business Council, a non-profit organization focused on statewide economic growth and technological advancement. Together, these business leaders and state officials formed the Safeguard Iowa Partnership to enhance collaboration and communication between government and the private sector. Partnership representatives developed goals rooted in the idea that "the government cannot and should not be the only responders in a disaster situation," recognizing that "the private sector has a wealth of knowledge and assets that may be needed during an emergency."[16]

SIP's goals and activities are oriented to the *learning and information sharing objective*. SIP primarily provides training and resources to the private sector and maintains information networks among businesses in case of disaster. SIP both implements trainings directly and also works through chambers of commerce and associations to deliver education to small businesses. Trainings focus on mitigating impacts to businesses in case of natural disaster as well as prevention, preparation, response, and recovery related to other types of threats, like cybersecurity, public health, and active shooter threats. Several online resources are also provided.

One of SIP's programs specific to disaster recovery is a business damage survey. Documenting and estimating damage is a major undertaking that supports petitions for post-disaster recovery funding. SIP recently developed the survey with input from Iowa Emergency Management Association. The survey is delivered online, and local and state government will have access to the data for the purpose of requesting federal disaster recovery funding. Accurate assessments of damage to businesses help make the case for recovery funding, but they also inform funders and other economic recovery support stakeholders who want to structure their aid programs to the greatest needs. SIP's ongoing maintenance of communication networks positions the organization to get the best yield possible on a business survey during disaster recovery.

---

[15] FEMA, *National Disaster Recovery Framework, Second Edition*.

[16] Safeguard Iowa Partnership, "Who We Are," http://www.safeguardiowa.org/who-we-are.

In the past ten years, SIP has engaged in numerous activities in support of emergency readiness, response, and recovery. Working closely with public officials, SIP has participated in eleven Emergency Operations Center activations, and has responded to eight requests by Iowa Homeland Security and Emergency Management for mobilized financial and informational resources from the private sector. Additionally, SIP has served as an information hub for businesses following a disaster like the massive flooding event that affected the state in 2008. SIP's "Back to Business" workshops, which typically follow major flood events, help businesses learn about financing recovery in the short- and long-terms. SIP has trained over 700 business owners and workers since its inception, building and maintaining contacts and relationships with each training.

SIP is incorporated as a non-profit. The partnership employs two full-time staff and maintains a $238,000 annual budget (54% from grants, 46% sponsor donations). It is free for registered businesses, government agencies, and non-profits or associations to join. SIP attracts these members by offering a channel of communication for clear, direct information from state officials following disaster, as well as access to networks, workshop events, and other resources. The partner roster boasts several hundred entities spanning four categories: 150 private sector companies, 129 public sector agencies, 52 non-profit organizations, and 31 associations. Private sector partners include small businesses, banks, insurance companies, and others. Municipal and county government agencies are also represented, ranging from police departments to post offices. Non-profits include faith-based organizations, health and social service providers, and professional unions and associations.

The Iowa Business Council continues to provide leadership to the partnership through advising and funding its work. Other funding sources include grants and private donations and sponsorships. Several public agencies and businesses have joined as sponsors, including the state's Homeland Security and Emergency Management Department, energy corporations, investment groups, and manufacturing, engineering and telecom firms.

When asked about challenges that face SIP, staff shared that funding and capacity limit the programs that the partnership can implement. With a full-time staff of just two people, the organization depends heavily on volunteers, whom they recruit from the ranks of partner firms and organizations. The constant limitation to SIP's work is finding capacity among volunteers, who must also balance their own occupational priorities regardless of whether or not their employer is sponsoring their volunteerism. While SIP greatly appreciates that volunteers make much of their work possible, one staff person remarked, "We just don't have the capacity or the funding to go beyond our current programs into the next area."

Public/Private Regional Resiliency (P2R2) - Infrastructure Recovery

Infrastructure in the United States is owned by a mixture of public, quasi-public, and private entities. Businesses, residents, and entire communities rely on a variety of infrastructure systems, and decisions about recovering those systems can dictate the speed and conditions of long-term disaster recovery. FEMA recognizes the role of infrastructure in its Infrastructure Systems RSF, which "works to efficiently facilitate the restoration of infrastructure systems and services to support a viable, sustainable community and improves resilience to and protection from future hazards."[17]

In Florida, the Public/Private Regional Resiliency committee (P2R2) of the Northeast Florida Regional Council (NEFRC) brings together private sector leaders to work on infrastructure resilience. NEFRC is council of governments that includes 26 municipalities across Baker, Clay, Duval, Flagler, Putnam, Nassau, and St. Johns Counties, Florida. As with all councils of governments, it is a challenge for NEFRC to make meaningful regional policy because there is no regional government to implement policy. Instead, they must rely on local governments to individually adopt regional strategies. In the mid-2000s, NEFRC decided to try a fresh approach to regional policy, creating a leadership academy for a variety of public and private leaders who would learn to think and work at a regional level and assist with implementing regional initiatives. Graduates of this academy formed a volunteer-based organization, the Regional Community Institute, oriented towards doing policy work for the Council.

