Residents of New Orleans and elsewhere along the Gulf Coast have been trying to adjust to their “new normal” in the five years since Hurricane Katrina and the “Great Flood” in New Orleans, along with subsequent Hurricanes Rita, Wilma, Ike, and Gustav. The new normal changed abruptly when an industrial accident, the Deepwater Horizon drilling rig explosion, occurred off the coast of Louisiana on April 20, 2010. The burning rig took 11 lives and was followed by the worst environmental disaster the United States has ever faced, along with economic, social, and cultural impacts associated with gushing oil just as another hurricane season approached.

Oil Spill Impacts on New Orleans

The months before the fifth anniversary of the Katrina disaster saw the creation of yet another recovery plan: the Long-Term Gulf Coast Restoration Support Plan. The impact of the oil spill on tourism, fish stocks, trade, the oil and gas industry, and the environment across the region are extensive and likely long-term, although varying widely by state and community. The impact on New Orleans itself is yet unknown.

The city is not as affected by a loss of tourism as are the white sand beach communities of the other Gulf States, such as Mississippi, Alabama, and Florida. The arts, culture, food, music, and festivals of New Orleans draw tourists year round from across the United States and the world, making the tourism industry the metropolitan area’s largest economic driver. It is uncertain whether closed beaches and cancelled hotels and vacations along the Gulf Coast will be offset by purchases from those associated with cleaning up the oil.

The well-being of New Orleans is tied to the Gulf waters and coastal region, however. In addition to the number one economic engine—tourism—the oil and gas and port and transportation industries are key economic drivers, giving economic value to the nation while generating jobs and wealth in metropolitan New Orleans. Oil-related impacts on the economy of Plaquemines Parish may negatively affect the entire region, according to data provided by the Greater New Orleans Community Data Center. The Gulf Coast region produces 30 percent of crude oil and 12 percent of natural gas for the United States. A lengthy ban on offshore oil drilling would likely have a major negative economic impact.

Louisiana’s marshes and wetlands are the breeding ground for hundreds of aquatic species critical to the environmental and economic value of the region and nation. The wetlands have been eroding at an alarming rate for decades. Marshes have traditionally been called swamps in Louisiana and are filled in to allow new development, which is vulnerable to natural hazards. Oil exposure to these delicate areas may have long-term negative effects on fish; sea birds, such as pelicans and migratory birds; whales; and dolphins.

Commercial and recreational fisheries depend on a healthy coastal ecosystem, navigable waters, and wetlands and barrier islands to protect them. Since Katrina’s devastation, there has been renewed interest and effort to restore the coastal wetlands in the realization of their central importance to the recovery of the Gulf Coast. The magnitude of the setback caused by the oil disaster is not
yet known, but the oil tragedy may lead to reenergized interest in coastal restoration and increased funding.

**Remembering Katrina**

At least 1,464 Louisianans died—by drowning, injury and trauma, and heart conditions—in the Katrina disaster. The victims were not disproportionately taken by race, but half were over the age of 74. Those most vulnerable, physically and economically, were the least able to evacuate and cope. The Greater New Orleans Community Data Center (GNOCDC), in operation since 1997, provides data on the Katrina losses in New Orleans and, generally, on the Gulf Coast, which are used for the short summary here.

More than one million Gulf Coast residents were displaced from their homes by the winds and water. Those with resources returned home relatively quickly, but more than 600,000 households were still displaced a month after the storm. Evacuee shelters housed as many as 273,000 people at their peak and Federal Emergency Management Agency (FEMA) trailers housed at least 114,000 households.

One million housing units were damaged by Katrina’s wind and water in the coastal region and the subsequent flooding when the levees failed in New Orleans. Half were located in Louisiana. Eighty percent of New Orleans was flooded, leaving some areas under 10 feet of water, and others with less than one foot.

By July 2006, the city had lost more than half of its population. Monetary damages from Hurricane Katrina—and Hurricane Rita that followed three weeks later—totaled $150 billion or more than twice the damage from Hurricane Andrew, 9/11, and the Northridge Earthquake combined. The national spending was $125.5 billion but $75 billion of that was for emergency relief, not rebuilding. Philanthropic contributions were more than double for both the 2004 South Asian Tsunami and 9/11 in the United States but amounted to just $6.5 billion. Private insurance claims covered less than $30 billion of the losses.

