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## *Introduction*

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Policy analysts, historians, and social commentators will analyze the impact of the 2005 storms on the Gulf region for years to come. It is important that they do, because the 2005 catastrophe will not be a unique event in human history. Since 2005 the United States has felt the wrath of more than one natural disaster, including massive wildfires in southern California in 2007, hurricanes Ike and Gustav in 2008, and the multiple tornadoes that struck in spring 2011. In 2010 Haiti was devastated by a 7.0 magnitude earthquake. And in March 2011, Japan suffered a catastrophic triple punch: earthquake, tsunami, and nuclear disaster.

As for future risk, the United Nations has concluded that large concentrations of people across the world live at risk of natural disasters such as earthquakes, hurricanes, and flooding or of manmade disasters such as industrial contamination or terrorist attacks.<sup>1</sup> In the United States, West Coast residents may be well aware of the earthquake risks that they face, but East Coast residents, particularly in the North, may be less prepared for a natural disaster in the form of a catastrophic storm surge. By 2100, Boston, for example, could well experience such a surge, worsened by the combined effects of natural subsidence over the century, a sea level rise of fifteen inches due to climate change, and a high tide, which could inundate downtown Boston and Cambridge, with coastal flooding from Rockport to Duxbury.<sup>2</sup>

The nation would do well to learn from catastrophic events like Katrina and Rita. Such disruptive forces not only expose the breakdown in government responses but often reset the social, economic, and political forces in the areas that they impact. The hurricanes and their disastrous aftermath shed light on issues unresolved in American life, such as race, poverty, and the ability, or inability, to tame nature for our economic and personal use.

For instance, Katrina and Rita revived national attention concerning the failure of levees in a way that echoed concerns raised during the Great Mississippi River Flood of 1927.<sup>3</sup> By the late nineteenth and early twentieth centuries, the Army Corps of Engineers had largely adopted the highly contested “levees only” policy that gave precedence to constructing levees on the Mississippi River and its tributaries over adopting diversified control mechanisms such as spillways, outlets, and reservoirs. The 1927 flood shattered the “levees only” policy and led to passage of the 1928 Flood Control Act, which pushed the federal government to become much more active in the nation’s river and water protection systems. The system of levees that existed during the 1927 flood was considered inadequate. Despite post-1927 changes, the levee system remained inadequate seventy-eight years later.<sup>4</sup>

Many books written in the aftermath of the Gulf Coast storms focus on a forensic analysis of what went wrong, the inadequacy of the levees, and the perceived incompetence of government. Such analysis is critical to understanding how to improve safety and systems to prepare for future disasters. This book, in contrast, occupies a different and more cautiously hopeful niche: it examines the progress that Gulf Coast communities are making to bounce back after a major disaster to rebuild a stronger and more prosperous region for the long term.

This book assesses changes in core areas of policy, planning, and civil society through the prism of resilience and opportunity. Resilience is in part a function of the extent to which leaders intentionally strengthen economic characteristics and civic capacities (including by retooling policies) that help a community rebound and become less vulnerable to future crises. That adaptive ability is especially critical because catastrophes can come often and in different forms. In the past six years alone, the Gulf Coast has been grappling with an ongoing series of crises—the 2005 hurricanes, the 2007 recession, and the 2010 Gulf of Mexico oil spill. All three events have caused leaders to readjust their long-term rebuilding strategies.

Resilience is also defined by improving opportunities through adaptation. Are leaders implementing strategies that will lead to better outcomes than before the storm, such as stronger economic growth and reduced income inequality? Or are the billions of private, philanthropic, and government dollars pouring into the Gulf region simply rebuilding the status quo? This is of particular concern if the status quo generated poor social, economic, and environmental outcomes prior to the disaster.

The chapters in this volume examine the five- to six-year progress in the Gulf Coast in terms of achieving the dual goals of resilience and opportunity. They are not all encompassing; rather, they constitute a sample of community issues central to developing resilience and opportunity in the devastated areas of the Gulf Coast. We reach beyond the common focus on New Orleans and Louisiana to include the experience of leaders and families in the devastated areas of Mississippi. While other neighboring states were located in the horrible path of the first devastating storm, Katrina, their communities faced different challenges due to the breadth and magnitude of its destructive force. We do not, for example, include a chapter on Alabama. This is not a slight. Many organizations worked to help local communities recover in the aftermath of the storm, but improving larger systems of governance and increasing equity did not rise to the level of prominence in Alabama that they did in Louisiana and to a lesser extent Mississippi.

