Case Study

Hurricane Events, Population Displacement, and Sheltering Provision in the United States

Christine M. Mitchell[1]; Ann-Margaret Esnard[2]; and Alka Sapat[3]

Abstract: Displacement has traditionally been conceptualized as a phenomenon that results from conflict or other disruptions in developing or unstable countries. Hurricane Katrina shattered this notion and highlighted the various dilemmas of population displacement in the United States. This paper focuses on the dilemma of postdisaster sheltering and housing as experienced after Hurricanes Andrew, Katrina, and Ike. Methodology and data sources include a review of scholarly empirical research, a Lexis-Nexis search of major laws and regulations passed after the hurricanes, congressional investigations and testimonies, and newspaper articles. Evidence is found of flexible but ad hoc policy response and programmatic changes during the housing recovery process. Given the problems experienced during the recovery process and the lack of attention paid to displacement issues, recommendations are made toward integrating a process approach into current practices to: (1) recognize disaster-induced displaced persons and plan for their differential needs; (2) integrate agency programming at all scales; and (3) implement a holistic yet streamlined process to provide services to disaster-induced displaced persons. DOI: 10.1061/(ASCE)NH.15276996.0000064. © 2012 American Society of Civil Engineers.

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Introduction

This article addresses the issue of population displacement due to hazards in the United States, an issue that has to date received little attention in the field of disaster research and that has generally been given short shrift by policymakers. The result of this avoidance is disjointed, nontransparent policies and practices from the federal to the local level, leaving many displaced Americans invisible to policymakers and practitioners and unable to fully recover from displacement resulting from disasters. Discussed here are the gaps in policy and practice toward the goal of enabling coordinated, responsible, and effective policies and practices for displaced Americans.

Displacement has traditionally been conceptualized as a phenomenon that results from conflict, development projects, or other disruptions in developing or politically unstable countries. Hurricane Katrina shattered this notion and highlighted the various dilemmas of population displacement in the United States. Much of what is known about displacement causation is derived from outside the field of disaster research, and from outside the United States (cf. Oliver-Smith 2009). Within the field of disaster research there is a tendency to focus on event time and place, or the spatial and temporal scales of a hazard event, which has led to a lack of critical information about populations displaced in the United States and those predisposed to displacement. Similarly, the longterm social processes that are set in motion by a disaster, including displacement and resettlement, have received far less attention than needed.

Displacement is a process that derives from preexisting and shifting physical and socioeconomic vulnerabilities, which are brought to the fore after the event. There has been much in hazard and disaster vulnerability research that is invaluable in determining both place-based and socioeconomic vulnerabilities (Blaikie 1994; Morrow 1999; Morrow and Peacock 1997; Clark et al. 1998; Cutter et al. 2003; Cutter 2003, 2006a, b; Oliver-Smith 2004; Wisner and Blaikie 2004; Adger 2006; Smit and Wandel 2006; Bolin 2006; Dash et al. 2007; Laska and Morrow 2007; Myers et al. 2008), understandings useful toward assessing the process of displacement. That body of research clearly illustrates that individuals, households, and communities have predisaster vulnerabilities that contribute to their risk of being displaced by disasters.

The elderly, the physically challenged, renters, the young, and others are all vulnerable to displacement after a disaster, though

FL 33431-0991. E-mail: asapat@fau.edu

they will likely experience this differentially. Also at risk are those inhabiting substandard housing and those in geographically risky communities. Some of the conditions that make these individuals vulnerable are inherent to that individual, such as age and economic status, but others are societally based (cf. Chambers and Conway 1991; Reiss 2011). Preexisting vulnerabilities become evident after

[1] Doctoral Student, Dept. of Geosciences, Florida Atlantic Univ., 777 Glades Road, Boca Raton, FL. 33431; formerly, Graduate Research Assistant, School of Urban and Regional Planning, Florida Atlantic Univ., where researcher was funded. E-mail: cmitch22@fau.edu

[2] Professor, School of Urban and Regional Planning, Florida Atlantic Univ., 111 East Las Olas Boulevard, Fort Lauderdale, FL 33301 (corresponding author). E-mail: aesnard@fau.edu

[3] Associate Professor, School of Public Administration, Florida Atlantic Univ., Social Sciences Building, Room 279, 777 Glades Road, Boca Raton,

disasters as cumulative and "late-blooming impacts" of the disaster (Mileti 1999). Nowhere is this more evident than long-term population displacement from catastrophic disaster events, such as major hurricanes. Hurricane Katrina highlighted the various dilemmas of internal population displacement and diaspora in the United States, with more than one million Americans being displaced from their homes and scattered throughout the greater region and the United States (U.S. Senate 2009). Local land use planning, urban development patterns, zoning, housing conditions, and other such factors contribute to household displacement vulnerability potential as well. Overall, displacement is not only an event but a process starting with preexisting conditions that cumulatively create a challenging set of problems for those vulnerable populations who become displaced. Identifying these vulnerable populations before an event is the first step toward mitigating displacement after an event. Vulnerability and capacity assessments, monitoring, and evaluation constitute a starting point at the local level. The writers acknowledge that the National Disaster Housing Strategy (NDHS) is a vital step because it clearly acknowledges the need for a new direction in disaster housing and the special needs of displaced persons (FEMA 2009c). The Strategy shows promise in addressing the many challenges related to displaced persons, the differential needs of displaced homeowners versus displaced renters, and the needs for a range of affordable housing options, as well as flexibility in implementing interim housing solutions (FEMA 2009c). However, there are other complicating dimensions of displacement and recovery.

For example, the ongoing displacement and long-term recovery process following Katrina unveiled that: (1) there is a need for ongoing dialogue and research in the United States about what is displacement, who is displaced, when this state ends, implications for host/receiving communities, and institutional response frameworks, particularly during long-term recovery time frames; and (2) institutionally driven timelines and benchmarks and the assistance process often result in uneven recovery and a mismatch between what assistance is available, to whom, when it is needed, and who is responsible for providing it. Against this backdrop, an attempt is made here to illuminate the gaps between institutional response frameworks and actual needs of displaced persons.

