

# Building Capacity in Six Disadvantaged Communities Vulnerable to Natural Disasters

Prepared by

Center for Sustainable Community Design  
Institute for the Environment  
University of North Carolina at Chapel Hill  
Chapel Hill, NC

for

MDC  
Chapel Hill, NC

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## Abstract

**Problem.** Disaster plans almost always do not benefit from the knowledge and values of disadvantaged people who are frequently underrepresented in planning processes. Consequently, the plans are inconsistent with the conditions, concerns, and capabilities of disadvantaged people.

**Purpose.** To describe and analyze an Emergency Preparedness Demonstration (EPD) project aimed at reducing the risk to life and property in six disadvantaged communities in Delaware, Maryland, North Carolina, Pennsylvania, Virginia, and West Virginia. EPD involves a community-based participatory planning process aimed at building the capacity of disadvantaged communities threatened by disasters.

**Methods.** To understand the successes and limitations of the EDP approach we used multiple sources of evidence. Semi-structured interviews were conducted with 30 key informants, field notes were taken during attendance of community planning meetings, and documentary materials prepared by local planning teams (memoranda, vulnerability assessments, household surveys) were content analyzed.

**Results and conclusions.** Five implications were derived from the EDP experience that were found to be critical for success in organizing, planning, and capacity building in the EDP communities: recruit participants for inclusive collaboration; provide analytical tools to co-develop information and empower people; employ coaches to organize and facilitate sustainable community change; design a review bottom-up process for selection of strategies that holds communities accountable; and build capacity for implementation of strategies.

**Takeaway for practice.** Disadvantaged population groups can reduce their vulnerability to hazards through planning. However, they need assistance from an external organization to make positive progress. A team of planners with expertise in community development and disaster planning can serve this function, but they must have sufficient funding and commitment from donor organizations to do deep and sustained civic engagement work.

**Keywords:** disaster planning, disadvantaged communities, social vulnerability, civic engagement, empowerment

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### Authors:

Philip Berke: [pberke@unc.edu](mailto:pberke@unc.edu), Professor in the Department of City & Regional Planning, and Deputy Director, UNC Institute for the Environment, University of North Carolina-Chapel Hill.

John Cooper: [jcooper@mdcinc.org](mailto:jcooper@mdcinc.org), Project Director, MDC, Inc.

David Salvesen: [salvesen@unc.edu](mailto:salvesen@unc.edu), Deputy Director, UNC Institute for the Environment, University of North Carolina-Chapel Hill.

Danielle Spurlock: [dspurloc@email.unc.edu](mailto:dspurloc@email.unc.edu), Doctoral student, Department of City & Regional Planning, University of North Carolina-Chapel Hill.

Christina Rausch: [dspurloc@email.unc.edu](mailto:dspurloc@email.unc.edu), Project Manager, MDC, Inc.

## **Building Capacity in Six Disadvantaged Communities Vulnerable to Natural Disasters**

The 2005 Hurricane Katrina offers a vivid portrayal of the inequalities of disaster planning in American society (Cutter 2001, Lindell and Perry 2004, NRC 2006, Peacock, Morrow and Gladwin 1997). While the inequalities may have been news to some, they were not news to the displaced people in many other communities along the Louisiana, Mississippi, and Alabama coasts. If the people in the poor wards of New Orleans had been consulted, they would have easily identified the significant weaknesses of the evacuation plan. They would have made clear that the elderly, the disabled and the poor would not be able to leave. They would have said that most of those without cars -- 25 percent of households in New Orleans, overwhelmingly African-Americans -- would not be able to leave (Bourque et al. 2006). The Hurricane Katrina case is indicative of many other vulnerable communities across the nation as their disaster plans do not benefit from local knowledge, and are inconsistent with local conditions, concerns, and capacities of disadvantaged people.<sup>1</sup>

In this paper, we describe a community-based participatory planning project aimed at building the capacity of disadvantaged communities threatened by disasters. A disadvantaged community consists of key social characteristics (women, racial/ethnic minorities, low-wealth, and the elderly) that create a disproportionate susceptibility to harm and constrain capacity to respond.<sup>2</sup> The project was undertaken by the authors of this report who formed a partnership that included community development planners at MDC Inc., a non-profit organization, and the faculty and students of the University of [to be named]. With an emphasis on community-driven issue selection, community collaboration in discovery and diagnosis, and action to effect change as a part of the decision process (Minkler et al. 2008, Reardon 1998), we believe that our

approach is particularly well suited to collaborative efforts focused on the deep disparities in disaster vulnerability.

We address the core question of how can planners, emergency managers, and community development specialists overcome the barriers to enable participatory planning in disadvantaged communities at risk to disasters. Addressing this question responds to calls for improving knowledge on public engagement strategies aimed at building the capacity of disadvantaged communities to improve their disaster resiliency and reduce vulnerability (Berke and Campanella 2006, National Research Council 2006, chs. 2,3, 6, Peacock, Morrow and Gladwin 1997).

The paper consists of three parts. We initially describe the roots of an Emergency Preparedness Demonstration (EPD) project aimed at reducing the risk to life and property in six disadvantaged communities in Delaware, Maryland, North Carolina, Pennsylvania, Virginia, and West Virginia. We then discuss the community selection process, and data collection and analysis procedures used to assess the capacity building efforts in EPD communities. Next, we chronicle six critical factors that explain the degree of success (and failure) of the organizing, planning, and capacity building activities in each community. Finally, we review implications of the partnership's grassroots activities to offer guidance for prospective non-profit and university collaborative initiatives engaged in disaster resiliency planning in disadvantaged communities.

### **Principles for Building Community Capacity**

While public participation is an essential function of planning, the problem of general apathy in disaster preparedness and mitigation has been well-documented (see, for example, Berke 1998, May 1991, NRC 2006, chs. 3, 4). State and federal legislation that motivates local disaster planning is often premised on the assumption that people with a stake in the outcomes of

planning will engage in public debate, and the core challenge is to educate and build consensus on proposals for action (Burby 2003). However, seeking resolution of disaster issues is particularly problematic without a supportive public willing to act (Godschalk 2003, May 1991).