This group developed a list of action items, including researching the effects of climate change on the region and identifying strategies to address these effects. Using data from the U.S. Army Corps of Engineers and the guidance of NEFRC, the group generated a Regional Action Plan on sea level rise in 2013.[18] The plan identified three key priorities: generating tools to better understand and communicate the effect of sea level rise on infrastructure; evaluating cost savings from wise investments; and engagement with other jurisdictions, residents, and the business community. To engage the business community, the plan called for the establishment of a Public/Private Regional Resiliency (P2R2) Committee. In the plan, the P2R2 Committee is charged with developing recommendations to "incentivize population and private development to locate outside of vulnerable areas."

Today, P2R2 is comprised of business owners, consultants, and public officials who meet on a volunteer basis, and their work focuses broadly on implementing the Regional Action Plan. Members include local chamber of commerce representatives, bankers, planners, academics, business associations, emergency managers, and others. At regular meetings of P2R2, the group discussed the best way to promote resilience in development, including during post-disaster redevelopment. To address this goal, P2R2 launched an Action Agenda[19] which included the creation of a new resource, the Northeast Florida Infrastructure Resilience Planning Checklist.

---

[17] FEMA, *National Disaster Recovery Framework, Second Edition*.

[18] Available at http://www.nefrc.org/WiP/PDFs/Resource-Library/Regional-Action-Plan.pdf
[19] Available at http://www.rcinef.org/P2R2_Action.html

The Infrastructure Resilience Planning Checklist[20] is a tool that helps public officials take climate change into account while making decisions about infrastructure maintenance and recovery. It extends regular site inspection and asks the user to project the infrastructure's performance in flood events, including considerations of exposure to water, performance when flooded, ability to modify the project to adapt to flood events, and overall functional and financial risk. Developed through work group meetings with local government officials, technical experts, and researchers and launched at a St. Augustine event that also focused on a sea level rise tool developed by the University of Florida, the checklist is a quick, accessible tool for local governments to utilize when considering infrastructural investment, particularly in the wake of disaster events and damaged facilities.

P2R2 helps with implementation at the local level through engagement with local decision-makers. In addition to the direct involvement of some local governments in the partnership, because several P2R2 members are leaders of local chambers of commerce, when mobilized, members can make the case to their local governments to plan in ways that protect their assets. The business community is an influential stakeholder in infrastructure and development decisions, and their interest in resilience helps shape conversations that happen at the local level.

Another P2R2 project involves conducting resilience workshops for home and business owners and local governments to help them understand what they can do during and following a disaster event to recover quickly. Other action items have focused on adding resiliency to the consumer education that banks typically carry out, hazard identification, and the creation of decision-making models to guide local governments in making long-term recovery policy decisions in resilient ways. In addition, P2R2 is interested in investigating whether banks could acquire

Community Reinvestment Act credits by financing resilient development and redevelopment.

P2R2's work focuses broadly on the ongoing goal of infrastructure and development resilience. However, their consideration of future risks during infrastructure and development decision-making will promote more resilient redevelopment in the event of disaster and disaster recovery. P2R2 is an example of how a partnership with broader goals of resilience is prepared to serve the context of disaster recovery. P2R2's work is oriented to the *planning and policy objective*.

P2R2 is driven by a committee of members, largely leaders from the private sector, who volunteer significant time, facilities, and resources to carry out partnership objectives. NEFRC supports their work with staff time. One of their greatest ongoing challenges is the classic problem of regional governance: there is no mechanism to hold municipalities accountable for regionally agreed-upon goals over the long term. With no way to enforce regular review of infrastructure and development decisions, this work requires active buy-in from municipal governments and sustained engagement from the community.

A second challenge is that it been difficult for P2R2 to develop quantitative metrics of success, defined as increasing the resilience of the region. One potential evaluation strategy would be to measure the tax value of property in hazard-prone areas over time in the region. However, this type of measure would require longitudinal study, the sort the partnership is currently too young to perform.

---

[20] Available at
http://www.rcinef.org/Infrastructure_Checklist_Form.pdf

SAFER Santa Rosa - Health & Social Services for Recovery

Health and social services are critical to community recovery following disaster. In normal times, families of all types rely on healthcare access in their community, and social services connect vulnerable families and individuals with resources. Residents will hesitate to return to a community post-disaster if the health and social services they rely on are unavailable, and their recovery will be slowed. In addition, healthcare is a major source of economic activity in many regions, and the recovery of the healthcare sector supports overall economic recovery.

The Support Alliance for Emergency Readiness (SAFER) is a partnership based in Santa Rosa County, Florida with a mission to "foster efficient, streamlined service delivery to people affected by disasters." Partnership goals focus on efficiently connecting physical, financial, and informational resources with unmet needs through all phases of disaster. During non-disaster times, the organization focuses on meeting the needs of vulnerable populations in the county. SAFER developed out of an informal long-term recovery committee led by county emergency management and private stakeholders after Hurricanes Ivan (2004) and Dennis (2005). It is a coalition of organizations that contribute to human services delivery, and its focus on disaster recovery also includes business continuity.

SAFER's work is focused in three areas: communication, leadership, and engagement. In order to foster enhanced communication, the organization distributes weekly newsletters covering local needs, requests for donations and assistance, information, and opportunities. SAFER builds leadership and engagement through information sharing, workshops, and other training opportunities. The coalition's activities across focus areas is overseen by multiple committees, including committees for unmet needs, case management, business continuity, recovery, preparedness, logistics, volunteers, administration, and public relations/marketing. During disaster recovery,

SAFER primarily has a *learning/information-sharing objective*, connecting needs to resources in the community. However, it has also facilitated *physical reconstruction* partnerships after disaster.