This article begins by discussing the state of knowledge about displacement in general, followed by a discussion within the American context, and the lingering and vexing question about when displacement status ends within the context of disaster recovery. Next, the current hazard emergency management framework within the United States is examined, particularly how standard phases of recovery within the traditional Disaster Life Cycle model and emergency management framework drive the disaster recovery process. With examples from three catastrophic hurricanes— Andrew, Katrina and Ike—the institutional responses of FEMA, American Red Cross (ARC), and Housing and Urban Development (HUD) are contrasted with past recovery processes to illuminate the disjuncture, or gap, between their responses and reality. These three catastrophic hurricanes were chosen as examples to illustrate how institutions tasked with response and recovery have responded to large-scale displacement of populations via the provision of shelter and housing assistance. Findings are presented to bolster the assertion that displacement needs to be reconceptualized not as an event, but as a product of multifaceted processes that predispose segments of populations in both the short and long term. Viewing displacement as a process that begins before an event allows planners, emergency managers, and policymakers to incorporate approaches within policies and programs that recognizes differential vulnerability. In the last section of the paper, three recommendations are made integrating a process approach into current policies and practices.

Disasters and Displacement

Displacement is commonly perceived as a phenomenon resulting from conflict or other disruptions in developing or unstable countries (cf. Belcher & Bates 1983), or that induced by development projects (such as construction of dams). The latter is referred to as displacement-inducing development (de Wet 2009). However, it is increasingly acknowledged that displacement can result from natural or manufactured disasters in the developed world (cf. Fordham 2007; Smith and Wenger 2006). The term displacement is used here to mean the uprooting of people from a home territory in response to physical, economic, or environmental danger or harm such as a natural hazard (Oliver-Smith 2005). The term population dislocation is also used to refer to both mass population movement resulting from natural disasters (Lin 2009), and related socioeconomic impacts in which households are forced to move because of damage to structures and infrastructure caused by the natural hazard (Van Zandt et al. 2009). Although various disasters can lead to displacement, the focus in this paper is on those internally displaced as a result of catastrophic hurricanes that strike the U.S. mainland. These displaced persons are referred to as disaster-induced displaced persons (DIDPs) throughout the paper. It is important to examine internal displacement and the recovery process triggered primarily by hurricanes. It is, however, acknowledged that hurricanes are one hazard out of many that trigger displacement and that multiple hazards are associated with hurricanes, including flooding, storm surge, wind damage, that can further compound the potential for postevent displacement. Furthermore, climate changes may bring more frequent and more severe hurricanes in the future, leaving large numbers of displacees in their wakes.

The repercussions of inadequate planning continue to surface in the personal stories of those affected by Andrew, Katrina, and Ike. The Katrina experience showed that the National Response Plan in place at the time failed to consider the possibility of more than a million people becoming displaced. As Mohr et al. (2008) pointed out, the National Response Plan assumed that there will be another city or large population center nearby that could absorb a displaced population temporarily. Katrina illustrates the various and many flaws inherent within this assumption. To do better, all underlying assumptions within the new National Disaster Plan, now called the National Response Framework, need to be reconsidered to ensure that gaps are being addressed and that the time frame of services available is at least adequate to respond to differential needs throughout all phases of response and recovery.

Hurricane Katrina not only shattered the notion that internal displacement does not happen in the United States but highlighted other problems with displacement, including the effect that displacement status and terminology can have on the displaced and the services that they receive. In the U.S. context in particular, problems recognizing who is displaced are twofold: (1) there are no legally binding definitions of internal displacement; and (2) for

any state institution or organization to serve displacee needs, there must be a clear understanding of who the displacees are and when their displacee status both begins and ends (Kunder 1999; Mooney 2002, 2003; Weiss 2002; Kälin 2005; Cohen 2006).

These issues are more than just vexing problems for anyone seeking to serve displacee needs, and the ramifications for getting it wrong are large (cf. Cohen 2006; Tierney et al. 2001). Clarifying these two issues and incorporating them into policy and practice are important for the reasons provided in the section Why Addressing Displacement Matters. Failure to begin addressing these issues will continue to leave the United States singularly unprepared for the next large displacement event. Why terminology surrounding the state of displacement is critical to understanding and implementing appropriate policy is discussed in greater detail.

Terminology and Definitions

A number of problems arise from displacement terminology, or the lack of it, within the American context. As scholars of social construction and policy design have pointed out, the social construction of certain populations and the language used to describe them greatly influence the kind of policies that are subsequently adopted to deal with their problems (Berger and Luckman 1966; Schneider and Ingram 1993, 1997; Donovan 1993, 2001; Stone 2001). Terminology and designations play an important role in policy design and determine who benefits and loses from policies that get adopted (Schneider and Ingram 1993). When terminology fails to acknowledge the existence of a social group, such as displaced persons, then policy and practice are unlikely to address their needs.

Specifically, the social construction of target populations refers to the cultural characterizations or popular images of the persons or groups whose well-being is affected by public policy. When social construction of certain target groups, such as retirees and veterans, is termed positively, then these groups benefit from the policy process in terms of policies, practices, and budgets. Conversely, groups that evoke negative connotations and symbols, such as the poor, deviants, or the homeless, are likely to get fewer benefits and may be subject to more punitive regulations and policies (Schneider and Ingram 1993). An illustration of this occurred during the Northridge earthquake when the homeless were turned away from immediate postdisaster emergency and temporary shelter because they were not made homeless by the earthquake and, thus, they did not qualify for temporary aid and shelter (Comerio 1998). Similarly after Hurricane Andrew, those who stayed in tent cities who were homeless before the storm were denied assistance, such as travel trailers and mobile homes, and instead were referred to homeless shelters (FEMA 1994). Being termed a refugee or other globally negative term builds a negative stereotype for those deemed to be refugees. For example, the term refugee was rapidly rejected by even those who fled New Orleans following Katrina, an indication of the very alienating nature of the term, perceived as insulting, discriminatory, and victimizing (Masquelier 2006; Stephens and Reide 2006; Sterett 2011). Policymakers are more likely to plan for displaced citizens than they are for refugees, migrants, drifters, or the homeless.

In addition to the problems of terminology, there is no clear policy understanding or formal definition of displacement in United States policy and, thus, no direct framework for addressing or mitigating displacement. Under the current legislative framework for disaster management as structured within the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288, as amended, 42 U.S.C. 5121–5207) displacement is acknowledged as a state that results from a person leaving their domicile as a result of a hazard experience. However, when this state ends is not addressed. Lacking full definition, displacement is treated as a state that is an immediate but temporary effect of the hazard and is implicitly assumed to be attenuated by, first, short-term emergency shelter and, second, within the recovery phase, through limited financial support to qualifying individuals.

Given these problems with terminology and definitions, it is instructive to understand how displacement is defined in a broad international human rights legal context. In 1998, the United Nations Guiding Principles acknowledged the subset of DIDPs by defining internal displacement and internally displaced persons (IDPs) and outlined what rights and protections those IDPs should be entitled to. The United Nations Guiding Principles define IDPs as: "persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border."