The problem is especially serious for disadvantaged groups who often face racial discrimination and class inequalities, and the uncertainty and suspicion that accompanies these conditions (Morrow and Peacock 1997, Peacock and Girard 1997). Breaking down these barriers hinges on community planning that embraces the idea that public officials and local people work together in a process aimed at building community capacity to engage, organize, and take action on locally defined priorities. Berke (1995), Ganapati and Ganapati (2009), and Maskrey (1994) maintain that the most striking feature of empowerment in a disaster planning context lies less in the use of specific techniques and methods but in who defines vulnerability problems and who generates analyses, represents, owns, and acts on the information which is sought. Asking the “who” question enables planners to look more closely at what is meant by the capacity to engage. Rather than just taking part, the focus is on the central issues of empowerment and control in making and acting on choices.

Sirianni’s (2007) hybrid of conceptual models is particularly relevant to understanding how to empower communities vulnerable to disaster. First, the classic *collaborative planning* model offers guidance to the role of the planner in consensus building, acting as a coach who communicates, listens, mediates and serves as an intermediary among stakeholders (Innes 1998, Innes and Booher 2004), but with particular emphasis on relational organizing practices that encourage face-to-face conversations about values and interests to build trust and cultivate the empowerment of the most marginalized (Warren 2001). Second, the *asset-based community development* model recognizes local assets (e.g., skills of local residents, the power of faith-

based organizations, and the supportive functions of formal local institutions) as the primary building blocks of a resilient community, where disadvantaged communities are recognized by their assets, not by their deficiencies and state of helplessness (Dodson, Thomasson, and Totten 2002, Kretzmann and McKnight 1993). Finally, as noted by Sirianni (2007), the *accountable autonomy* model involves building capacity of disadvantaged groups to develop their own plans, but with standards for accountability to achieve the broader community-based aims (Fung 2004).

Based on these conceptual models, we derive five principles that can be used to assess the design of planning programs aimed at overcoming the obstacles to engagement and reducing vulnerability of marginalized populations:

1. *Strengthen networks through diversity in participation.* Participants of planning requires an inclusive, supportive team of allies that represent internal groups within the disadvantaged community with little or no formal power but with knowledge about local conditions and values, and external groups with power and resources to change the status quo (Berke et al. 2002, Grence 2002, Zaferatos 1998, Sirianni 2007). Building capacity to reduce disaster vulnerability and underlying inequities is beyond the scope of a single individual or organization. Collaborative arrangements aimed at strengthening networks should proceed with a holistic perspective, rather than developing recommended actions for a particular group separately.
2. *Co-develop information.* Local people and planning experts should co-develop information to aid in defining the most pressing disaster issues and selecting strategies. Use of “ordinary knowledge” possessed by local people acknowledges their perspectives and abilities, and forms the basis for research and planning that reflect local conditions and values (Innes 1998, Schon 1983). It can also aid in the development of more accurate information about local vulnerabilities (Cornwall and Jewkes 1995, p. 1668-1669), and improves the understanding of the problems and options for solving them.
3. *Coach to build trust and motivate change.* Use coaches as change agents to catalyze communities to create a vision, set goals, select strategies, and take action. Core skills of coaching include: translate multiple sources information to strengthened relationships between underserved populations and formal authorities; mediate conflict; ensure that all voices be heard; and be flexible to adapt to changing circumstances (Dodson, Thomasson and Totten 2002, Emery, Hubbell, Salant 2005, Susskind et al, 1999).<sup>3</sup>
4. *Select strategies that fit local conditions and values.* Disaster vulnerability reduction strategies should be based on a deliberative process among those groups affected by the strategies (Berke, Kartez and Wenger 1993, Ganapati and Ganapati. 2009). Strategies

should be selected not based on a top-down evaluation, but on a process that emphasizes extensive discussion and one-on-one communication. They should be premised on accurate information, internally consistent with local values and conditions, and designed to achieve goals as envisioned by the broader hazard policy concerns, but under terms disadvantaged people felt they could control (Fung 2004).

5. *Build capacity for implementation and sustainable change.* Create partnerships during planning so that representatives of disadvantaged groups and formal organizations would be committed and capable to move the work forward. Maintaining active civic support is essential for implementation of plans and, most importantly, for fostering sustainable change in relations with underserved populations (Briggs 2004, Burby 2003, Sirianni 2007).

We examine the choices made by the EPD case communities discussed in this article to achieve each principle. Understanding the alternative pathways has important implications for creating disaster plans that matter to disadvantaged people.

### **Background: Roots of the Emergency Preparedness Demonstration Project**

In 2004, MDC and the university initiated a partnership called the Emergency Demonstration (EPD) project with the support of the Federal Emergency Management Agency (FEMA). MDC is a private non-profit organization based in [town, state] that has worked for over four decades on development issues in underserved communities throughout the American south. The university group consisted of a core of faculty investigators (assisted by graduate students in anthropology, public health, and urban planning) with considerable experience in hazard vulnerability analyses and disaster planning who added a research assistance dimension.

Between 2005 and 2008 the MDC/university partnership initiated and completed six community-based demonstration projects aimed at creating disaster plans and taking action to implement prioritized strategies.<sup>4</sup> We were well aware of the long history of deep disappointment in past externally-driven initiatives, especially those associated with university and government researchers, which had failed to produce significant physical development

improvements and social programs benefiting distressed communities in the arenas of community development (Reardon 1998), environmental justice (Minkler et al. 2008) and disaster resiliency (Peacock, Morrow and Gladwin 1997). This history prompted the MDC/university partners to pursue a bottom-up, participatory action research approach to disaster planning.<sup>5</sup>

Two key features of this approach included the establishment of a core planning team in each EPD, and the employment of three coaches to work with the six teams. The role of each team is to represent the diverse interests of the community, provide local knowledge about disaster related issues that participants define as important, and formulate solutions to address issues according to their own priorities. The central role of coaches is not only to serve as a technical adviser, but also to be facilitators and catalysts for change. Effective coaches must have a diverse mix of professional skills (communication, consensus building, visioning, technical competence, and advocacy) needed to empower and motivate collective action.