When SAFER was founded in early 2009, its leadership was structured among four groups: businesses, non-profit organizations, faith-based organizations, and governmental agencies. The board of directors arranges for near-equal representation across these groups. Currently the board includes the voices of five businesses, four faith-based organization leaders, four non-profits, and three local government agencies (the County Health Department, Public Works, and the state legislature representative's office). This representation parity is written into SAFER's organizational bylaws, ensuring perspectives across different sectors are included and no set of interests dominates another's. Beyond board representation, SAFER avoids rigid organizational structure; where partners opt for case-by-case structures depending on needs and projects that come into the partnership's purview. Over 100 entities are currently represented as partners, participating in capacities ranging from passive receipt of the newsletter to volunteer coordination, workshop facilitation, and disaster continuity planning.

SAFER's work in post-disaster recovery is not limited to presidentially declared disasters. For example, in 2009 a fire destroyed a large portion of the historic downtown of Milton, Florida. SAFER sent out a request for assistance to its network, detailing the needs of a homelessness non-profit whose offices were destroyed. Within a week of the event, SAFER partners and their allies had provided for the homelessness organization's immediate needs, including a new office space, furniture, food, and clothes to continue operations. Additional aid was given to help the organization transition to a more permanent solution. SAFER also facilitated a relationship between county partners and Lowe's Home Improvement following a major flood in 2014. This arrangement aided in physical reconstruction, enabling partners and local officials to access supplies at a contractor's discount, facilitating their recovery. P3s like SAFER are positioned to provide recovery assistance for disasters of smaller scale, where communities and regions must rely on resources within their own boundaries.

SAFER has expanded its engagement efforts from traditional hazard events (fires, floods, etc.) into ongoing issues such as poverty. This extension serves the partnership in two ways. First, addressing ongoing community challenges like poverty requires some of the same skills as providing healthcare and social services to vulnerable communities during and after disaster, giving the organization the opportunity to develop and use its capacities. Second, by participating in year-round projects, campaigns, and activities, partners and volunteers are kept engaged for when major disaster events occur and institutional memory is maintained.

SAFER holds in-person events to maintain its community presence and to engage its ranks of volunteers. For example, on the Annual Day of Service, SAFER mobilizes volunteers to explain disaster preparedness, solicit donations, as well as connect with stakeholders who may not yet be partners. This major effort helps SAFER maintain the relationships necessary for effective information dissemination in the event of a disaster. This program also serves as a major marketing

mechanism, generating interest and funding opportunities for SAFER. The partnership organizes other engagement events such as a consumer disaster preparedness expo that occurs alongside a joint faith-police community relations event called Love My Neighbor.

SAFER describes its major challenge as increasing and maintaining partner involvement. To be effective following a major disaster, SAFER's relationships and networks need to be active and partners need to know one another and use established channels of communication. These networks and communication channels must be cultivated constantly, which is an example of pre-event preparation for disaster recovery.

In Santa Rosa County, like all places in the United States, disaster recovery efforts face major funding gaps after non-declared events. SAFER's future projects include a Disaster Fund that could finance the hiring of case managers to assist local businesses during non-declared disasters. Even in events where federal or state funding would be available for disaster case managers, locally funded case managers would likely be able to start working more quickly.

Hancock Resource Center - Housing Recovery

Housing recovery is an iconic part of disaster recovery. As FEMA writes in the National Disaster Recovery Framework's Housing RSF, "Housing is a critical and often challenging component of disaster recovery, but must be adequate, affordable, and accessible to make a difference for the whole community." Housing plays a major role in recovering communities as well as in shaping a community's overall resilience or vulnerability to disaster. Private and public partners have many reasons to coordinate on housing recovery. Nearly all housing in the United States is privately owned and developed, but financing for housing development, particularly affordable housing development, comes from both private financial institutions and public sources like tax incentives and Community Development Block Grants. Decisions about how to rebuild – whether housing must meet new standards or where it will be permitted – affect developers as well as neighborhood and downtown retail business owners. Both business owners and their employees must have their own housing to be able to re-open businesses.

The Hancock Resource Center (HRC) is a Hancock County, Mississippi-based organization that began with a mission to guide and support housing redevelopment after Hurricane Katrina, a *reconstruction objective*. Today HRC is a full-service community development non-profit, providing housing services, youth development, violence prevention, and other ongoing services to the community. Since Katrina, the Center has also responded to Hurricanes Isaac and Gustav and the BP oil spill.

After Katrina, Hancock County faced staggering needs for recovery. There were no housing organizations in the county, and over 65,000 housing units were damaged or destroyed. Many external volunteer organizations stepped in to help rebuild immediately after the storm. The County established a recovery commission to organize its own work. The Hancock Chamber of Commerce, which formerly had focused solely on services to its members, joined the commission as a civic organization.