As the five-year anniversary of Katrina approached, major efforts to reform the public school system, improve the delivery of healthcare to the neediest, and reform a dysfunctional criminal justice system were touted. The Saints’ 2010 Super Bowl victory had captured the spirit of a city that was determined to be resilient—to bounce back better than it was five years before. Then, the region was faced with another disaster, the Deepwater Horizon catastrophe.

Katrina and Deepwater Horizon highlight the region’s vulnerability to natural and man-made hazards—hurricanes or flawed structures such as levees and oil rigs—that are ever threatening to the people in the Gulf region and their more than $240 billion dollar economy.

Loss of trust in institutions—government and private—resulted from the two catastrophes because of the slow and confused responses, real or perceived, to the events and the circumstances surrounding their occurrence. A structurally unsound levee system surrounding New Orleans was a result of cronyism and corruption. “Cozy” public-private sector relationships in the Gulf states encouraged lax regulations and regulatory enforcement, making it possible for an oil company to tolerate questionable construction practices for the oil rig that exploded. There is not a “stress meter” large enough to measure the ruined lives and pain in the U.S. Gulf Coast region.

The well-being of New Orleans is tied to the Gulf waters and coastal region. In addition to the number one economic engine—tourism—the oil and gas and port and transportation industries are key economic drivers, giving economic value to the nation while generating jobs and wealth in metropolitan New Orleans.

**New Orleans Five Years Post-Katrina**

Despite persistent predictions that New Orleans’ post-Katrina population would plateau, the number of households in the city continued to increase steadily in the city’s fifth year of recovery, although that rate of growth has begun to slow, according to a study by the GNOCDC, released in July 2010. In the past year, neighborhoods that have been slowest to recover from Katrina have grown the fastest. The current population mix might not consist of all the same people as in the past, but the growth is robust, even five years post-disaster.
Among the city’s 73 neighborhoods, 66 have recovered more than half the number of households they had before the levees failed. In general, as residents moved back into their rehabilitated homes or into new or rehabbed apartment buildings in flooded parts of New Orleans’ east bank over the past two years, the consolidation of the city’s population in areas that did not flood has started to reverse itself. For example, 21 neighborhoods lost households from June 2008 to June 2010 and many of these are in parts of the city that did not flood, such as the West Bank and the “sliver by the river.”

Some parts of the city don’t show the ravages of the disaster, while others look like it happened yesterday. Because neighborhood recovery varies greatly in relation to resources and capacity for organizing, the neighborhoods need help making participatory land-use decisions. A recent GNOCDC study recommends that the New Orleans Redevelopment Authority and the state’s Office of Community Development avoid a one-size-fits-all approach to remaining blight.

The center warns that the ongoing oil disaster in the Gulf could have a dampening impact on the New Orleans housing market and suggests guarding against the potential for absentee owners to acquire and “sit on” historic housing stock. The center also recommends that Community Development Block Grants (CDBG) still held by the state, as well as unspent federal dollars, be used to reduce blight and expand public transportation options to connect neighborhoods to work centers.

Five years post-Katrina, it is difficult to imagine that the flooded neighborhoods of New Orleans would have recovered much at all. Beyond the financial aid used for the recovery is a story of resilience—of individual, family, and neighborhood residents; a network of nonprofits; and thousands of volunteers who organized and developed plan after plan to rebuild the city.

Ensuring Resilience

In its first ever Quadrennial Homeland Security Review (QHSR) report to Congress on February 1, 2010, the U.S. Department of Homeland Security (DHS) outlined its strategic framework to guide its activities for the next four years. The section of the report dealing with disasters and FEMA states the mission as “ensuring resilience to disasters.” In July 2010, the QHSR presented its Bottom-Up Review Report (BUR), a department-wide assessment of DHS aimed at aligning programmatic activities and organizational structure with the missions and goals identified in the QHSR.