## **Site Selection, and Data Collection and Analysis**

To test the efficacy of our participatory research approach our fieldwork focused on communities that were selected based on the following procedure. Initially, disadvantaged communities within the 2003 Hurricane Isabel impact zone were identified using census data on socio-economic and minority characteristics. The impact zone covered areas that sustained moderate to severe damage extending along the Atlantic Coast from South Carolina to Maine and as far inland as West Virginia.

Next, a preliminary list of communities was developed and reviewed by staff from state divisions of emergency management and FEMA to identify the best candidates based on

potential barriers and opportunities to working with such communities, and the commitment and capacity of communities to participate in the demonstration project. Site visits were then conducted by the MDC/university team that included exploratory meetings with a diverse set of local representatives in potential communities, to determine the willingness and ability of the communities to participate.<sup>6</sup> Six communities were selected from rural and urban areas: Chester County, PA; Dorchester County, MD; Hampton City, VA; Hampshire County, WV; Hertford County, NC; and Wilmington, DE.

In the beginning, the MDC/university partners decided to initiate on-the-ground work in 2005 with a pilot community (Hertford County, NC). The aim was to initially concentrate planning efforts within a single community to enable a learning process in project design. Team members hoped success in a pilot project would offer lessons to refine work subsequent EDP sites that would lead to wider success, and, over time, produce a wider movement for reform. Planning in Hertford County lasted about 18 months, while the remaining sites were more short-term that lasted approximately 9 to 10 months.

To understand the successes and limitations of our approach we used multiple sources of evidence. Between September 2007 and March 2008 semi-structured interviews were conducted with 30 key informants from the EPD sites. Informants were individuals who were knowledgeable and influential about disaster vulnerability and community development efforts in their respective communities. They included participants on the core EPD planning teams who are representatives from community-based organizations (e.g., churches, neighborhood groups) local government agencies (e.g., emergency management, social services, health, neighborhood planning), unaffiliated residents, and external organizational representatives from state agencies and national humanitarian aid organizations (Citizen Corps, Red Cross, United

Way). An interview protocol was used that included questions designed to gauge success (and failure) in recruitment of key participants, internal and external relationship building, coaching, formulation of strategies, and prospects for implementation.

The interviews were supplemented by field notes taken during attendance of community planning meetings by MDC/university staff, and a two-day summit that convened representatives of all EPD sites in Baltimore during June 2007. The intent of the summit was for local participants and coaches to describe their experiences in working on the EPD projects, exchange ideas about how to improve the EPD process, and learn from each other. In addition, we collected documentary materials that were prepared by core EPD planning teams (memoranda, vulnerability assessment studies, household surveys, and media releases). Content analysis of transcribed interviews and field notes was based on standard coding procedures specified by Miles and Huberman (1994).<sup>7</sup>

## **Disaster Planning in Socially Vulnerable Communities**

The following discussion reviews the experiences of the six community-based EPD projects. The discussion is organized under each of the five core principles for disaster planning in socially vulnerable communities.

### **1. Strengthen Networks and Diversity in Participation**

The MDC/university partners found that two strategies were particularly effective in building a diverse and representative network of supporters to facilitate action: a participant recruitment strategy that was tailored to the local situation; and an engagement strategy to encourage participants be involved early in the process.

**Recruitment Strategy.** During the initial phase, each EPD community received a \$15,000 planning grant to cover time of a site coordinator (supplied by a community-based organization active on the core planning team) to support recruitment, and other key planning activities like arranging meetings, assisting in data collection, and disseminating information. To prevent any one group or narrow set of interests from dominating the process, each EDP initiative worked with a coach to formulate locally tailored recruitment strategies for engaging a full diversity of interests.<sup>8</sup>

In some cases, recruitment of EPD participants was facilitated by strong pre-existing networks of people. Hampton City, VA, for instance, initiated an EPD with a lead organization – Hampton City Neighborhood Unit -- that had been operating for nearly 20 years. According to the coach of this site, the Neighborhood Unit had “deep networks that could energize people into action...lots of contacts, lots of trust, and person-to-person relationships.” Because the relationships were highly functioning, the groundwork undertaken in other EPD sites was not necessary in the Hampton City. The recruitment strategy was multi-pronged with potential participants identified during initial meetings, initial invitations issued by email or personal contact, and then follow-up from a long-time staffer in the Neighborhood Office who was a very highly respected in the community.

In contrast, a highly developed network was not present in rural Hertford County, NC. The lead organization in Hertford County -- Roanoke Economic Development, Inc (RECI) – initially relied on a single person who was energetic, very engaged in the process, and immersed in the subject matter, but was new to the area and did not have a well-developed network of relationships with residents. To assist recruitment of members for the core planning team, the coach and RECI staff member decided to personalize the recruitment process by employing three

long-time residents to recruit individuals unaffiliated with a particular group and representatives of community-based service providers (e.g., churches, child care services, and the housing cooperative). After the core planning team approached the county manager, the manager used her influence by personally tasking key representatives of county agencies, notably emergency management, to participate.

Other outreach strategies focused on discovering existing levels of disaster awareness and preparedness among disadvantaged groups, and concerns of these groups about future disasters. Because disadvantaged people often have low rates of participation in public meetings, the City of Hampton and Hertford County core planning teams administered surveys and focus groups aimed at eliciting concerns, and levels of awareness and preparedness of residents. In Dorchester County, when immigrants and people of color did not come to officially sponsored events efforts were made to interview parents of children at Head Start Centers. According to the coach at this site, because these Centers “are great generators of trust...parents were more willing to reveal personal information about themselves and their families.” These experiences revealed how EPD communities were challenged to discover and recruit for a diversity of interests.