The Chamber first stepped into housing recovery to respond to the problem of misunderstandings and lack of clarity about the County's new building codes. Recognizing that recovery work required grant funds that often are distributed to non-profits, the chamber initiated a 501(c)3 called the Hancock Community Development Foundation. The United Way of South Mississippi provided a small grant to get a housing "One-stop" center off the ground. The One-stop provided a convenient place where builders and homeowners could come to have their questions answered. The One-stop's advisory committee, made up of local stakeholders, eventually merged with the County's Long-Term Recovery Committee, the group charged with addressing unmet rebuilding needs, which had previously been run by national volunteer organizations. This shift provided administrative funding associated with case management, which in turn allowed the Chamber to hire an Executive Director from its own staff. The Hancock Community Development Foundation wanted to remain a fiscal agent rather than a program administrator, so in coordination with both the Foundation and the Chamber, Hancock Resource Center (originally the Hancock Housing Resource Center) spun off from the Chamber and registered as an independent 501(c)(3) non-profit.

Since its inception, HRC has administered many redevelopment and recovery programs for the community. But their work has not been limited to post-disaster housing redevelopment. As a staff person remarked, "We started off with the idea that we would work ourselves out of a job. As soon as recovery was done, we would go away. What we learned on the road away from Katrina was that there were a lot of problems that existed in the county before Katrina that were not visible. Katrina sort of ripped the roof off the building [so to speak]. As these problems evolved, we were very fortunate that there was a lot of Katrina-related funding that was available to build capacity."

HRC's work beyond disaster recovery keeps the organization ready in the case of another disaster. As a

HUD-recognized community development corporation, the organization addresses community issues that affect housing security, like veterans' resources and domestic violence. While the HRC serves on the county Emergency Operation Center in disaster, it receives no funding to do so, but grants associated with tackling upstream housing issues do provide a revenue stream. Administering ongoing community programs also maintains the partnership's capacity to respond to disasters if needed. As a staff person describes, "Part of our commitment when the dust settled from Katrina was not to lose the institutional knowledge that we gained after we went through Katrina."

HRC has responded to some gaps left by the traditional suite of long-term recovery resources. Building local capacity during the post-disaster period changed the dynamics of recovery resources in Hancock County, as it does in many places. While the recovery could not have succeeded without the work of national volunteer organizations, the transition to local stakeholders as the dominant recovery agents led to some conflicts. HRC notes that national disaster recovery organizations may not have an "exit strategy" to transition recovery work to locals, where capacity exists.

In addition, as the recovery effort gained ground in Hancock County, local contractors struggled to find work when volunteer organizations were building for free. HRC began to write the cost of paid labor into its grants, an approach that funders have not always favored. However, the organization advocated for paid labor in order to assist in economic recovery by providing jobs and to ensure the highest quality rebuilding possible, as some homes built by volunteers were substandard. In addition, support for paid labor helped strengthen the base of HRC's local supporters.

HRC is led by a board that includes the chamber of commerce, educators, an emergency management

agency, faith organizations, a bank, and community members. The Center employs 14 staff members. As of the last annual report, HRC's staffed efforts were paired with over 1,800 hours of volunteer labor, valued at $37,195.

New Jersey Corporate Wetlands Restoration Partnership - Natural & Cultural Resources Recovery

Disasters can damage and destroy natural environments as well as "cultural resources," or historic places and cultural artifacts. Natural resources provide human settlements with protection from stormwater in rain events, and also have intrinsic value, such as habitat for animals. However, nearby development can make it difficult for wetlands or other ecosystems to undergo natural restoration and migration after a natural disaster. Cultural resources are also inherently valuable, providing connections across generations and helping people access history. These resources are often located near water, which makes them vulnerable to loss. Because natural and cultural resources have a public value that can be difficult to monetize, it can be challenging to bring funds to the table for their restoration after disaster. Nonetheless, public and private partners come together in a variety of configurations to restore and rebuild these resources. FEMA recognizes that post-disaster recovery of natural and cultural resources depends on the community and legal context of the resource, calling for the RSF in this area to "preserve, conserve, rehabilitate, and restore [natural and cultural resources] consistent with post-disaster community priorities and in compliance with applicable environmental and historical preservation laws and Executive orders."

The New Jersey Corporate Wetlands Restoration Partnership (NJCWRP) corrals the resources, expertise, and interests of a variety of public, private, non-profit and academic partners "to protect, enhance and restore important aquatic habitats and water quality in New Jersey."[21] The partnership focuses on funding projects like habitat restoration, marshland protection, fish passages, education and outreach, and cultural and historic projects. The NJCWRP is the state chapter of the national network of Corporate Wetlands Restoration Projects, which operate primarily in the Northeast with

the support of the Coastal America Foundation. NJCWRP has a *reconstruction objective*, which in this case refers to restoring the natural environment.

The chief function of NJCWRP is to bring private sector funding into recovery efforts. A staff member describes that founding members of the partnership recognized there was "a great deal of government money from various sources earmarked for restoration that's left on the table because there's no private match." These unused dollars, which were available if matched with private resources, provided partnership founders with a compelling proposal for potential corporate partners who were interested in making a difference in wetlands restoration.