According to this definition, in which the DIDP subset is emphasized, the authors assert that the definition of who is an IDP applies to those displaced from hurricanes or other natural disasters within the United States and that these DIDPs maintain their human rights and rights to service from the U.S. Government and its institutions.

When Displacement Status Ends

The second vexing dilemma in determining who is or who remains internally displaced relates to when displacee status ends. This is not addressed in the Stafford Act. Without a definition and comprehensive understanding of the process of overcoming displacement, when recovery has taken place or what elements and scale of service and aid are needed to assist and promote recovery cannot be determined effectively. The end of displacement is inherently assumed to be when the DIDP begins the process of regaining a roof over his or her head. In practice, the provisioning of a roof over a displaced person's head is not the same as the person either going home or making a new home. It is a temporary refuge, regardless of how long it lasts. Overall support typically lasts no longer than 18, sometimes 24, months, though in the case of Hurricane Katrina, assistance lasted several years for some. Yet often 18 months is too short of a period for a displacee to return to or create a new home equal to what was lost after a catastrophic disaster. To date there is no consensus on how many internally displaced persons there are, where they are, and for how long they have had this status internationally (Mooney 2002; Weiss 2002; Kälin 2005; Cohen 2006; Brookings-Bern Project on Internal Displcement 2007) much less in the United States.

Mooney (2002) provides useful insight into displacement end status that, although focused primarily on internal displacement from armed conflict, situations of generalized violence, and severe human rights abuses, is applicable to disaster-induced

displacement and DIDPs. Specifically, Mooney discusses two approaches and lingering questions related to determining at what point a person is no longer considered displaced. First is the solution-based approach and determination of (D)IDP end status based on return to the impacted area versus resettlement or integration into another area. Applied to the United States, post-Katrina housing issues offer a good example of the difficulties inherent in the solution-based approach. For example, if displacees cannot return (e.g., a housing unit has been condemned or the owner lacks the funds for needed repairs) but intend to eventually return home, are they still displaced while they are resettled elsewhere? Or, if a city tears down public assistance low-income housing units without replacing them, has the city denied the right of return to the households who might occupy them as they had previously?

A second approach is the institutional responsibility/needs and obligation approach. It questions when the particular needs of (D)IDPs end and who makes this determination (Mooney 2002). Does this occur when they no longer need protection (the refugee analogy) or when they no longer require assistance? Is there a difference in responsibility based on the mode of evacuation, that is, if a household self-evacuates in their own vehicle to friends or family versus if a household is evacuated by a government organization in a bus or placed on a plane, destination unknown to the evacuees, as happened during Katrina? Further, who decides protection and assistance are no longer required? The type of approach, at what scale it is needed, and until when are inadequately understood in the recovery context. Also, who is responsible for providing this assistance? Are these local, county, state, or federal responsibilities, or are these shared, and how? A definitive understanding of displacement in the United States is needed to determine these various but shared responsibilities.

Along with terminology and the issue of when displacement status ends, there are more lingering questions specific to DIDPs in the United States. When DIDPs are unable to return to their jobs, should DIDP temporary camps and settlements (such as the post-Katrina mobile home parks) be required to be placed within walking distance of transportation, employment opportunities, and social services? This can be construed as acknowledging that the "temporary" state may be of longer duration, perhaps even becoming permanent, a possibility warned of by many over the years (cf. Bowden et al. 1977; Burton et al. 1968; Quarantelli 1982; Kates et al. 2006). What are the responsibilities of receiving areas to which DIDPs relocate in large numbers? How can municipalities share services and costs? What kinds of changes would be needed in zoning and policy ordinances to allow for placement of mobile homes and/or accommodation of DIDPs? To whom can these places turn to for financial and administrative assistance in accommodating large concentrations of DIDPs? Certainly local resources would be stressed and some relief must be forthcoming, but which higher level of government should provide this help—the originating municipality, the receiving county, the State, or some combination thereof? Accepting that there is a difference between the needs of short-term evacuees and those of longer-term displacees allows receiving areas to forecast potential demands and formulate plans to deal with and prepare requests for longer-term assistance based on these forecasts. How all of these questions are answered has implications for the responsibility of federal, state, and local governments, the obligations of nonstate actors, and the

ability to provide for DIDPs in an appropriate, coordinated, timely, and dignified way. Termination of displacement status is therefore intricately linked to predisaster planning and long-term disaster recovery, especially as plans begin to identify and address vulnerable populations within their communities. Defining displacement and addressing such questions can lead to a process-driven approach within policy, planning, and practice that is more supportive and effective for those displaced than the current event-driven model, and can provide a bridge between theory and current practice.

Lacking a definition of displacement that addresses when this state begins and when it ends results in policy and procedures that do not adequately address the differential needs of the displaced holistically, humanely, and efficiently. This indicates that in the United States, policy is deficient toward the needs of its disaster-displaced population. This omission is likely to be an issue not if, but when another large-scale displacement of Americans occurs as a result of a catastrophic disaster. Though the Guiding Principles on IDPs are in and of themselves not legally binding, they are operational guidelines for the implementation of human rights for those who are displaced by disasters and more. The Katrina experience has brought to the fore of our national consciousness the importance of institutional readiness and timely response, as well as the gaps existing within the current framework of our institutional system, particularly for those displaced by disaster.

Some insights can be garnered from an examination of the traditional disaster life cycle, the institutions involved in postdisaster recovery and sheltering, and related sheltering and housing policies and practices that impact displaced persons. In the following section, the current legislative and institutional framework in disaster management is examined, specifically with regard to illustrating the current approaches of providing shelter and housing for DIDPs in the immediate aftermath of the declared disaster. These provisions are compared through the lens of three major hurricanes, noting the duration and types of shelter provided by ARC, FEMA, and HUD after each disaster. The findings are based on a review of empirical scholarly research, a Lexis-Nexis search of major laws and regulations passed after the Hurricanes, congressional investigations and testimonies, media reports, and federal and state reports, to reconstruct institutional responses of government and nongovernmental organizations in response to shelter and housing needs after Hurricanes Andrew, Katrina, and Ike.