**Engage Early-on to Sustain Commitment.** Each EPD was notified by the MDC/university partners to engage stakeholders early-on and cautioned that their efforts would unravel if they failed to be inclusive, and that the initial planning grant could be withdrawn. For instance, in two EPDs, county emergency managers had some initial reluctance to buy-in to the project. They felt threatened or at least didn’t see the value in participating. In these cases, MDC/university became involved in building trust and relations. Two MDC/university staff had been emergency management practitioners. Once MDC/university staff met these local officials and explained the intent of the EPD, local officials agreed to at least initially participate.

Comments like we became more likely to at least “lend an ear,” “our fears were put to rest...that the process would not be used to criticize emergency managers like everyone else was doing after Hurricane Katrina,” and that “we are all after the same thing argument” indicated that reluctance and tempers were eased. One emergency manager summed-up the feeling among the initially reluctant EPD sites, stating that the process “could actually make their job easier, rather than harder.” Thus, a lesson learned here is the importance of involving the emergency managers very early in the process so that they will be more likely to actively participate.

While MDC/university challenged each EPD community to devise ways to ensure diversity in participation, not all communities achieved this aspiration. In Hampshire County, WV, for instance, engagement was narrower in scope compared to other EPDs. The lead organization emphasized recruitment based on networking among public agency staff rather than grassroots networking. The ultimate group of participants consisted of four to seven staff from various county departments (Office of Emergency Management, Department of Health and Human Services, Committee on Aging) made up the backbone of the planning team. Members tasked themselves to gather information and select action strategies focused on their definition of disadvantaged populations in the county which centered on the elderly. In Wilmington, DE engagement of local emergencies was limited to only the emergency management, but other key agencies were not engaged.

Table 1 reveals the pattern of results of the determined efforts to enhance participation and strengthen networks among diverse organizations both internal and external to the communities.<sup>9</sup> Results aimed at participation internal to the EPD sites were successful at five EPD sites, with multiple local government agencies and community-based organizations active in the more successful sites. Hampshire County, however, was dominated by local government

agency staff. Residents that were unaffiliated with an organization, elected officials and other local institutions showed mixed results. Participation of external organizations was mixed with local chapters of national non-governmental organizations (NGOs) like United Way and Red Cross participating in the majority of sites (four of six sites), but state agencies were active at only in Dorchester County and Wilmington. Participation by these external NGOs is particularly critical since they provide considerable resources to disaster stricken communities. However, the needs of disadvantaged populations are often overlooked unless outside donors understand the issues and needs before a disaster strikes (Berke, Kartez and Wenger 1993, Graham 2007).

Table 1 here

Overall, the Hertford County EDP has the greatest number of active participants because they had more time relative to other sites to conduct deep penetration in relational and trust building. As noted, this Hertford County was the pilot site that was engaged for 18 months while other sites were engaged for a six to eight month period. This extra time provided the opportunity for the coach and core planning team to “do things side-by-side which is the way you break down race and other barriers to building trust and establishing respect,” as one local participant noted.

## **2. Co-develop Information**

Once MDC/university partners were assured that a diverse set of representative participants were committed to be engaged and the scope of the proposed planning made sense, each EPD community received technical assistance to conduct the next phases of planning that involved diagnosis and discovery, goal setting, strategy selection, and implementation. A range of analysis tools and sources of information were made available, including GIS hazards maps,

vulnerability assessments, surveys of households, presentation by experts, and best practices for other communities that were promising models for the EPD work. On request, university specialists also offered technical assistance in interpretation of maps and data.<sup>10</sup> Table 2 shows the tools that were used by each of the EPD planning teams.

Table 2 here

Historical and cultural knowledge of people who have lived through disasters and who understand how such disasters make them vulnerable was continuously fed back into the process. Specific attention was given to local involvement in mapping the location of hazard areas and socially vulnerable populations (e.g., elderly, low income households, and people with disabilities) in these areas. A key aspect of the mapping exercise was to bring out stories about how local people were affected by disaster events, and to empower them to revise the maps prepared by experts based on local knowledge and experience. In Hampshire County, WV participants challenged the vulnerability assessment. They pointed out areas not highlighted on the maps where flooding occurred. In particular, one area was characterized by steep slopes and ravines, where narrow, steep creeks flooded during storms that made roads impassable. Some people told of being cut off from work or from necessities (e.g., medicines). Others talked about how people in the more rural areas were isolated and cut off because of flooding or downed trees. They also explained how the vulnerability map inaccurately indicated the presence of a Hispanic neighborhood in a part of the county prone to flooding. Participants remarked that there were few, if any, Hispanics remained in the neighborhood after an apple orchard shut down as many came to the area to pick apples. During Hertford County, NC planning team meetings, participants were split into three groups to comment on the maps and point out discrepancies in the location of critical facilities, housing, employment centers, and environmental threats.

Comments like “that facility is located across the street from where it is shown,” and “that facility no longer exists” reflect the importance of ordinary knowledge.

In contrast, Dorchester County’s experience with the maps was not as successful as Hampshire County and Hertford County. Most participants thought the maps were helpful at framing the issues associated with potential hazards in the area, but that some of the data was outdated or simply not accurate. Staff from the county’s Office of Emergency Management’s (OEM) were vocal critics of the maps. For example, they pointed out that hazardous facility data was not current and the group made numerous corrections immediately once maps were unveiled. In this case, OEM staff felt that they should have been consulted early-on about the maps as they had the more reliable data that was used to revise the maps. According to one planning team member, “Earlier involvement by OEM would have saved the project time, resources, and heartburn.”

Analytical tools were used in a variety other ways to help residents understand the issues and options. The Hampton EPD engaged neighborhood residents to assist with the door-to-door household survey and university specialists assisted with data analysis. A Neighborhood Office staff member from the City of Hampton observed that, “People really cared a lot about the results as the neighborhood was deeply involved in collecting the data.” The Dorchester County, Hampshire County, Hertford County, and Hampton EPDs drew on presentations from local agency experts (e.g., emergency management, health, social services) and outside experts from universities and state agencies. The presentations elicited many questions that local groups went through together with various attendees piping in when they needed to. Finally, MDC/university partners cataloged promising practices from across the country that were intended to offer

guidance to EPD communities about how other places in similar situations dealt with preparedness and mitigation.