NJCWRP provides funds for projects that have already completed the design, engineering, and permitting stages. Eligible projects must be located on public land, which includes land owned by non-profit land conservancies, and each project must have a federal, state, or local governmental partner. The Partnership will contribute up to $25,000 in funding, which usually cannot exceed 25 percent of the entire budget for the project. On a monthly basis, government partners, consulting firms, and conservation groups with technical expertise convene to review potential projects for alignment with the Partnership's mission and current capacity. "If the group thinks a project is worthy, they make a recommendation for funding and we have a cutoff of $25,000, which is the max we

---

[21] NJCWRP, "About Us," http://www.njcwrp.org/about-njcwrp.

commit to a project. We look for as much leverage as possible – an applicant with a commitment to funding from multiple sources," according to an NJCWRP representative. Funds primarily go towards restoration. Occasionally, NJCWRP funds support project components that government sources cannot, such as signage or education.

NJCWRP provides funding to protect and enhance wetlands on an ongoing basis, and after Superstorm Sandy, the Partnership recognized a role for their work in recovering and restoring wetlands damaged by the storm. NJCWRP was able to provide private match funding for federal grant applicants to study storm impacts to wetlands and restore tracts of land with the joint goals of ecological habitat restoration and flood protection.

Private sector members range from major corporations to small businesses, which commit fairly modest annual dues and in return receive recognition as stewards of the local environment. Many business members' entry-point is through business associations such as the New Jersey Business & Industry Association or the state chamber of commerce. NJCWRP attracts corporate partners by providing a structured opportunity for corporate social and environmental responsibility. The Partnership emphasizes that private sector "match" funds can leverage much greater sums of grant funding. In addition, participation can provide firms with new relationships to public sector agencies or other businesses. NJCWRP is chaired by PSE, an energy company, and includes a diverse range of companies that contribute alongside non-profit environmental organizations and academic partners. Membership dues are $5,000 for large corporations, $3,000 for small corporations, and $500 for NGOs, but dues may "paid" as in-kind services, as well.

Since the Partnership's inception in 2003, NJCWRP has completed numerous restoration projects. Twenty-six corporate partners have participated, providing over $700,000 worth of financing, expertise, and materials.

These efforts have supported projects that span over 520 acres and 25 stream miles, according to the Partnership's website, and provided private sector leverage to $8,500,000 of project costs.

Moving forward, the Partnership seeks to increase membership and keep existing companies engaged in the Partnership's work. One challenge is that typically one or two key executive staff often initiate and lead a company's NJCWRP participation, and if they leave the firm, its corporate participation dissipates. Partnership representatives are interested in developing a standard way to institutionalize participation within member companies, instead of relying on individual relationships.

Hurricane Matthew Disaster Recovery & Resilience Initiative - Community Planning & Capacity Building

FEMA's Community Planning and Capacity Building RSF focuses on the capacity of public agencies to plan their recoveries and implement their recovery strategies, as well as the ability to engage communities in visioning and decision-making. Ideally, "recovery planning in the post-disaster environment builds short- and long-term community resilience, empowers local leaders and stakeholders and improves recovery outcomes for the individual and the community," according to FEMA's NDRF. Communities impacted by disaster have the potential to access and receive significant funding for redevelopment, but they may not have the ability to corral resources toward shared goals or manage responsible implementation of projects. Partnerships offering support to community planning and capacity building might offer technical planning expertise, ongoing support for programs, and funding.

Despite the identified need for planning and capacity building, the authors had difficulty locating a true public-private partnership that contributes to community planning and capacity building. State and local governments often retain private firms to complete recovery planning, but these tend to be one-off relationships without a longer-term commitment to collaboration and without any capacity-building. This case highlights a university-public partnership that has supported post-disaster community planning; this model can offer insights for future partnerships that include private sector partners.

After Hurricane Matthew flooded many communities in North Carolina's rural coastal plain, leaders from the University of North Carolina at Chapel Hill (UNC-CH), North Carolina Division of Emergency Management (NCEM), and the governor's office came together to form the Hurricane Matthew Disaster Recovery and Resilience Initiative (HMDRRI). HMDRRI seeks to analyze the impacts of Hurricane Matthew to the state, provide policy analysis and recommendations to the governor and NCEM, and assist communities with disaster

recovery planning, all of which are *planning/policy objectives*.

North Carolina's Director of Emergency Management initially pitched the concept for the organization, which would connect state government and university capacity. Emergency management agencies often become responsible for managing state-level recovery efforts, a charge that frequently exceeds pre-disaster capacities in the agency. HMDRRI was able to bring together the expertise of UNC-CH's Center for Coastal Resilience, a "Center of Excellence" funded by the federal Department of Homeland Security, as well as the UNC-CH Department of City & Regional Planning, the North Carolina State University (NCSU) Department of Landscape Architecture, and planning and landscape architect consultants.

Since its inception in 2016, HMDRRI has produced architecture and landscape design recommendations, policy analyses, and local plans. HMDRRI developed land suitability analyses for locating new development out of the floodplain, examined downtown flood retrofit options, recommended strategies for redevelopment of affordable housing, and developed design guidelines for resilient, culturally appropriate housing and open space in flood-impacted

HMDRRI
Hurricane Matthew
Disaster Recovery and
Resilience Initiative

communities. HMDRRI's community planning efforts focused on six towns with significant disaster damage and limited municipal capacity for planning and implementation: Fair Bluff, Kinston, Lumberton, Princeville, Seven Springs, and Windsor. With support from NCEM staff and FEMA's Community Planning and Capacity Building staff, HMDRRI stakeholders have led visioning and design workshops in several of these communities. HMDRRI has also provided training opportunities for numerous graduate students from UNC-CH and NCSU.