Institutional Framework and Process of Recovery

The Disaster Life Cycle model employed by FEMA to manage hazards comprises four phases: predisaster mitigation planning; preparedness; emergency response; and recovery and reconstruction (Godschalk et al. 1999; Haddow and Bullock 2003; Altay and Green 2006). The model was built around a hazard-event conceptual framework that originated from a governor's workshop on emergency management in the late 1970s (Altay and Green 2006, p. 480). The model is firmly embedded within a behaviorist paradigm that responds to disasters with engineering and structural solutions (Myers 2007). Although this widely used four-step model has been useful and more than adequate for "routine" or "everyday" emergencies, its shortcomings have become apparent, particularly with respect to the last phase, recovery. While it serves as a

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heuristic tool, it is less than helpful as a guide for policy and practice, because of its reliance on the underlying paradigm.

Complex emergencies resulting from catastrophic hurricanes and other major disasters, demand flexibility from standard operating procedures, regulations, and policies that are difficult to achieve in a highly hierarchical system where decision-making constraints abound. The model presumes that movement from response to recovery occurs linearly and within a relatively short time span, predicated on and measured by the state of physical repair and reconstruction. In doing so, this model overlooks a number of issues in the recovery process, not least the fact that material recovery in the short term is a far different process than social recovery in the long term, a very differential and protracted process. As noted by Levine et al. (2007), what a "superficial reading of the model overlooks is that the human aspects of response and recovery do not always flow quickly or smoothly ... (it is) within this poorly understood transition period that issues of displacement, temporary housing and provision of long-term housing, rise to prominence" (Levine et al. 2007, p. 5).

Looking at displacement and the recovery of permanent housing for individual households underscores the complicated and nuanced process of recovery that vulnerable households face after disaster. This is consistent with concerns raised by scholars since the seventies that the last phase of the disaster life cycle (i.e., recovery and reconstruction) is the least understood and still a very understudied protracted process of social recovery (cf. Bowden et al. 1977; Kreps 1978; Burton et al. 1978/1993; Quarantelli 1982; Comerio 1998; Alexander 2000, 2002; Hoffman and Oliver-Smith 2002; Burby 2006; Altay and Green 2006, p. 481; National Research Council 2006; Kates et al. 2006; Oliver-Smith 2007; Myers et al. 2008; Button 2009). Disaster researchers have made strides in understanding the social differences in the aftermath of disaster, resulting in a large and cohesive literature of social vulnerability that rejects the earlier behavioral paradigm and, instead, emphasizes that social vulnerability is rooted within social structures—a structuralist paradigm (Myers 2007). This paradigm advances the understanding that it is those who are marginalized in any given community who are likely more vulnerable and less resilient after a disaster (cf. Smith 1996; Hewitt 1995; Wisner and Blaikie 2004) and that disaster does not affect all equally but depends on the social system in which they are embedded. Viewing displacement through a vulnerability lens can create a predisaster entry point to mitigate postdisaster displacement.

Continued reliance on physical and technological responses to disasters results in relief and reconstruction agencies focusing on the material aspects of recovery. Policy and programs based on the heuristic four-step model fail to recognize that recovery is in great part a social process. Failing to explicitly recognize the different time frames and multiple steps that different members of a society take in moving from relief to recovery leads to regulatory frameworks that impose a rigid set of actions (and underlying expectations) on what is actually a fluid, internally complex, and multidimensional set of processes, and can do more damage than good. A focus on the material aspect of recovery negates the very real human damage after a disaster, not least place attachment, grief for a lost community; shredded social networks; severed connections with the environment, especially for natural resource-based communities; lost livelihoods; and more. These nonmaterial social aspects are too often overlooked, and without some care and

attention, they may inhibit the social and psychological recovery of a displaced and/or resettled population.

The next section examines institutional policies as practiced by ARC, FEMA, and HUD, which together are the primary providers of postdisaster shelter and housing assistance, to identify institutional time frames for assistance.

Institutional Sheltering and Housing Practices during Recovery

When a disaster event is forecast, such as a major hurricane, ARC is tasked to provide emergency shelter during and after an event. This type of shelter usually comprises temporary tents, school gymnasiums, or other municipal buildings predesignated as sheltering sites. Emergency shelter is typically provided for up to 2 weeks after an event until FEMA is able to provide temporary shelter. Temporary shelter from FEMA usually includes hotel/motel rooms, cruise ship berths, and any other available nongroup housing. FEMA policy provides this shelter for an initial period lasting up to 3 months, with possible extensions of 3-month increments, up to a total of 18 months. FEMA temporary sheltering is to last only until the displaced can be provided with temporary housing. Temporary housing is provided initially by FEMA, though 18 months after Katrina, FEMA began partnering with HUD to offer temporary housing through the Katrina-Disaster Housing Assistance Program (K-DHAP). Two months after Ike, FEMA and HUD again partnered to offer postdisaster temporary housing (Sapat et al. 2011). FEMA provides temporary housing for an initial 3-month period that can be extended, by increments of 3 months, up to 18 months in total (U.S. Senate 2009).

Housing and Urban Development begins its temporary housing program with a 3-month provision, extending this in 6-month increments for up to a total of 24 months, or 2 years, after which assistance is no longer provided under the initial disaster declaration. Anyone needing assistance after the total allowed provision (18 or 24 months) must apply individually under separate nondisaster social programs demonstrating and documenting need. HUD provides a variety of housing assistance, including disaster housing vouchers, substitute housing, and mortgage assistance (up to 3 years in Andrew).

As HUD assumes responsibility for housing from FEMA and begins to incorporate DIDPs into their temporary housing programs, households are often required to reapply for benefits and be reassessed for eligibility. HUD assistance comes primarily in the form of vouchers for rental housing and, through this, bridges the gap between temporary and permanent housing for those who qualify for aid. FEMA provision and HUD provision of temporary shelter and temporary housing assistance often run concurrently or overlap to some degree, though there are frequently also gaps in assistance. Typically, FEMA and HUD programming overlap, beginning in the temporary shelter stage and continuing through the temporary housing stage. Though both programs provide much needed benefits to DIDPs, these separate programs and their separate qualifications, timelines, and deadlines are a great source of confusion for DIDPs, with some who qualify but do not receive benefits because of red tape and confusion and others who take advantage of the separate systems to duplicate benefits (cf. HUD 2006).

These problems are primarily a result of a lack of programming coordination, and this is often where criticism of both agencies arises. The temporary housing stage can last from just a few weeks or months, to many years until households rebuild, find a new permanent home, or simply exhaust the programs available to them. Neither FEMA nor HUD offers permanent housing, though HUD does have some programs allowing eligible households an opportunity to purchase homes from them. In their programs, both FEMA and HUD implicitly assume that after 18 to 24 months of temporary housing, beneficiaries will have gotten back on their feet and found permanent housing. In reality, many households require assistance beyond the 18 or sometimes 24 months usually allotted (U.S. Senate 2009).