### **3. Coaching to Build Trust and Motivate Change**

The EPD process revealed how well planners serving a coaching role were able to engage and build community capacity to act. Coaching for community change is attracting increasing attention from the development and social change fields across the country. The practice dates back to the mid-1980s when organizations like MDC began providing community-based technical assistance as a support for intervention to increase the pace and success rates of local committees that were reshaping educational and community development reforms (Dodson, Thomasson and Totten 2002, Susskind et al, 1999).

The EDP experience revealed that successful coaching is premised on four core skills. First, coaches should serve as catalysts for progressive change aimed at facilitating communities to create a vision, set goals, select strategies, and take action. Comments about effective coaching by various participants on the core planning teams included, “be persistent,” “push and promote,” and “ask tough questions,” like “Who is missing from this room? What data do we need?” However, these same participants further explained that coaches were adroit in understanding that sustainable change would only come about as long as coaches “...didn’t project a feeling as if we were being evaluated...local people especially disadvantaged folks don’t want to be evaluated,”...“they don’t want to be told that they were doing something wrong.” They needed to “understand that the process was not a threat to them.”

Second, coaches must be flexible to adapt to changing concerns, conditions, and capacities. For example, at one EPD site, the first meeting was held in the basement of the

county Office of Emergency Management, but was not well attended. Coaches were told by residents that this location was “frightening” and “insensitive” to marginalized groups. For the marginalized groups, who often hold deep suspicions of law enforcement, coming to this location was a threat. Coaches worked with emergency management staff by offering to meet in the neighborhoods and at culturally safe places (e.g., churches and neighborhood centers). At other sites, coaches recognized that communities varied in organizational capacity and thus coaching approaches had to be adapted accordingly. One coach worked in both the City of Hampton, which had a deeply rooted neighborhood organization that was well-staffed and had been working in the community for decades, and Herford County where development organizations had low capacity and had fewer community connections. In the City of Hampton, the coach’s role was to advocate and prod, while in Hertford County it was to provide training and capacity building, which in the coach’s words meant “...how to set up meetings, how to organize, to hire local coordinators to assist,” and so forth.

Third, effective coaches displayed an ability to translate multiple sources information (grassroots and technical/scientific) to strengthened relationships between underserved populations and formal authorities (Forester 1989, 1999). They must adept at breaking down the information into digestible chunks so that residents, local emergency management staff, non-governmental service providers, and others to develop a common basis for understanding the issues and deriving solutions. This involved explaining results of studies including, for example, data derived from automated mapping about location of hazards and vulnerable populations, and household surveys on residents’ preparedness levels in the hazardous areas. In several communities, participants indicated that an essential capability in translating knowledge was to be wary of “meeting fatigue” and “erosion of interest” by the community. They pointed out that

coaches took steps to guard against the emergence of these potential obstacles with engagement techniques that allowed participants to elicit responses to issues raised by the data and collectively brainstorm ideas to improve community disaster preparedness.

Fourth, coaching in all EPD sites strived to ensure that all voices are heard, especially the voices of the underserved. Coaches arranged meetings that served as informal get-togethers, learning each others' views, and establishing the basis for subsequent independent contact. They often focused on difficult issues, deeply held mistrusts, and disputes that pose serious obstacles to disadvantaged people in attending meetings, being part of ongoing deliberations, and gaining access to outside resources.

In two communities, there was a considerable mistrust between residents and local government emergency management staff at the outset. On the one hand, residents considered staff to be distant, top-down authorities who had little understanding of distressed communities and people of color. Many residents expressed their deep disappointment in prior local government disaster responses that had failed to, for example, effectively communicate emergency warnings, and account for evacuation, sheltering, medical and long-term housing assistance needs of underserved people. On the other hand, staff felt threatened by what they considered to be an intrusive intervention of outsiders (MDC/university partners) could potentially exclude their organizations' resources and expertise. In response, coaches in these communities focused on getting residents and emergency management staff to attend planning meetings together, and at times would arrange for one-on-one discussions. Helping each participant see the viewpoint of the other, including values, interests, assets, and knowledge that each participant could offer, was a central role of each coach, and permitted residents, local government staff, and representatives of the non-government sector to trust the coach as an

honest broker and reliable conduit of information. The comment, “the coach pushed the community to cross deep divides,” by a planning team member reflects the critical role of the coaches in these two communities.

However, coaching to get all voices to be heard did not always go smoothly. Despite considerable prodding, a coach in one community was unsuccessful in getting individual residents to participate. Members of the lead planning team were representatives of local government agencies. Consequently, it was geared more to work on formal organizational networking rather than grassroots organizing. The coach regularly pointed out to the team that residents needed to be engaged to broaden the narrow public administrative perspective, but members felt that their agencies were best suited to carry out the effort. As a result, this team narrowly viewed disadvantaged as disabled and elderly, but not low income or single parent households. Further, meeting times were always scheduled during daytime hours which suited agency staff but precluded attendance by residents who worked during the day.

#### **4. Select Strategies that Fit Local Conditions and Values**

Each EDP community was tasked to develop a plan that included a list of prioritized strategies for reducing vulnerability to hazards. Once the plan met standards established by MDC/university staff, each community was eligible for a \$25,000 grant to implement one or more of the strategies. The MDC/university staff reviewed each plan as a blueprint to guide change in each community. In reviewing each plan, MDC/university staff as well as coaches asked several questions: Is the analysis accurate? Do the EPD goals flow logically from the problems identified in the plan? Are strategies internally consistent with goals, and are they politically feasible? Is there a clear implementation action program, including a timeline,

identification of organizations responsible for implementation, resources that are available needed for implementation, and indicators to gauge progress?