HMDRRI funding has primarily come from public sources. The North Carolina Policy Collaboratory, an initiative funded by the state legislature to bring university expertise to the state's environmental problems, has provided over half a million dollars in funding. Other funders include North Carolina Emergency Management, the U.S. Department of Homeland Security, and the state legislature. HMDRRI also brought in nationally renowned community design experts for a five-day charrette in Princeville, North Carolina. HMDRRI interested those private partners through an appeal based on both the historic value of the town, which is the first U.S. community chartered by African Americans, and by providing a concrete and time-limited way for professionals to donate their time.

While Hurricane Matthew was a federally declared disaster, HMDRRI provides assistance that is not necessarily available through Stafford Act programs and would serve communities that face recovery from a non-declared disaster recovery. In addition, while the project has primarily been funded through public sources, firms with a stake in local resilient recovery and community capacity might fund similar partnerships in other places.

Takeaways for Action

Each of the case partnerships contributes to a different arena of disaster recovery and resilience, and they do so via a range of objectives, including physical reconstruction, learning and information sharing, and policy and plan development. Across these diverse cases, there are lessons for public-private partnership formation, scope, objectives, and sustainability.

Disaster needs and broader missions catalyze public-private partnerships

In four of the six cases presented in this paper, a large-scale disaster event catalyzed the creation of the partnership. Often, there was a clear disaster recovery need that existing resources could not address. A public agency or elected leader suggested private (or non-profit) sector organizations that were better positioned to meet those needs. In some cases, contributing private sector actors were already at the table, discussing disaster recovery or participating on committees. In other cases, pre-existing relationships, formal or informal, helped public sector leaders reach out to key partners outside of government. Two of the partnerships, P2R2 and NJCWRP, began as mission-oriented partnerships to improve resilience and to fund wetlands restoration, respectively. These two partnerships began their work outside the disaster recovery context and later identified the specific relevance of their work to recovery.

Recommendation

When identifying disaster recovery needs and gaps in capacity, the public sector should make sure to have private sector firms at the table, including those with a stake in recovery and those with potential resources, relationships, or expertise to lend. Public officials and all disaster recovery stakeholders should explore ways in which private firms or business organizations might be able to serve the recovery, and those private interests should have an open mind about how they can expand their mainline work to support recovery. All of the partnerships in these cases leveraged pre-existing relationships to get started. Relationships among public

officials, private firms, and non-profits should be nurtured on an ongoing basis. At the state level, emergency management activities are a sensible context for these relationships because firms that have relationships in other parts of state government might not be known to public officials who identify recovery needs and gaps. At the local level, public officials and private sector leaders may work with one another in a variety of contexts, and these same individuals are likely to be at the table when discussing disaster recovery.

In addition, public agencies should include private sector stakeholders in the development of a recovery plan, in which the capacities for recovery across the community are outlined in Recovery Support Functions. The development of a recovery plan can also help a community achieve greater buy-in for more resilient redevelopment patterns. It can be difficult for public agencies to get business representatives to planning meetings; instead, those agencies may have more success by reaching out to people whose job it is to represent businesses, such as chambers of commerce or industry associations. Larger businesses may have staff dedicated to continuity or emergency operations who also are more likely to see their involvement in a recovery plan as part of their job.

Partnerships do not need to exclusively focus on disaster recovery

Some P3s that contribute to disaster recovery are not specifically oriented to disaster recovery in name or mission, such as the New Jersey Corporate Wetlands Restoration Program and P2R2. These organizations both formed outside of specific disaster recovery efforts. Other P3s start with a disaster recovery mission, like the Hancock Resource Center, and become embedded in longer-term missions to serve communities after the disaster is over. An organization with an institutional memory of assisting disaster recovery is more likely to be able to serve recovery again if needed. In fact, partnerships that maintain active programming under blue skies are well-positioned to help with recovery by organizing volunteers, administering grant funds, or connecting

businesses and residents to resources in the next emergency.

Recommendation

The capacity of existing P3s could be expanded to serve disaster recovery. Partnerships that focus in areas as wide as housing, economic development, local planning and policy, environmental quality, downtown and community development, historic preservation, and infrastructure have roles to play during disaster recovery. Agencies and organizations that do focus on disaster recovery could reach out to initiate a conversation with those partnerships about their potential role in disaster recovery. Alternatively, these existing partnerships may identify a need to address disaster resilience, and they could proactively position themselves to serve in a disaster recovery by building relationships with stakeholders more traditionally involved in recovery, such as emergency management agencies.