Sheltering and Housing Experiences from Andrew, Katrina, and Ike

As described, institutions such as ARC, FEMA, and HUD follow certain timelines and procedures in the wake of disaster and assume that recovery will take place within those officially denoted timelines. Yet the reality of recovery experiences for those whose housing is damaged or destroyed in a hurricane's path suggests experiences different than those assumed by institutional expectations and mandated agency responses. To see how different these lived experiences can be from the officially prescribed and expected timelines, actual recovery times are examined in terms of sheltering and temporary housing needs manifested after three devastating hurricanes, specifically the sheltering and housing needs that emerged in (1) Homestead, Florida, after Hurricane Andrew; (2) New Orleans, Louisiana, after Hurricane Katrina; and (3) Galveston, Texas, after Hurricane Ike. These three catastrophic hurricanes were chosen as examples to illustrate the limitations and inadequacy of the federal disaster response model to hazard events as applied to the process of shelter provision and housing assistance for DIDPs, and to further the argument that more attention needs to be paid to displacement processes and issues in disaster management policies and practices. One avenue for doing so is the integration of a process-driven approach within current policies and practices. As previously acknowledged, the National Disaster Housing Strategy is a vital part of the policy response, though it remains to be seen how effective it will be in addressing displacement, particularly in the long term.

Hurricane Andrew struck Homestead, Florida, on August 24, 1992 (National Hurricane Center 1992). It destroyed 85,000 homes and left 180,000 people homeless for some time, with at least $30 billion in damage (Morrow 1997; U.S. Senate 2009, p. 32). Hurricane Andrew was the last Category 5 hurricane to make landfall in the United States in the 20th century, devastating the South Florida communities affected. Andrew's impact is reflected in a rich scholarly literature (FEMA 1994; Smith 1996; Smith and McCarthy 1996; Dash et al. 1997, 2007; Girard and Peacock 1997b; Morrow and Peacock 1997; Morrow et al. 1997; Peacock et al. 1997; Yelvington 1997). Notable for Andrew is that this was the first instance of FEMA being directly responsible for managing and operating mass-care shelters—the tent cities. The initial ARC volunteers were replaced by officials from FEMA within the first week of operations. At the peak of use, almost 3,600 people were staying in the four tent cities (FEMA 1994, p. 17). The tent cities

began closing based on FEMA Region IV director Major May's decision to move people out as fast as possible and into travel trailers and other accommodation because of tensions in the tent cities. He directed Individual Assistance to assess other options on September 14th. The tent cities began closing on September 18th, and closed on October 23rd. Eligible households were leased travel trailers or mobile homes by FEMA, while those ineligible for this assistance (the prestorm homeless, undocumented people or people without papers, and others) were pushed in various directions including public housing, homeless shelters, and friends and relatives. The process of moving from tents was chaotic at the first camp, though later, at other camps, became less so. The rapid shutting down of the tent cities led to evaluation and critique of the process (FEMA 1994; Peacock et al. 1997).

On August 29, 2005, Hurricane Katrina made landfall in southern Louisiana, striking New Orleans as a Category 3 storm (National Oceanic and Atmospheric Administration 2005). It covered more than 90,000 square miles, killed more than 1,500 people, and displaced more than 1 million people from throughout the Gulf Region including Louisiana, Mississippi, Alabama, Florida, and Georgia (U.S. Senate 2009; Hori et al. 2009). In New Orleans, the result was more than $60 billion of losses and destruction, and damage of more than 1.2 million housing units (U.S. Senate 2009). After spending up to 7 weeks in emergency shelters and shelters of last resort, many displacees transitioned to FEMA-supplied temporary shelter in motels, hotels, cruise ships, and other temporary accommodations all over the United States, for what was initially 3 months, but lasted up to 24 months for some. Temporary housing in trailers and mobile homes began to be offered 3 months after the storm to more than 143,000 families to transition DIDPs to temporary housing. Two years post-Katrina, HUD's K-DHAP received more than 719,000 applicants for HUD voucher and other housing assistance. Four-plus years after Katrina, there are at least 30,000 families still reliant on HUD's K-DHAP (U.S. Senate 2009). Many individuals and families who were flown out of the region to other areas have made their new towns and cities their new homes, but there is no information available on whether people would like to return and cannot or choose to stay where they quite literally landed (Sterett 2011).

Hurricane Ike made landfall on September 12, 2008, at the City of Galveston, Texas, as a Category 2 storm, yet it was assessed as the third costliest storm in U.S. history (Van Zandt et al. 2009), behind Katrina and Andrew (Munich 2008). There were an estimated $38 billion in losses, of which only $15 billion was insured (Munich 2008). The research conducted by Van Zandt et al. (2009) revealed that nearly half of Galveston's detached housing units were vacant 2 months after the hurricane. The city of Galveston and its housing authority assisted more than 6,500 families with disaster housing, and reported that 1,500 families remained on disaster housing assistance as of July 2010 (Galveston Housing Authority, Texas 2010). The post-Ike FEMA impact report estimated that Ike caused $3.4 billion in total housing damage (FEMA 2009a). ARC reported serving more than 20,000 people across the region displaced by Ike (Fort Bend County 2008). FEMA and HUD set up the Ike Disaster Housing Assistance Program (Ike-DHAP) within 2 months of Ike, allowing 18 months of assistance, which was later extended to 2 years (FEMA 2010). Two years after Ike and Gustav, FEMA reported assisting more than 114,141 individuals and 25,000 families with disaster housing

through IKE-DHAP (FEMA 2010), and Henry et al. (2010) reported that Galveston's population had decreased by 8% from its pre-Ike population.

Sheltering and Housing: Overall Institutional Timelines

For these three hurricanes, emergency shelter was provided by ARC for between 1 day and 8 weeks, long past the assumed need of 2 weeks. Temporary shelter was provided by ARC and or FEMA for between 5 weeks and 18 months, extending far past the 3 months assumed needed (Fig. 1).