The act of negotiating these questions with EPD teams and pushing them to answer with rigor was sometimes contentious. Having worked hard to develop an analysis, create a vision, set goals, select strategies, and establish an action program, EPD teams did not always gain approval of their selected strategies, and sometimes became frustrated when they were challenged about their assumptions, required to do more analysis, or develop clearer indicators about who participated (and who did not) in the decisions. In negotiations that preceded acceptance of the plan and selected strategies, MDC/university staff took great care to avoid being cast as enabling facilitator in some instances and evaluators in other instances.

In Hampton, for example, the coach concluded work by assisting the local planning team in brainstorming options for their information distribution strategy. Next, the team prepared a draft of a grant application, which MDC staff reviewed in person with members of the local planning team. The draft summarized the goals of the strategy, explained how the selected strategy will achieve the goals, and described the planning phase to implement the strategy. MDC requested more specificity about the types of actions used to implement the strategies, and detail regarding the timeline and organizations responsible for spending grant funds. The planning team continued to develop the project, narrowing the list of options for education and distribution tactics. A month later, the team submitted its final proposal which contained detailed actions to raise awareness and preparedness in Hampton. MDC/university staff recommended approval and FEMA accepted the final application for funding.

Table 3 shows the approved set of strategies for each EDP community. Different communities chose to focus on different mixes of training, shelter, and public outreach

initiatives. For example, Dorchester County had the widest array, while Hampton and Wilmington chose to concentrate on a few.

Table 3 here

The intent was to have strategies selected and refined through extensive, iterative discussion and one-on-one communication. Approved plans were designed to achieve goals as envisioned by the broader EPD effort, but under terms local people believed they could control. There was a clear recognition that strategies were rooted in numerous sources of local knowledge, as well as professional expertise.

## **5. Build Capacity for Implementation and Sustainable Change**

EPD projects were designed to catalyze and build local social capacity to act on behalf of disadvantaged residents. The core goal was to create partnerships so that, over time, professional agency staff and civic associations would be committed and capable to carry the work forward. This participatory and asset-based approach used in the EPD sites is critical to creating active publics needed for implementation of plans and, most importantly, for fostering sustainable change in relations with underserved populations (Briggs 2004, Sirianni 2007).

The MDC/university staff believed that the \$25,000 grants created a strong incentive for keeping teams committed during the difficult planning process, especially for the typically low-resourced local offices of emergency management. Thus, the work that teams did together was not speculative as there was real money on the table. And there was an immediate return on the time and energy invested during the months spent on planning.

While MDC committed funds to enable implementation, this resource would not facilitate lasting change without a well-developed capacity for such change. The funds were viewed by

MDC/university as incentive grants to seed further civic innovation and progress in the reduction of disaster threats, rather than sustain ongoing programs. Several promising activities emerged during the planning stage that widen the circle of allies and increase the likelihood for successful implementation:

- In Hampshire County, multiple organizations with no (or limited) experience in disaster planning became actively engaged. The well-established Committee of Aging, for example, became a primary partner in the county's newly established Preparedness Education and Assistance Project which identifies and engages community organizations that work with target elderly groups. An MOU between the Potomac Valley Transportation Authority and Christ Church of Romney was created that certifies the church as a secondary shelter.
- In Dorchester County, the Office of Emergency Management and a representative of the Hispanic community collaborated on a Spanish language CERT<sup>11</sup> training that has been a success. The office is touted it as the first (if not only one) in the state of Maryland.
- In Hampton, the planning process created an opportunity for the new emergency management director to learn about underserved neighborhoods on a personal level, and to enact an education campaign aimed at their particular learning styles and culture.
- In Hertford County, the topic of disasters was a vehicle for building new relationships within the community or strengthening existing relationships. Many people who participated already knew each other, and were able to come together as a part of the EPD since they shared a common history and, in some cases, common goals. The process improved the relationships between residents and county emergency management director. They had a better understanding of the emergency manager's job and limitations, and became allies in the search for additional resources (see below for discussion about \$8,500 grant).

Another activity for building capacity to sustain community work involved creating an expanded learning network of EDP participants. Participants on the EPD planning teams were invited to a summit that was convened in June 2007 by MDC in Baltimore to cross fertilize and learn from each other, and to further ensure that the overall EPD program was the result of an open and inclusive process. Thirty-two people attended the summit, and over 100 people participated in EPD project planning activities at the six sites. The intent of the learning network

was to generate broader networking capacity to facilitate sustained innovation and commitment beyond the end date of the EDP.

A key constraint in building capacity to implement plans was the insufficient amount of time devoted to each EPD community. This limitation precluded deeper work in development of trusted partnerships. In Wilmington, for example, there was not enough time to really build any new relationships. At the very best, people were able to place names with faces and to get a sense that there were many groups out there with a stake in reducing vulnerability. In Chester County, contacts were improved across the three boroughs (Avondale, Downingtown, and Kennett Square), but there was insufficient time to work out how the strategies in their plan could foster inter-jurisdictional coordination.

Finally, an important part of the EPD process was to leverage and pool resources from a variety of sources to help implement the strategies. In Hampshire County, the coach observed, “No one organization has to do all the work with too few resources. For example, the county’s Office of Emergency Management and Department of Health now talk almost daily.” In Hertford, participants in the local EPD project coordinated with the local emergency management director to apply for a \$8,500 grant from the State of North Carolina to establish a Hertford County Citizen Core Council. Not all communities had equal access to external sources. However, when combined with an inclusive collaborative approach and the asset-based disaster planning process of the EPD, this leveraging enabled groups to achieve together what they could not achieve on their own.

## **Implications for Mending a Broken Contract**

The EPD initiative reported here attempts to address a basic duty of democratic governance that entails upholding a human rights contract to consult the public, particularly

those who are marginalized and underserved, and involve them in decisions and plans that will affect them. There has been a long history of broken contracts by institutions charged to protect disadvantaged communities from natural disasters. Our intent was redress prior failures through a collaborative process (Innes and Booher 2004) centered on relational organizing practices aimed at empowerment (Warren 2001). Such empowerment is based on building trust through inter-personal skills in community organizing, accountability standards, and asset-based community development (Sirianni 2007).