This followed major changes in the emergency management system with the passage of the Post-Katrina Emergency Reform Act of 2006, which called for some 300 changes in federal emergency management. The changes, some completed and many ongoing, span five major management issues associated with mission and culture, leadership and structure, capabilities, resources, and accountability.

New Emergency Management Continuum

The two most recent reports reconceive how to deal with disasters. Traditionally, emergency management professionals and academics refer to the stages of mitigation, preparedness, response, and recovery. The QHSR and BUR, however, use “resilience” as the umbrella term for depicting how to deal with disasters. Resilience applies to both physical and social systems, and has several key attributes:

- Robustness refers to inherent strength or resistance to withstand external demands.
- Redundancy allows for alternatives—options and choices—during stress.
- Resourcefulness is the capacity to mobilize needed resources and services before, during, and after an emergency.
- Rapidity refers to the speed with which disruption is overcome and services restored.

The State of Louisiana has recently defined “community resiliency” as the capability to anticipate and respond to natural or human-made hazards in an effort to limit negative impacts on people and property. Believing that there is not a one-size-fits-all solution for promoting resiliency, Louisiana officials are working
with at-risk communities to develop appropriate solutions. The competitive Comprehensive Resiliency Pilot Program is a $10 million pool of federal CDBG money that will enable communities to be proactive in addressing risk and tying those factors into population growth, flood zones, and economic development.

Drawn from Louisiana’s $1 billion allocation of CDBG funds for recovery from the 2008 hurricanes Gustav and Ike, in June 2010, the state awarded nearly $9 million to 29 projects in communities affected by those hurricanes so they could become more resilient in the event of future disasters by incorporating mitigation and sustainability strategies such as updated comprehensive plans, zoning ordinances, and building code enforcement.

All of the eligible projects are focused on communities in the 53 parishes that were affected by Gustav and Ike. The program makes Louisiana eligible to compete in a special $312 million Disaster Recovery Enhancement Fund that was made available in 2009 by the U.S. Department of Housing and Urban Development.

**Dissemination of Best Practices**

Lessons learned from the planning processes in the Louisiana communities will be compiled into a best practices resource available to all. The 29 projects were selected from a field of 87 submissions for resiliency planning, with a second round of awards for building-code enforcement following soon. One project is the development of a comprehensive, integrated water management strategy and plan for Orleans, Jefferson, and St. Bernard Parishes.

The plan builds upon an international partnership between the region, the American Planning Association, and the Kingdom of the Netherlands known as the Dutch Dialogues. The strategy will be one of the first developed for a city located within in a subtropical climate zone and can serve as a model for other regions at risk.

Another of the funded projects is the Southwest Louisiana Economic Development Alliance, intended to develop a comprehensive regional housing study and strategic plan for five parishes. The nonprofit Global Green identified a project to develop an economic development strategy in coastal parishes, that is based on wetland protection and carbon sequestration. Preliminary wetlands data suggest that coastal wetlands may absorb as much as six times more carbon than forests, placing these wetlands at the forefront of areas where emerging carbon investors might invest.

**Other Changes Related to FEMA Post-Katrina**

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (the Stafford Act) authorizes the president to issue “major disaster” or “emergency” declarations before or after catastrophes occur. The Deepwater Horizon oil spill is currently being addressed by the Oil Pollution Act of 1990, P.L. 101-380.

If the scope of the impact on the coastal states or the need for supplemental federal funding or other factors change, FEMA’s role could expand, and the Stafford Act would offer several options to programs to address the oil spill, although the U.S. government has secured an agreement for the private oil company responsible for the disaster to pay all costs.

Discussion of the Stafford Act reminds us that the difficult and still unresolved issues related to Hurricane Katrina’s landfall have led to numerous congressional hearings and studies intended to decide whether the Stafford Act needs major changes. It also reminds us of the turmoil after Katrina in dealing with public expectations for government performance and funding and the mistrust that resulted.

FEMA published a draft National Disaster Recovery Framework early in 2010 that attempts to reconcile many of the complex, confusing, and overlapping authorities and funds currently available to recover from a disaster. The plans may not be needed or implemented for the Deepwater Horizon Oil Spill if the “responsible parties” are continually involved in the clean up and the involved coastal communities are resilient.

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