The American Red Cross arrived 2 days before Hurricane Andrew and provided emergency shelter until 6 days after Andrew, at which time the National Guard arrived and built four tent cities initially staffed by ARC volunteers (Peacock et al. 1997). Before Hurricane Katrina, ARC initially provided emergency shelter, though many took refuge in shelters of last resort including the notorious Superdome, as the severity of the storm became known. ARC quickly expanded its sheltering capacity and eventually provided 270,000 people emergency shelter for up to 7 weeks through on-the-spot partnering with faith-based organizations, other nongovernmental organizations, and local governments (ARC 2008). Five days before Hurricane Ike made landfall in Galveston, ARC had opened emergency shelters throughout the

Temporary housing provision by FEMA began soon after temporary shelter was provided, overlapping during each hurricane recovery. Temporary shelter started as early as 2 months after Andrew, 3 months after Katrina, and 1 month after Ike. Temporary housing provided by FEMA was initially meant to last for 6 months, but was consistently extended by 3- or 6-month increments, usually up to 18 months or even 2 years, though lasting more than 4 years after Katrina for those families still in trailers as of June 2009. Ike assistance also lasted longer than the 18 months initially expected; it ultimately extended to a total of 24 months, with counties and cities continuing assistance outside of the program into the beginning of 2011.

Examining federal and state emergency management support via sheltering and housing practices after a hurricane disaster reveals that the emergency management response is based on a linear event framework that inherently fits recovery processes into certain time frames measurable by quantitative indicators such as number of meals served, number of people sheltered, time in shelter, monetary aid received, and numbers transitioned. This framework is derived from a behaviorist paradigm that underlies disaster management in the United States. That these time frames are inadequate to the needs of DIDPs is reflected in the continuing demand for shelter and housing beyond institutional time frames and the ad hoc extension of services by provider institutions. It is
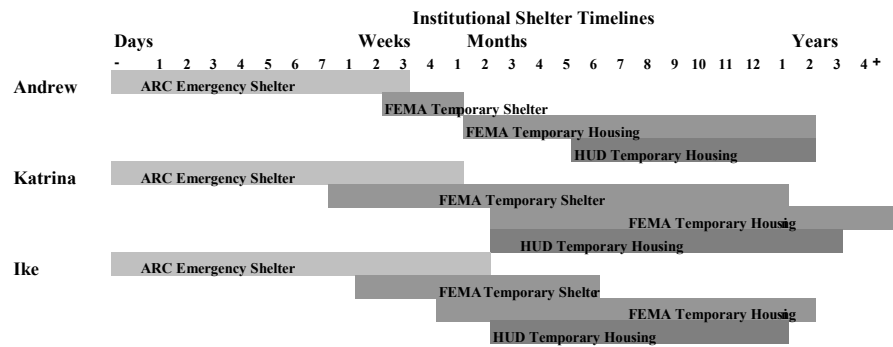
Fig. 1. Case study estimated time frames as of August 2009

area and eventually provided 40,600 people with shelter for 2 to 8 weeks (ARC 2008).

Emergency shelter is not meant to last long and in general does not, though we see a great range in how long this type of shelter is offered and used, from 8 days to 8 weeks. When demand exceeded supply, as in the Katrina experience, ARC was quick to expand capacity. Clearly learning from that experience, ARC mobilized earlier and in a broader area for Ike, and maintained services for a longer period. In addition to assisting with evacuation and providing shelter to people, ARC made provisions for households to be evacuated with their pets, who were sheltered either with their families or at animal facilities nearby. This was due in large part to the unwillingness of many households with pets to evacuate without their pets during Katrina, which resulted in the deaths and displacement of many pets and much media focus on this aspect of the disaster and evacuation policies. This, in turn, resulted in the passing of the PETS Act in 2006 that allows and assists households in evacuating with their pets (Edmonds and Cutter 2008; Cutter and Finch 2008).

acknowledged that it is precisely because these disasters were catastrophic that the "normal" institutional time frames were inadequate, and thus, FEMA and HUD did show flexibility to bend prescribed timelines to better meet displacee needs. However, the current flexibility in response to demands by institutions is ad hoc, nontransparent, and unplanned for, resulting in disjointed programming and communication of information and uneven services that allow some DIDPs to fall into a sheltering and housing gap, which causes great distress and further increases the needs they may have—for transportation, food, child care, and communication, and more— increasing vulnerability, rather than increasing their capacity to help themselves. The sheltering and housing problems that emerged after Andrew, Katrina, and Ike clearly led to a need to change institutional deadlines repeatedly. Although the extensions given for housing helped meet the needs of a number of people, it also revealed the inability of the current institutional framework to adequately plan for mass displacement of populations. There was the assumption that the current sheltering fand housing policies and processes would work. Given that catastrophic hurricane events such as Andrew, Katrina, and Ike

strain the current system of shelter and housing provision, it would be beneficial for agencies to institute flexible recovery processes with the ability to rapidly scale to the demands placed on it by DIDPs. Given that these timelines will likely have to be flexible after a catastrophic event, the authors suggest that this likelihood be incorporated into response plans so that changes are not made on an ad hoc basis.

Continuing to operate within an event-based framework that focuses on what should be done in each stage of sheltering and when each ought to end does not allow for explicitly addressing how to evaluate when transitions variably begin and end and how to meet those needs. To improve current practices there is a need for acknowledging and planning for those predisposed to displacement and those experiencing displacement after an event. The following section provides an overview on the issue of predisposition to displacement and what is known from the empirical literature.

Vulnerable Households and Predisposition to Displacement

Identifying those who are predisposed to displacement is not an easy task as each disaster is unique with respect to the physical destruction to homes, employment centers, and critical infrastructure. However, it can generally be assumed that vulnerable persons with the least ability to respond to disaster impacts are also at greatest risk of short- and long-term displacement and related effects (Bolin 1985; Morrow 1999; Quarantelli 1995; Morrow and Peacock 1997; Davidson and Lambert 2001; Oliver-Smith 2006; Levine et al. 2007; French et al. 2008; Esnard et al. 2010). Several case studies conducted since Hurricane Andrew have provided further insight into the profiles of displaced persons, where they went, and for how long. Smith and McCarthy (1996) examined displacement after Hurricane Andrew to identifying better methods of measuring the demographic effects of Hurricane Andrew on both the housing stock and population distribution in Miami Dade County, Florida. They identified 353,300 residents displaced by Andrew (Smith and McCarthy 1996, p. 271). They estimated that 271,000 of these remained in Dade County, 31,900 moved north to Broward County, 32,700 moved to other parts of Florida, and 17,700 left the state altogether, totaling 82,300 persons who left Dade County at least temporarily because of the hurricane. Smith and McCarthy (1996) also noted that more than 13% were displaced for between 27 and 52 weeks, and 8% were displaced longer than 53 weeks, and that the further people moved initially after the hurricane, the lower the proportion of those who returned.