We derive five implications from the EPD experiences that can serve to guide similar efforts aimed at empowering local people to renew their communities from within. First, in all sites, successful recruitment required personal contacts that were facilitated by trust and one-on-one relationships. However, the strategy for recruitment varied across sites. In the case of Hampton City, where pre-existing social networks are well-developed and there are strong ties with the formal local governing body, the appropriate strategy to mobilize participants was to rely on a highly respected neighborhood organization with deep relations to the community. In contrast, Hertford County had comparatively weak internal networks and links to the county government were weak. The most appropriate recruitment strategy was to invest in more time and resources (employing local residents, surveys, etc.) aimed at relationship building.

Second, co-development of information should be combined with intense capacity building and empowerment work of coaches to aid local people in defining the most pressing disasters issues and selecting strategies most relevant to them. A range of analysis tools and sources of information were made available to each EPD site, but involving the community in the preparation, collection, and analysis of information helped ensure that the assessments were

relevant to them. People cared more about the results when they were deeply involved in collecting the data.

When information was not co-developed, there was less opportunity to build a sense of ownership and commitment to the project, and even increases the likelihood for hostility. At one site, for example, local officials felt that they were not sufficiently consulted early-on about preparing maps that identified hazards and vulnerability community facilities (e.g, Dorchester County, MD), and there was a sense that work initiated by outsiders that intentionally exclude local resources and expertise from the process. There was a strong sense that if they had been treated as partners early-on more trustworthy maps would have been prepared as some of the initial mapped hazards data was outdated or simply not accurate.

Third, independent coaches built into the planning grant offer critical support to disadvantaged people in undertaking their own deliberative process that entailed identifying and achieving goals. Coaches were catalytic agents, accountable first and foremost to the underserved people, and provided encouragement and guidance when teams were struggling or unclear how to proceed. They served as intermediaries skilled at building trust (Susskind, McKernan and Thomas-Larmer 1999).<sup>12</sup> They supported informal webs of communication, coordination, and information exchange to strengthened relationships between underserved populations and formal authorities, and identify and gain access to outside resources needed by the community.

When coaching was not followed, collaborative planning was more likely to underperform. Despite considerable urging, for example, a coach in a West Virginia community was unable to convince the core planning team to expand the diversity of participants on the team. Consequently, the team was better geared to work on formal organizational networking

that deals with local government agencies. This approach did not spill over to grassroots organizing among disadvantaged people.

Fourth, proposed locally developed strategies should be reviewed based on a set of accountability standards. MDC/university staff asked questions about the accuracy of the information used to define problems and craft solutions, and the internal consistency between goals and strategies. Additional questions were put forward on whether a clear implementation action program was included in each plan: were specific tasks aimed at implementation specified; was a timeline in place; and were organizations assigned to carry the tasks? The intent was not to be evaluative, but to have strategies selected and refined through extensive discussion and one-on-one communication. In the end, the aim was for each community to produce its own strategies based on a collaborative process while at the same time meet accountability standards relevant to the broader goals of the entire EPD project.

Fifth, disaster vulnerability work has greater opportunity to be sustained by maintaining civic commitment and engagement. There is no doubt that the challenge to maintain implementation remains serious in the EDP communities. While the EPD projects could offer no assurances that implementation of the strategies would be immediate and undeviating in any given community, a multi-pronged set of practices was employed to facilitate civic action aimed at sustaining the work. One practice was the inclusive collaborative plan-making process that was undertaken at each EPD community was aimed to widen the circle of allies to increase the likelihood for successful implementation of selected strategies. No one organization can hope to do all the work. Another practice involved grants to implement selected strategies that serve as an incentive to seed further civic innovation and progress in the reduction of disaster threats,

rather than sustain ongoing programs. Finally, the EDP process was designed to leverage and pool resources from a variety of sources to help implement the strategies.

In sum, all of the above supports the idea that people have the power to renew their communities from within (Dodson, Thomasson, and Totten 2002). Such grassroots capacity building did not stem from a carefully scripted, linear and orderly process. There were innovations and struggles from all groups involved. Community-based participatory planning is not fail safe despite the best efforts of planning practitioners. The disparities between disadvantaged people and the general population in disaster vulnerability and ability to self-govern are deeply entrenched and cannot be undone through a single participatory initiative. To remain vital and capable to meeting needs, a plan and the engagement process must be continuously revisited. The EDP work presented here shows that a team of planners with expertise in community development and disaster planning can serve this function, but only if they are provided with funds and institutional support needed to do the time consuming work.

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Table 1: Most Active Participants on the Emergency Planning Team (EPT)

Participants	Chester Co, PA	Dorchester Co, MD	Hampton City, VA	Hampshire Co, WV	Hertford Co, NC	Wilmington, DE
<b>Internal to Community</b>						
<i>Local Gov't Agencies</i>						
Emergency man.	X	X	X	X	X	X
Elderly services				X	X	X
Health	X			X	X	
Social services		X	X	X	X	
Coop extension	X	X	X		X	
Police		X			X	
Neigh-hood dev	X		X		X	
Housing	X		X			
Planning		X				
<i>Community-based Organizations</i>						
Econ dev			X		X	X
Emergency						X
Church	X	X	X		X	X
Health care			X		X	X
Neigh-hood group	X	X	X		X	X
Child care					X	
Housing					X	X
<i>Business reps</i>						
Small business assoc.						
Individual business					X	
<i>Unaffiliated residents</i>						
	X	X			X	
<i>Elected Officials</i>						
			X		X	
<i>Other Local Institutions</i>						
Educational			X		X	
Hospital					X	X
<b>External to Community</b>						
<i>State agencies</i>						
Emergency man.						X
Social services						X
Health		X				
<i>NGOs</i>						
	X	X	X			X