Even after six years, efforts to recover are still in development and will remain so, especially after the explosion of the *Deepwater Horizon* oil platform spilled tons of oil into the Gulf of Mexico. Our goal is to use this midway point in the region's long-term transformation to step back, offer lessons and cautions, and highlight the remaining challenges for the Gulf Coast and indeed the nation.

## **The Dimensions of Destruction**

Prior to Hurricane Katrina the Gulf Coast was beset with high poverty along with racial and ethnic exclusion in communities that were both economically and physically vulnerable. Table 1-1 shows that in 2004, the three states where Katrina had the most impact were among the poorest in the nation. As the Center for Budget and Policy Priorities pointed out, "Of the 5.8 million individuals in these states who lived in the areas struck hardest by the hurricane, more than one million lived in poverty prior to the hurricane's onset."<sup>5</sup>

**TABLE 1-1. Poverty and Income in States Hit Hardest by Hurricane Katrina**

<i>Location</i>	<i>Poverty (percent)</i>	<i>Rank</i>	<i>Median household income (dollars)</i>	<i>Rank</i>
Alabama	16.1	8th worst	36,709	9th lowest
Louisiana	19.4	2nd worst	35,110	5th lowest
Mississippi	21.6	Worst	31,642	2nd lowest
United States	13.1		44,684	

Source: U.S. Census Bureau, American Community Survey (ACS), 2004. Compiled by the Center for Budget and Policy Priorities ([www.cbpp.org/9-19-05pov.htm](http://www.cbpp.org/9-19-05pov.htm)).

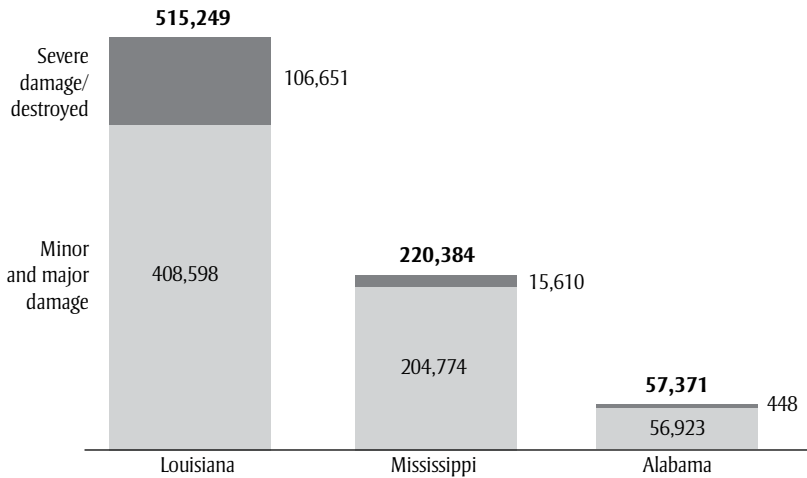
In August 2005 Hurricane Katrina hit the Gulf Coast, tearing up more than 93,000 square miles in its path.<sup>6</sup> More than 1 million people were displaced.<sup>7</sup> Some people returned home within days, but up to 600,000 households remained displaced a month later.<sup>8</sup> The storm damaged over 1 million housing units, about half of which were located in Louisiana.<sup>9</sup> Figure 1-1 indicates that housing damage in Louisiana was more severe than in neighboring states, although the extent of damage in Mississippi also was severe. In New Orleans, arguably the epicenter of the disaster, 134,000 housing units—70 percent of all occupied units—suffered damage when the levees protecting the city failed.<sup>10</sup> The Federal Emergency Management Agency (FEMA) and the U.S. Department of Housing and Urban Development (HUD) estimate that 78,810 of these units in New Orleans were severely damaged or destroyed.<sup>11</sup> The total picture is one of a region that required a massive housing rebuilding effort.

In response to the widespread devastation, the federal government authorized a total of \$142.6 billion in spending and tax relief by 2009 to help the Gulf states respond to the impacts of hurricanes Katrina, Rita, and Wilma. Of that amount, merely \$36 billion in discretionary spending was directed at measures to promote long-term recovery, such as by building nonemergency housing, repairing levees, restoring wetlands, improving infrastructure, and other community development needs.<sup>12</sup>

## Defining Resilience

The dictionary defines *resilience* as “an ability to recover from or adjust easily to misfortune or change.” However, assessing whether a region has that ability and measuring whether it has been exercised is challenging.