The question of who was displaced by Hurricane Andrew was also addressed by Girard and Peacock (1997), Peacock et al. (2006), and Dash et al. (1997, 2007). Overall, Dash et al. (2007) found that Anglos and non-Hispanic blacks had disproportionately moved away from the case study area of South Miami Heights. That African-Americans were more likely to move was also reported by Morrow-Jones and Morrow-Jones (1991), who also found that female-headed households and the elderly, along with African-Americans, were more likely to migrate following a disaster, concluding that "the less powerful may move disproportionately" (p. 129) because of less access to resources. People with lower incomes and lower levels of educational attainment were also found to be disproportionately displaced after

a disaster event. However, Van Zandt et al. (2009), in a study of Ike, found that African-American households were less likely to have been displaced, even in instances where their houses were damaged, perhaps because they lacked the resources to move.

In research after Katrina and Rita, Myers (2007) drew similar conclusions regarding displacement. Not only are urban residents at risk, Myers points out that rural households may lack the means for moving out of the path of disaster or recovering afterward (Myers 2007; Cutter et al. 2003). The study by Koerber (2006) provides other invaluable insights into the migration patterns and characteristics of New Orleans residents who were displaced by Hurricane Katrina. According to Koerber (2006), those who moved tended to be younger, more likely to be single or separated, less likely to be fully employed or in the labor force, more likely to be in poverty, and living in renter-occupied housing. Predisaster inequities, discrimination, and exclusion emerged as important determinants of displacement (Phillips and Morrow 2007).

Peacock et al. (2006) pointed out that households and neighborhoods that are poorer before a disaster often do not receive the necessary aid to "jump start the recovery process" (p. 268). Lowincome households, often underinsured and not qualifying for most assistance, suffer the most. Those without transportation are further hindered in recovery, particularly when public transportation has been disrupted or has ceased to function (Peacock et al. 2006). The primary government program for those without insurance or with insufficient coverage is the Small Business Association (SBA) Loan program, which low- or fixed-income households may not be able to qualify for or afford. Peacock and Girard (1997) found that those who are economically and socially disadvantaged were more likely to reside in housing that is substandard and more likely to be damaged. These households are more likely to be renters or mobile home occupants and /or reside in housing with lowerquality construction (Fothergill and Peek 2004; Myers 2007). Further, renters face recovery problems as well, usually having no insurance and no rights to stay in the property, despite damage, as homeowners do (Fothergill and Peek 2004; Myers 2007). Lacking savings and assets, renters may be less likely to return after being displaced. Should they want to return, they often find that there are fewer rentals available on the market as there is limited government assistance for landlords to restore rental properties after an event. After Katrina, a pilot program was initiated in areas struck by Ike to repair rental properties (FEMA 2009b; Sapat et al. 2011). though no studies of its outcome are available at this time. The rentals available are often higher in cost and likely occupied by more affluent households (Peacock et al. 2006). Ties to a location also play a factor, including employment, schools, and social networks. Lower-income households that cannot rebuild rapidly are faced not only with the loss of shelter, but the loss of ties to their community.

Henry et al. (2010) estimated an overall 8% loss in total population for the city of Galveston in the 2 years following Hurricane Ike. Van Zandt et al. (2009), in their study of Galveston, Texas, after Hurricane Ike, found that neighborhoods with higher proportions of minorities, older housing stock, and lower adult educational attainment were less likely to have started repairs and that neighborhoods with higher shelter and housing recovery needs and lower civic capacities were also less likely to have begun repairs 2 months after the hurricane. Their overall finding was that

indicators of social vulnerability did make a negative difference in household disaster response and recovery.

Why Addressing Displacement Matters

The failure to officially address the displacement issue, including predisposition to displacement, has several important consequences for disaster recovery that should be avoided. First, there is a domino effect in the institutional handling of disasters—situations where agencies are not thoroughly, and in some cases minimally, prepared before an event and do not act consistently through the event. This can lead to an increase in vulnerabilities for communities and households (Oliver-Smith 2006; Feldman et al. 2003), as evidenced during and after Katrina. State and local government agencies responsible for services need to plan budgets and strategies in coordination with one another. If not, there can and likely will be a ripple effect of problems that move downward to the local level, eventually trickling into communities and households least able and least responsible for bearing the social and financial costs of this lack of preparation and coordination. A process-driven approach should not increase costs for municipalities. For example, local governments can arrange for assistance from county or state governments in conducting vulnerability assessments and, in return, incorporate such assessments into the planning process that addresses future DIDP services.

Second are the implications for the areas receiving those displaced. Ill- or unprepared agencies transfer the tangible and intangible costs to receiving locales, communities, and households by their lack of planning and action. At the time of Hurricane Andrew, some displaced households resettled in Broward County, a county that was unprepared to receive these displaced households (Benedick 2002; Welsh and Esnard 2009). This creates a second level of vulnerability and insecurity for both residents and DIDPs in those areas that are not affected by the primary event, but to which DIDPs turn as safe havens. The Houston area first experienced an influx of hundreds of thousands of Katrina DIDPs, followed by Ike DIDPs 4 years later. Cities, such as Houston, can actively prepare for the next time by beginning the planning process for receiving DIDPs. This will take a concerted effort of local, state, and federal agencies, and they must not only plan for and develop strategies, but must also operationalize these by working out how local agencies will receive supplemental resources (e.g., people and equipment) and timely funding and repayment to address extra costs to meet DIDP needs.

Third, lacking guidelines and consistent operational definitions of displacement, long-term recovery coalitions and committees spring up to meet the unmet needs of displaced households after local, state, and federal agencies have started and even completed their recovery missions (Welsh and Esnard 2009). These nongovernmental organizations have begun to determine on their own when displacement ends, or when it should end, and organize assistance accordingly. The result is arbitrary and ad hoc calculations of service provision, further frustrating displacees. The widely varying approaches and operating frameworks of charities and government institutions leave DIDPs confused and distraught, greatly adding to the stress burden they carry from the event and subsequent experiences. The degree and variation of "red tape" encountered in both government and nongovernment assistance is

unnecessary and detrimental to the well-being of those affected. Greater incorporation of these nongovernmental organizations into the planning process, whether members of official unmet needs committees or not, will enhance the well-being of affected DIDPs as they go through the process of recovery.