P3s can deliver resources for small-scale disasters and in low-capacity contexts

Media coverage of post-disaster P3s often captures the efforts of large, corporate projects that reach hundreds or thousands of survivors after widespread, devastating events. These partnerships provide critical services at a large scale, sometimes without the red tape of government efforts. However, more often, disaster recovery occurs on a smaller scale. Disasters with highly localized impacts do not rise to the level of a Presidential Disaster Declaration, which is required to trigger federal disaster recovery resources. In these smaller disasters where federal resources are unavailable, local P3s may have an even more important role to play. For example, SAFER Santa Rosa has a mission to prepare health and social services for a large-scale disaster recovery, but with these capabilities, the organization was able to activate recovery resources after a downtown fire which wasn't eligible for major public recovery aid. The Hurricane Matthew Disaster Recovery and Resilience Initiative does not rely on federal disaster recovery aid for its funding. A smaller scale can also have other advantages; local P3s may be able to offer greater speed, flexibility,

and leadership, and find it easier to achieve a major impact.

Recommendation

Small businesses and local organizations should consider themselves significant contributors to disaster recovery, even if the scope of what they can offer is limited. Partnerships that have worked in presidentially declared disasters should consider how their resources could be activated in response to smaller, non-declared disasters. A plan could identify roles that the partnership can play when Stafford Act funding is not available. Larger partnerships may need to generate new relationships to work in response to a local disaster.

Regular communication and engagement sustains partnerships

Partnerships rely on regular outreach and member engagement, especially between disaster events. Some partnerships like SAFER Santa Rosa distribute a newsletter, while others like the New Jersey Corporate Wetlands Restoration Partnership hold a monthly meeting. Multiple case partnerships run regular volunteer days or trainings to keep members engaged with and contributing to the partnership. These regular opportunities for partners to contribute are vital to sustaining energy for a partnership over the long run.

Recommendation

Partnerships should institutionalize multiple ways for partners to stay engaged in the work, especially during periods when there is not an active disaster recovery. Consider communication channels as well as activities that give partners an opportunity to contribute, and make sure their timing and format matches the availability and practices of existing members. In addition, multi-way communication channels can deepen relationships and ensure that the partnership is responsive to conditions on the ground. Listening sessions, surveys, and partner input on communication can provide these channels.

Some P3s organize as non-profits to access funding sources

Some public-private partnerships, like the Safeguard Iowa Partnership and the Hancock Resource Center, evolved into more formal organizations with 501(c)(3) non-profit status. According to staff of partnerships that have become non-profits, this process helps organizations orient themselves toward durability and long-term goals. In addition, non-profit status can help a partnership solicit donations by offering a tax deduction. Non-profits are also eligible to receive certain grant funds. For other partnerships, non-profit status may not make sense, particularly if the effort is tied to a public sector agency or process, such as the Hurricane Matthew Disaster Recovery and Resilience Initiative and P2R2. Regardless of non-profit status, partnerships use naming, branding, and marketing to establish an identity, gain exposure, and market their work.

Recommendation
Partnerships should consider whether the advantages of non-profit status make sense for their mission and activities. Partnerships that do become non-profits should take advantage of tax-deductible individual and corporate donations as well as eligibility for public and charitable funds.

Partnerships use active strategies to engage businesses and keep them involved

Multiple partnerships describe the difficulty of keeping businesses on board. Businesses, especially those that are smaller-sized, are occupied with the work of their firm and may not have any staff whose job description includes participating in the partnership. NJCWRP described a challenge that will be familiar to many: often participation hinges on one employee or leader at a company or in an agency who is excited about a partnership, and if that staff person leaves, their organization drops out of active participation.

Recommendation
There are a few ways to improve business engagement. One important strategy is to orient the partnership's work toward relevant interests of businesses, or to seek partners whose business interests already fit the partnership's objectives. Partnerships can provide benefits like relationships or exposure, or help firms, their customers, or their supply chains become more resilient. These practices can also build appreciation for the business' participation in the partnership within the ranks of company leadership and staff. Partnerships can also ask the individuals who participate in the partnership on behalf of a firm to serve as an ambassador between the firm and the partnership. This role includes sharing partnership news and resources within their firm and bringing the interests and input of the entire firm to the partnership. Appointing a second person from each organization deepens relationships; one representative may take a primary role, but connections to the organization will not be lost if that person leaves. Finally, when soliciting new companies to get involved, partnerships might look to those businesses that already are leaders within the community or organizations devoted to representing businesses, such as chambers of commerce or industry associations.

Most partnerships rely partly on volunteers, who want to see the value of their work

Several of the partnerships in the case studies pair funded, staffed resources with unfunded, volunteer resources. Some volunteers provide labor to a partnership outside of work hours, while others' volunteerism is a joint donation from their employer, who allows the employee to volunteer as part of their employment. Holding regular events like trainings or resource fairs helps give volunteers an ongoing role in the partnership, not just in the case of disaster recovery. Some partnerships can offer tangible benefits to volunteers. For example, P2R2 relies on the contributions of passionate local leaders, and in return for their commitment, the organization contributes to volunteers' skillsets by training them in local government decision-making processes. However, the Hancock Resource Center example suggests that partnerships should be aware of the situations in which volunteer labor may undercut local workers.

Recommendation

While programming the partnership's activities, consider creating opportunities for volunteers. When planning these opportunities, partnerships should consider the value of the volunteer opportunity from the volunteer's perspective. Do they simply want to give their time and energy to a mission? Then the partnership can emphasize their role in accomplishing larger goals. Do volunteers want to acquire new skills or relationships from volunteering? Partnerships can generate leadership opportunities, skill development, and new connections.