**FIGURE 1 - 1. Number of Homes Damaged by the 2005 Hurricanes in Louisiana, Mississippi, and Alabama<sup>a</sup>**



Source: FEMA and HUD, "Current Housing Unit Damage Estimates: Hurricanes Katrina, Rita, and Wilma," February 12, 2006 ([www.dhs.gov/xlibrary/assets/GulfCoast\\_HousingDamageEstimates\\_021206.pdf](http://www.dhs.gov/xlibrary/assets/GulfCoast_HousingDamageEstimates_021206.pdf)).

a. Louisiana had far more homes severely damaged or destroyed by Katrina than neighboring states: 7 times the number in Mississippi and 238 times the number in Alabama. Over 21 percent of Louisiana's damaged properties are estimated to be severely damaged or destroyed.

Kathryn Foster contributes greatly to our understanding of regional resilience in her chapter, "Professing Regional Resilience." She points out that resilience represents both the capacity to respond to a shock and the performance of the region once a shock has occurred.

A region's capacity to be resilient after a disruption depends on the extent to which it has the resources, skills, infrastructure, processes, attitudes, and other factors necessary to anticipate, mitigate, and cope with any potential crisis. Those factors include hazard mitigation, of course, but also economic strengths and intangible attributes such as social networks. A review of the literature suggests a set of characteristics besides hazard mitigation that may enhance regional resilience:<sup>13</sup>

- a strong and diverse regional economy with a relatively small gap between the incomes of high- and low-income residents

- large numbers of skilled and educated workers with the capacity to adapt to changing needs

- wealth, whether government, private, philanthropic, or individual, to invest in rebuilding as well as reforms and resilience capacity

—strong social capital, including high levels of civic participation and social cohesion between and across groups.

### **Imagining Opportunity**

Opportunity is a critical component of post-disaster recovery. It is defined by the extent to which a community uses a disaster as an occasion not simply to return to normal but also to achieve a new and better standard of living. It means retaining assets and correcting flaws while rebuilding. By all accounts, the Gulf Coast had many flaws prior to the onslaught of Katrina and Rita, not the least of which were poor and unequal educational and employment opportunities and unsustainable growth patterns.<sup>14</sup> Why did we not see significant efforts to address these issues before the storms? The inescapable answer is that we should not expect change from entrenched interests that see no reason for change.

Mancur Olson makes the point that the significant economic growth rates seen in Japan and Europe after World War II resulted from the disruption of entrenched economic and political interests, which allowed new and emerging economic and institutional arrangements to innovate and bring about growth.<sup>15</sup> This is the essence of creating post-disaster opportunity: being able to suspend, or at least keep in abeyance, the existing forces of self-interest, which would normally challenge innovation and change.

If Olson is right, leaders, residents, and institutions in the Gulf Coast should be taking the “opportunity” presented by the 2005 disasters to create a new and brighter future, one that will differ from the region’s historic course. Greater New Orleans and coastal Mississippi are currently works in progress. Though enormous challenges and unmet needs remain on the region’s long road to recovery, there are promising signs of reinvention and increased capacity to withstand future crises. Meanwhile, the forces of the status quo are hard to resist, especially as urgency fades and new priorities surface.

Many of the authors in this volume remain cautiously optimistic, however, and urge that collective efforts continue to remake the systems, policies, and social and cultural dynamics that can put this region on a sustained path to greater opportunities. These writers, many of whom are from the Gulf region, bring expertise in specific policy arenas but also their unique perspective as residents and civic participants in the recovery. While there is no chapter dedicated to the federal government

response, most of the authors touch on the role that the federal and state governments played in serving as partners (or sometimes barriers) to reform. We hope that scholars, politicians, analysts, the media, and the public will take notice of their research and experience. The following is an overview of the chapters included in this book.

### **New Policies and Plans to Build Greater Resilience and Opportunity**

A series of reforms in the key areas of city services, housing, and planning are demonstrating that New Orleanians have the capacity to work together to begin undoing the policies and habits that have contributed to the region's long-standing social, economic, and environmental problems. John Renne (chapter 8) describes how the city of New Orleans, Jefferson Parish, and the state of Louisiana have developed a new emergency evacuation plan that takes into account the needs of carless households, the elderly, and other vulnerable populations. The new plan was put to the test during Hurricane Gustav in 2008 and proved so successful (as evidenced by the uneventful media coverage) that the evacuation plan could serve as a model for other cities and states. This is precisely the kind of preparedness needed to increase the disaster resilience of New Orleans in a way that is more socially inclusive.