Last but not least, defining and adopting a process-oriented approach can facilitate ongoing and future research on DIDPs, including studies to examine county vulnerability and the percentage of specific populations with one or more vulnerabilities. This would allow appropriate evacuation times, shelter preparation, and special services throughout the timeline to benefit those predisposed to displacement. Furthermore, models of displacement vulnerability would allow planners and others to examine long- and longer-term needs of DIDPs that have thus far been outside the framework of disaster mitigation practices in the United States. At the most basic level, it would be useful to know the numbers of individuals and families displaced. Currently, there is no systematic approach nor are there guidelines to keep track of the number of DIDPs, though the technology certainly exists. This lack of data is partly understood to be due to the lack of clear terminology and operational definitions of displacees and displacement end status.

Recommendations toward Integrating a Process Approach into Current Practices

Three recommendations are offered to improve the current institutional framework; these are based on evidence already presented from scholarly research as well as the current analysis of the sheltering and housing provisioning process following hurricanes Andrew, Katrina, and Ike. The recommendations are: (1) recognition of postdisaster displaced persons and planning for their differential needs; (2) integration of agency programming at all scales; and (3) implementation of a holistic yet streamlined process to provide services to DIDPs.

Disaster-Induced Displaced Persons

As previously mentioned, when terminology fails to acknowledge the existence of a social group, such as the displaced, then policy and practice are unlikely to address their needs. Defining displacement and addressing such dilemmas can lead to a process-oriented approach within current policy and practice that is more supportive and effective for those displaced than the current event-driven model. A process-driven approach would have at its foundation the identification of vulnerable populations at local levels, followed by programming aimed at reducing this vulnerability before an event occurs. The recognition of differential household vulnerabilities and, thus, capacities for recovery had not yet been incorporated into disaster recovery practices at the time of Hurricanes Andrew, Katrina and Ike, despite repeated evidence of this need.

Identification of households predisposed to displacement will require conducting multiagency community-wide vulnerability assessments prior to any hazard event and will provide concrete information that can form a basis for action within the community. Communities that identify populations vulnerable to displacement can reduce these vulnerabilities long before a hazard event by increasing the amount of affordable housing stock within the community, encouraging renters to purchase rental insurance,

assessing multiunit housing stock for capacity to withstand an event, and encouraging the upgrading of these properties, as well as other mitigative policies and practices.

Integration and Coordination

Second, integration of services being provided by the various governmental and nongovernmental agencies requires greater coordination at all scales, horizontal and vertical. Better coordination across agencies before, during, and after a disaster is a vital step. FEMA, HUD, and other agencies can improve coordination so that the variable needs of displaced populations are more speedily and efficiently met. The need for better coordination does not end at the federal level. It is also necessary to improve coordination between local governments, county agencies, governor offices, and state agencies.

Better coordination between institutions and agencies means overcoming differences in how particular mandates are interpreted. With the Department of Homeland Security (DHS) overseeing FEMA, there are interpretational differences among agencies of the Stafford Act. DHS interpreted the Stafford Act as allowing only 6 months of assistance after Katrina for temporary shelter and housing, whereas FEMA itself interpreted the Stafford Act as giving it the flexibility to provide aid as long as FEMA itself deemed necessary (U.S. Senate 2009). Internal inconsistencies such as these further encourage criticism of federal emergency programming responses and outcomes. Clarification of mandates and roles along with greater coordination and cooperation among agencies could serve to lessen conflicting interpretations of mandates and result in improved service provision and communication with DIDPs.

There is also a key gap among the agencies tasked with disaster recovery, probably because of the overarching recovery focus on rebuilding structures and the material provision of shelter and housing to assist disaster survivors, rather than on "rebuilding people." The gap could likely be a missing agency, such as Health and Human Services (HHS), or a missing policy, something the authors acknowledge that the National Disaster Housing Strategy seeks to provide. An agency such as HHS could better partner with ARC to incorporate displacees into an overarching and holistic tracking and recovery system as soon as displacement occurs. Partnering and coordinating with FEMA and HUD would allow less jagged transitioning between displacement and recovery, while also increasing cooperation and service delivery by all involved agencies. An outcome could be a system for tracking DIDPs, such as the issuance of temporary ID cards with smart chips, which would reduce the amount of paperwork required of DIDPs and allow benefits to be tracked across agencies and systems, thus preventing gaps and duplication of services.

Implementation

Responsibility for implementation belongs at all levels of government from the local to the federal, and should be coordinated across agencies and at all scales. Local-level displacement vulnerability assessments can be combined with larger-scale regional, state, and federal risk assessments, allowing comprehensive vulnerability and capacity assessments to be generated and used by municipalities to implement local programming aimed at reducing structural and social vulnerability

at the lowest scale. These assessments can further be used at regional, state, and national scales to prepare for the next catastrophic disaster. Multiagency disaster preparation exercises, such as with the fictional "Hurricane Pam" shortly before Katrina, are not sufficient at predicting the ripple effects of such an event, and this can be improved by implementing an inclusive multiagency task force at several levels of management to question and work through the assumptions behind current planning scenarios. Anticipating secondary effects of implemented policies can improve coordination and effectiveness in implementation, for example, for receiving areas and also for households placed in housing where little to no transportation exists and who are hesitant to occupy that housing for fear of losing their employment. Current policies should be evaluated for possible unanticipated outcomes, and changes made. Furthermore, the importance of local knowledge should not be understated. It is local knowledge that informs the implementation process, guiding action away from damaging interventions (or pointless ones) and toward avenues that will elicit public participation and support.

Conclusion

Unique as New Orleans is, it cannot be viewed as an isolated or singular case, as Andrew and Ike show. Policymakers need to learn from these past experiences (Birkland and Waterman 2008, Sapat et al. 2011; Welsh and Esnard 2009; FEMA 2009c) and address lingering and vexing questions related to displacement, especially as there have been consistent calls for better understanding and more research on displacement, particularly regarding sheltering and housing needs (National Research Council 2006).

The intentions in this paper were to discuss the concept of displacement in the U.S. context and show how the current lack of appropriate terminology (or definition), among other things, has contributed to a lack of policy toward disaster-induced displaced persons. It was further demonstrated how current policy follows a linear view of disaster response and recovery based on a measurement of stages of recovery. This inhibits a response based on differential needs. It is asserted that a process approach based on defining displacement and identifying predisposition to displacement would improve policy and practices aimed toward short and long-term recovery.

Any process will require monitoring and evaluation on a consistent basis through the collection of data on the evolving situation after an event. Implemented policy and programs will also need to evolve fluidly and effectively without the fits and starts currently experienced with ad hoc program changes. Cooperation among federal, state, and local agencies, as well as nongovernment relief organizations, will also be necessary to address how transitioning should be handled. There is much that can be changed to improve recovery for those displaced by disaster in the United States. And this clearly matters.

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