FEATURE

How Social Capital Can Aid Resilience and Disaster Recovery in Eastern North Carolina

Jacob Petersen-Perlman & Poonam Arora

Hurricane Florence hits North Carolina in September 2018. Source: Adobe Stock

INTRODUCTION

Some readers might be familiar with eastern North Carolina due to its 100-plus miles of beaches in the Outer Banks. Others might have sampled its Eastern-style "whole hog" barbecue. However, in recent years, eastern North Carolina has made headlines for its susceptibility to hurricanes. In the last decade, eastern North Carolina was hit by two powerful, life-threatening hurricanes: Matthew in 2016 and Florence in 2018. Hurricane Matthew made landfall after certain parts of North Carolina were already saturated from prior heavy rainfall, causing 31 deaths, damaging or destroying nearly 100,000 homes, and resulting in $1.5 billion in damage. Two years later, Hurricane Florence made landfall, impacting many of the same areas as Matthew with the wettest tropical cyclone on record in the Carolinas. Many of those impacted communities in eastern North Carolina are still recovering from the economic losses and environmental damage that these storms caused. However, eastern North Carolina is no stranger to extreme weather, its position on the Eastern Seaboard makes it particularly vulnerable to hurricanes—in fact,

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Eastern North Carolina communities have recovered from these damaging storms at uneven rates. Geographic factors such as floodplain size, presence/absence of impervious surfaces, terrain, and elevation can certainly influence how impacted these locations were due to flooding; however, social factors such as social capital, wealth, political connections, and trust may also determine how quickly and how much these communities recover, rebuild, and/or transform in the wake of these extreme weather events.

Social Capital and Disaster Recovery

Our research focuses on the role of social capital on resilience and sustainability within the context of post-disaster recovery for communities in the Tar-Pamlico Watershed of eastern North Carolina. A multidisciplinary team of researchers based at East Carolina University are answering social and physical questions focused on social and environmental resilience to coastal hazards.

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Within the context of natural disaster recovery, social capital is a concept that can be defined as the ability of a group of people to get the resources to recover and/or transform their situation. Thus, it is critical for communities to build and sustain their social capital reserves to be resilient enough to recover from disasters. Social capital is often defined as falling into three forms: bonding (relationships between people in a familial, social, or neighborhood group), bridging (relationships among different groups of people that can help with access to resources outside of the group), and linking (relationships of groups with groups of people in power). Bonding social capital can serve as a crucial factor in keeping disaster victims within a damaged community due to their stronger community ties. Bridging can help vulnerable populations get services outside of their own communities in times of need. Linking social capital can help with getting aid for rebuilding through governmental entities.

Communities of the Tar-Pamlico Watershed

We are examining the role of social capital for disaster recovery within four communities located in the Tar-Pamlico Watershed.

Princeville, a tight-knit, historical town of 2,000 people, is the oldest town in the United States chartered and incorporated by Black Americans. The town suffered tremendous physical losses in the flooding aftermath of hurricanes Matthew and Florence. Nearly 80% of the town was underwater for days after Hurricane Matthew.

Greenville, a small city of 93,000 people, is home to East Carolina University and serves as a regional hub. It is the largest metropolitan area in eastern North Carolina. The Greenville metropolitan area is the only inland area experiencing major population growth within the region. Downstream from Princeville, the city was also impacted most significantly by Hurricane Matthew, particularly in the city's neighborhoods that lie in floodplains (that is, North and West Greenville). These neighborhoods also have significantly higher minority populations.

Hyde County, is a rural county abutting the Pamlico Sound in Eastern North Carolina. With a population of around 5,000, Hyde County's economy is driven by agriculture, commercial fishing, and recreation/tourism. Like the rest of the eastern North Carolina Coastal Plain, the county is home to low-lying areas and therefore high flood susceptibility. Parts of Hyde County experienced substantial flooding during these storms, particularly with Hurricane Florence. In addition to destroying farms, flooding caused the release of coal ash and hog waste, polluting the nearby environment. Farmers in the county are also facing issues with saltwater intrusion impacting their water tables and their fields as the sea level continues to rise.

Nags Head is a tourism and recreation hotspot on North Carolina's Outer Banks. Located on a barrier island, Nags Head is home to many vacation homes, hotels, and resorts. The resort community's permanent population is around 3,000, but the town swells to nearly 40,000 people during the summer months. Due in part to its shoreline being the furthest east in the Southeastern U.S. Atlantic Coast, the Outer Banks are most susceptible to hurricanes, being hit by Matthew, Florence, and Dorian (2019) in the past decade. Nags Head has dealt with beach erosion, saltwater intrusion, and nutrient overload from septic systems.

Social Capital and Disaster Recovery in the Tar-Pamlico Watershed

Within communities like Princeville, bonding social capital has played a significant role in the community's efforts to rebuild in the wake of Hurricane Matthew. Despite many residents leaving after Hurricane Matthew, many other Princeville residents decided to stay. Bridging social capital helped in providing temporary housing for residents during and after the storm. Regarding linking social capital, billions of dollars have been allocated to communities in the Tar-Pamlico Watershed for rebuilding homes, processing insurance claims, providing

temporary housing, raising flood-prone homes, and renourishing beaches. The distribution of aid, however, has been found to be uneven, with places with high renter populations and fewer white people receiving comparatively less in aid.

Conclusion

Storms similar in magnitude to Matthew and Florence are likely to strike eastern North Carolina again. Undoubtedly, the types of social capital present (or absent) within these communities will be instrumental in shaping how they will recover, rebuild, and/or transform. Furthermore, social capital is still needed to help with recovery efforts that are ongoing within these communities, several years after these storms have landed.

As needs created by climate change continue to grow, fewer resources may be available to help these communities respond. If recent trends continue—with insurance companies pulling out of areas susceptible to environmental hazards, such as California and Florida—it may be difficult to find the necessary resources for eastern North Carolina to rebuild in the wake of the next disaster. The strength of bonding, bridging, and linking social capital within each of these communities will significantly shape recovery and rebuilding efforts and will be necessary to combat structural disparities in recovery aid.

If history is a guide, places like Princeville will continue to rebuild in some form, money will still be found to renourish the beaches in the Outer Banks, and other efforts will be made in the region to ensure that all of us will be able to enjoy eastern North Carolina-style barbecue for years to come. ■

Jacob Petersen-Perlman (j.petersen-perlman@colostate.edu) is a research scientist in the Department of Ecosystem Science & Sustainability at Colorado State University. He is a human-environment geographer who investigates political institutions and organizations responding to global environmental change, specifically the changing distribution and increasing degradation of water resources.

Poonam Arora (Poonam.Arora@quinnipiac.edu) is the associate dean of faculty affairs for the School of Business and a professor of management at Quinnipiac University. Her research program explores how individuals, through their choices, can create economic, environmental, and social sustainability for communities, organizations, and society.