Partnerships pursue public interest objectives and outcomes

All of the partnerships in this study have a central mission to improve the disaster recovery and/or resilience of some segment of a community or the environment. Firms may choose to participate in partnerships because it supports their branding, helps generate customers, or otherwise services their interests. Alignment of a firm's interests with a partnership's mission is strategic for both parties, but concerns can arise about private interests driving publicly funded work. None of the partnerships in these cases simply privatize essential public services or agency activities, a practice which has sometimes had concerning, inequitable impacts in the post-disaster context.

Recommendation

Partnerships should ensure that involvement of the private sector does not bias the partnership's work or steer it toward serving certain segments of the population over others. While this onus falls on all members of the partnership, those who represent organizations with a public interest mission have a particular responsibility to protect that interest in the partnership's work. Transparency will serve the partnership in its internal and external relationships.

Recovering communities benefit from P3s but examples are difficult to find

There is a need for more P3s with a long-term disaster recovery focus and more research on existing partnerships. The cases used in this white paper were selected from a relatively small number of public-private partnerships for disaster recovery that the authors could identify. The paucity of examples suggests two things: there are not very many P3s for disaster recovery in the United States, and partnerships that exist are relatively low-profile.

Recommendation

State and federal funders should consider how to incentivize P3s for disaster recovery under blue skies. For example, existing partnerships or organizations that have a focus on housing, economic development, health and social services, infrastructure, environment, historic preservation, and community planning could participate in state or local RSFs. A capacity-building non-profit could provide training on the landscape of disaster recovery for such partnerships. The cases in this white paper demonstrate that there are many kinds of partners who can contribute to disaster recovery, including businesses of all sizes and industries, universities and colleges, banks, chambers of commerce, social service organizations, media, and professional and industry associations. In many places, these kinds of organizations are not engaged in disaster recovery. They may even be interested in contributing to disaster recovery, but not know how to get involved. Partnerships can provide a structured way for otherwise unengaged organizations to bring their resources and expertise to disaster recovery.

Researchers in disaster studies should examine P3s in disaster recovery to better understand effective practices and document their existence for others who might be interested in learning from examples.

Works Cited

Chen, Justine, Ted Hsuan Yun Chen, Ilan Vertinsky, Lilia Yumagulova, and Chansoo Park. "Public-Private Partnerships for the Development of Disaster Resilient Communities." *Journal of Contingencies and Crisis Management* 21, no. 3 (2013): 130–43.

FEMA. *A Whole Community Approach to Emergency Management: Principles, Themes, and Pathways for Action*. Washington, D.C., 2011.

———. *National Disaster Recovery Framework, Second Edition*, 2016. September 2011.

Smith, Gavin. *Planning for Post-Disaster Recovery: A Review of the United States Disaster Assistance Framework*. Fairfax, Virginia, 2011.

Smith, Gavin, Amanda Martin, and Dennis Wenger. "Disaster Recovery in an Era of Climate Change: The Unrealized Promise of Institutional Resilience." In *Handbook of Disaster Research, Second Edition*, edited by Havidan Rodriguez, William Donner, and Joseph E. Trainor, 595–619. New York City: Springer International, 2018.

Stewart, Geoffrey T., Ramesh Kolluru, and Mark Smith. "Leveraging Public-Private Partnerships to Improve Community Resilience in Times of Disaster." *International Journal of Physical Distribution & Logistics Management* 39, no. 5 (2009): 343–64.

Additional Resources

Garcia, Sarah. *The Role of Public-Private Partnerships in Economic Disaster Recovery and Economic Resiliency*, 2017. http://restoreyoureconomy.org/wp-content/uploads/2017/09/Public_Private_Partnership_Paper.pdf.

Boyer, Eric, Richard Cooper, and Janet F. Kavinoky. *Public-Private Partnerships and Infrastructure Resilience: How PPPs Can Influence More Durable Approaches to US Infrastructure*, 2011. https://www.uschamberfoundation.org/sites/default/files/article/foundation/PPPs and Infrastructure - NCF.pdf.

Appendix

Semi-Structured Interview Questionnaire

1. What led to the creation of [your organization]?

    a. PROBE: What events and personalities?

2. How do you sell participation in the partnership to companies?

3. Where do new project ideas come from? How are they implemented?

    a. PROBE: What structures do new ideas move through before implementation?
    b. PROBE: What follow-up is there after implementation?
    c. PROBE: Can you give an example of how [specific program] came about?

4. Has your work intersected with [given regional disaster recovery effort] much?

    a. PROBE: Which agencies did you do work with?
        i. PROBE II: Who initiated this connection? /How did it come about?

5. What are challenges for your group's successful operation?
    a. PROBE: Can you give an example of a program/project not coming to fruition?
    b. PROBE: Can you give an example of something that hindered your work?

6. What does success look like to you and how do you measure it?
    a. PROBE: After measurement, who is this information shared with? Why?

7. You mentioned that [feature mentioned on website. E.g.: you're the most successful xyz in the nation] what distinguishes your partnership?

8. Where are you now and how do you see the organization moving forward? What big things lie ahead?

    a. PROBE: How could the public sector help these goals?
    b. PROBE: What would make attaining these goals easier?