Beyond emergency preparedness, New Orleanians have organized themselves to advocate for the overhaul of the public services that failed citizens and taxpayers in the past and to collaborate with many government, business, and nonprofit partners to achieve that goal. Andre Perry and Michael Schwam-Baird (chapter 3) carefully document how the post-Hurricane Katrina environment created an opening for the state of Louisiana to undertake one of the nation's boldest charter school experiments to fix the city's failing public school system. To date, school reform has led to some encouraging improvements in student academic performance and in school facilities. Karen DeSalvo (chapter 4) describes how the region is moving toward improved delivery of quality, affordable, and accessible health care to all populations, including low-income and minority patients, through the creation of a new, region-wide network of community health clinics. Nadiene Van Dyke, Jon Wool, and Luceia LeDoux (chapter 5) explain that leaders are making progress in reinventing key aspects of the city's criminal justice system to convert the historically corrupt, abusive, inefficient, and ineffective system to one that will improve fairness, accountability, and public safety outcomes. And David

Marcello (chapter 6) documents the adoption of ethics reform in New Orleans city government that not only will lay the foundation for greater transparency, trust, and integrity in public spending and decisionmaking but also will help improve the city's ability to respond and adapt to future crises.

All such efforts to deliver good schools, safe streets, quality health care, and reliable government are critical to attracting and maintaining families and businesses in the community in the near and longer term. But as disaster coverage and subsequent research have shown, Hurricane Katrina was fundamentally a housing disaster. Rebuilding homes and neighborhoods, especially for renters and low-income families, has been challenging. Still, promising developments in housing and land use planning exist.

In New Orleans, enormous attention has been paid to the Lower Ninth Ward as a barometer of neighborhood progress. Kalima Rose (chapter 7) tells us that in the Lower Ninth as well as many other neighborhoods, residents have organized themselves to ensure a future for their families and communities. The result is the emergence of a sophisticated network of neighborhood organizations and nonprofit developers aiming to rebuild more opportunity-rich neighborhoods for returning and existing residents. State leaders endeavored to foster the creation of more economically integrated housing and neighborhoods, while federal leaders reformed the long-troubled public housing authority and helped families in trailers and other vulnerable households find permanent housing. Robert Collins (chapter 11) describes how New Orleans finally developed a citywide master plan, despite many missteps. The new master plan, also codifies an inclusive community participation process, promotes livability, economic opportunity, and ways to "live with water." With the comprehensive plan in place, the city will likely be more resilient, recovering from future disasters in faster, fairer, and more cost-effective ways.

Housing recovery and planning in coastal Mississippi faced a different set of political and policy challenges, with uneven results for social equity. Unlike Louisiana, where Hurricane Katrina hit primarily one major urban center, Mississippi coped with the impacts on approximately one dozen smaller communities spread across three coastal counties (for example, Bay St. Louis, Waveland, Biloxi, Moss Point, and Gulfport). Governor Haley Barbour stepped into the recovery by taking a strong leadership role and establishing the Governor's Commission on Recovery, Rebuilding, and Renewal within two weeks of the storm. But the state's housing



recovery plan did not place a premium on serving low-income homeowners or renters. Instead, the state diverted federal housing and community development funds to finance economic development projects such as the expansion of the state port at Gulfport.

Within that context, Mukesh Kumar (chapter 10) and Reilly Morse (chapter 9) describe how some communities and organizations succeeded in pursuing equitable and sustainable development outcomes during recovery. For instance, some saw the Governor's Commission and its partnership with the Congress for New Urbanism as an opportunity to address some of the development challenges that many coastal communities faced prior to Katrina, such as urban sprawl, inadequate affordable housing, and weak downtown centers. On the positive side, Kumar notes that some local communities adopted the new goals for the region along with new urbanist design recommendations, resulting in a greater variety of urban forms in coastal Mississippi. However, it appears that most communities are reverting to the familiarity of pre-Katrina local growth and development patterns. On housing, Morse carefully describes how a new coalition of housing advocates developed a set of data-driven, media-oriented reports and strategies that effectively pushed the state to eventually respond to and address key affordable housing needs.

Finally, the failure of the levee system in greater New Orleans served as a wake-up call to southern Louisianans about the limitations of man-made infrastructure and the need to strengthen the region's natural protections to mitigate the effects of future hurricanes. Mark Davis (chapter 12) reviews coastal Louisiana's history of living with water and notes the decided shift in public attitudes and public policies in support of wetland restoration and a new framework for coastal restoration in the wake of both Hurricane Katrina and the subsequent Gulf oil spill. Yet a meaningful commitment to investments, laws, and policies to secure the long-term economic health and sustainability of the region remains out of reach.