Table 2: Techniques used to Provide Technical Assistance

Techniques	Chester Co, PA	Dorchester Co, DE	Hampton City, VA	Hampshire Co, WV	Hertford Co, NC	Wilmington, DE
Maps of hazard areas	X	X	X	X	X	X
Vulnerability assessment	X	X	X	X	X	X
Review of promising practices	X	X			X	X
Presentation by experts		X	X	X	X	
Survey design	X		X			

Table 3: EDP Projects Selected for Implementation

Chester Co, PA	Dorchester Co, MD	Hampton City, VA	Hampshire Co, WV	Hertford Co, NC	Wilmington, DE
-Train-the-Trainer course under “Be Red Cross Ready”	-Multi lingual brochures	-Neighborhood based edu campaign	-PREAP project*	-CERT training**	-Fun Days school kit for emergencies
-Trained residents supported to train	-Family disaster kits	-Post hoc campaign evaluation	-Establish volunteer reception centers	-Mobilze CBOs to engage in disaster planning	-Senior edu sessions
	-4-H Club training in schools	-Brochures for household preparedness	-Increase knowledge about incident man system	-Emergency aid sheltering project	-Magnets to raise awareness
	-CERT training**		-CERT training**	-County gov’t adopts resolution	
	-Reverse 911 System			-Magnets to raise awareness	
	-Distribute weather radios to trusted residents				
	-Media engagement program				

\*Preparedness Education and Assistance Project (PEAP) involves identifying and engaging community organizations that work with disadvantaged and assists them through training, networking and coordinating.  
 \*\*The Community Emergency Response Team (CERT) program is sponsored by Citizens Corps which helps train people to be better prepared to respond to emergency. The CERT course is taught in the community by a trained team of first responders who have completed a CERT Train-the-Trainer course conducted by their state training office for emergency management, or FEMA's Emergency Management Institute (<http://www.citizencorps.gov/programs/cert.shtm>, accessed 8/7/08).

## Endnotes

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<sup>1</sup> The few studies that have examined the links between local disaster plans and disadvantaged populations indicate that plans are less effective in meeting the needs and values of the disadvantaged compared to the general population in the context of emergency preparedness and response (Horney et al. 2010, Perry and Lindell 1991), mitigation (Cooper 2004, Maskrey 1994), and recovery (Berke and Beatly 1997, Ganapati and Ganapati 2009, Oliver-Smith 1991).

<sup>2</sup> Disadvantaged (or socially vulnerable) populations often have greater rates of hazard zone occupancy, live and work in less hazard resistant structures within those zones (e.g., manufactured housing), have lower rates of pre-impact interventions (hazard mitigation, emergency preparedness, and recovery preparedness), or have lower rates of post-impact emergency and disaster recovery responses (NRC 2006, chs. 2-3). Thus, these population groups are more likely to experience casualties, property damage, economic impacts, or adverse political impacts (NRC 2006, chs. 2-3).

<sup>3</sup> Coaching for community change is attracting increasing attention from the development and social change fields across the country (Emery, Hubbell and Salant 2005). The practice dates back to the mid-1980s when organizations like MDC began employ planners as coaches to provide community-based technical assistance to increase the pace and success rates of local committees that were reshaping educational and community development reforms (Dodson, Thomasson and Totten 2002, Susskind et al, 1999). By 2006, coaches in over 220 communities have worked with local leaders and social change organizations in communities throughout the U.S. (Emery, Hubbell and Salant 2005).

<sup>4</sup> See, for example, Greenwood and Levin (1998) for a comprehensive review of participatory action research, and Peapck, Morrow, and Gladwin (1997) for the application of this approach to disaster recovery in socially vulnerable communities after Hurricane Andrew struck South Florida.

<sup>5</sup> See, for example, Greenwood and Levin (1998) for a comprehensive review of participatory action research, and Peapck, Morrow, and Gladwin (1997) for the application of this approach to disaster recovery in socially vulnerable communities after Hurricane Andrew struck South Florida.

<sup>6</sup> The criteria for assessing local interest and capacity for achieving project goals will include: a sufficient number of representatives of key constituencies that are committed to program goals and open to learning; at least one community-based organization willing and able to provide leadership to achieving program goals; a willingness among local partners to promote the meaningful inclusion of disadvantaged citizens in the decision-making process; and a willingness to invest local resources, however modest, to achieve program goals.

<sup>7</sup> Themes were developed using both deductive and inductive coding procedures (Miles and Huberman 1994), such that some coding categories were created in advance based on the questions included in the protocol, and others were formulated based on individual responses and

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comments made during planning meetings and the summit. Because the emphasis was on capturing the range of perspectives, there was no attempt to weight one perspective over another. It was noted when a response arose from a single informant or participant during a meeting, or was common across multiple informants and participants of meetings.

<sup>8</sup> MDC provided each local team a recruitment chart with guidance about how to engage those who might not otherwise participate (notably the most marginalized), how key public service provider agencies and voluntary institutions could play a role, and how affected local businesses could be brought into the process.

<sup>9</sup> Attendance lists, meeting notes, and follow up post-plan making interviews were used to identify the groups that were most active and participated in most meetings.

<sup>10</sup> A vulnerability assessment serves as the basis for developing strategies to reduce the risks from disasters (Authors 2008). It entails identification and mapping of hazards and vulnerable people and property, including critical facilities such as hospitals and schools.

<sup>11</sup> The Community Emergency Response Team (CERT) program is sponsored by Citizens Corps which helps train people to be better prepared to respond to emergency. The CERT course is taught in the community by a trained team of first responders who have completed a CERT Train-the-Trainer course conducted by their state training office for emergency management, or FEMA's Emergency Management Institute (<http://www.citizencorps.gov/programs/cert.shtm>, accessed 8/7/08).

<sup>12</sup> The ideals are clearly revealed by Sirianni's (2007) penetrating analysis of empowerment in neighborhood planning, and aligned with several critical theorists (Forester 1989, Habermas 1984, Innes 1995).