### **Increased Civic Capacity to Build Resilience and Opportunity**

The chapters described above show that a spirit of reform has permeated the civic culture in New Orleans and other parts of the Gulf Coast, a phenomenon that many of the authors note did not exist before the storm. The new capacity to engage in civic affairs, build cross-sector partnerships, and solve problems as a community are critical signs of resilience and adaptation.

The remaining chapters present additional ideas about how to expand the region's capacity to respond to crises and the need to accommodate post-Katrina's new demographic realities. Frederick Weil (chapter 14) documents and confirms the unprecedented rise in community engagement in New Orleans after the storm. His surveys of approximately 6,000 residents, accompanied by extensive ethnographic research, found an increase in the number of New Orleanians participating in public meetings and processes, greater organizational capability among grassroots organizations, and dozens of newly formed umbrella groups. The Greater New Orleans Community Data Center (GNOCDC) is one of the nonprofits that has adapted nimbly and innovatively since Katrina. But the data center itself has also contributed to the effectiveness of citizen leaders, government, and other nonprofits through its deployment of timely, accurate, and accessible demographic, economic, housing, and other rebuilding data to inform decisionmaking. In chapter 13, Allison Plyer and Elaine Ortiz explain how philanthropy and public policies can help empower such data intermediaries in the wake of a disaster.

Critical to community self-reliance is the presence of strong social networks. Ann Carpenter and Nancy Montoya (chapter 15) add an important dimension to existing work on social networks in their case study of Bay St. Louis in Hancock County, Mississippi, and of the Broadmoor neighborhood in New Orleans. They find that physical gathering places such as restaurants, schools, and places of worship are critical to facilitating social networks and civic engagement, while the loss of such establishments can hamper the development of community ties. Such places helped fuel communication during the days right after Katrina and enabled residents to organize to rebuild in the months and years that followed.

Behind every collective action or transformational change is a leader. James Joseph, Lance Buhl, Richard McCline, and Leslie Williams (chapter 17) offer lessons on how to strengthen the culture of leadership in Louisiana so that an enduring supply of leaders is available to work to advance justice and opportunity for all citizens. Improving the capacity to rebuild better for all populations must also incorporate the new demographic realities of the region. Jasmine Waddell, Silas Lee, and Breonne DeDecker (chapter 16) directly address the issue of race and class by arguing that the recent influx of Hispanics to New Orleans and their shared experience with African Americans in facing poor

labor and living conditions provides an opportunity to build interracial alliances to advance common causes.

Finally, fueling much of the increased capacity in the Gulf region's community and social infrastructure is the vast power of national and local philanthropic organizations to provide advice and funds for investment and to convene interested parties to work toward rebuilding the area. Ivey Allen, Linetta Gilbert, and Alandra Washington (chapter 18) examine the important role of philanthropy in driving systems change after the storms and call for continued investment in the development and capacity of local and regional philanthropic groups in the Gulf Coast. As national philanthropies recede, local foundations must further the goals of social and economic equity and prepare to respond to future crises.

In addition to chronicling the shift toward resilience and opportunity in the Gulf region, the chapters in this volume raise concerns about the factors that threaten the Gulf region's six-year effort to make progress and offer lessons or propose next steps to further social and economic transformation. How will we know whether a new and better course is indeed being crafted? At the hurricane's five-year anniversary, Brookings and GNOCDC published *The New Orleans Index at Five*, in part to begin measuring the key outcomes of the region's rebuilding strategies. While it is still too early to tell, there are some indications that greater New Orleans is bouncing back better than before.<sup>16</sup> In the future, additional efforts must be made to further examine the region's economic development strategies and to measure the region's overall performance in working to attain the following goals of prosperity:

- economic growth that boosts productivity, spurs innovation and entrepreneurship, and generates quality jobs and rising incomes

- inclusive growth that expands educational and employment opportunities, reduces poverty, and fosters a strong and diverse middle class

- sustainable growth that conserves natural resources, maintains environmental quality, mitigates risk, and increases the overall safety of the area

- a high quality of life for residents and businesses, which often includes a package of strong amenities and public services, like good schools and safe streets.

Only then will we know whether the reforms documented in this book, along with other efforts, are truly putting New Orleans and the Gulf region on a brighter course.