

Session 3

Holistic Disaster Recovery: Creating a More Sustainable Future

Dimensions of Recovery

Time: 3 hours

(Slide 3-1)

Objectives:

- 3.1 Describe the disaster recovery process**
 - 3.2 Discuss the concept of disasters as an opportunity to implement sustainability measures during recovery and redevelopment**
 - 3.3 Explain the nature short-term versus long-term recovery perspectives and the impacts of each approach**
 - 3.4 Discuss the concept of disasters as a clarifying agent, highlighting existing or underlying local, state and federal characteristics**
 - 3.5 Revisit principles discuss in the session**
-

Scope:

The purpose of the third three-hour session is to introduce key dimensions of the disaster recovery process. One predominant view holds that disaster recovery is comprised of relatively predictable events, practices and problems. This approach will be critiqued by comparing and contrasting past and current research. Some research suggests that recovery is indeed comprised of a well-defined set of issues and processes. More recent research suggests that each disaster can present unique problems in addition to broad similarities that cut across disasters. Following a discussion of the disaster recovery process, topics to be addressed include describing disasters as an opportunity to initiate sustainable recovery and redevelopment practices, the negative effects of taking a short-term versus long-term approach to recovery, and the recognition that disasters frequently expose long-standing local, state and federal social, economic, political and organizational issues and problems that pre-date the disaster. The inequitable distribution of assistance, race and class conflicts, and inter-organizational problems will be discussed.

A case study of recovery in Kinston, North Carolina following Hurricanes Fran and Floyd will be presented which addresses most of the topics discussed in this session.

Readings:

Student Readings:

Mileti, Dennis. 1999. *Disasters by Design: A Reassessment of Natural Hazards in the United States*. Chapter 7, "Preparedness, Response and Recovery." Pp. 229-238. Joseph Henry Press: Washington, D.C.

Mushkatel, Alvin H. and Louis F. Weschler. Emergency Management and the Intergovernmental System. *Public Administration Review*. Vol. 45. Pp. 49-56.

Ohlsen, Christine and Claire Rubin. 1993. *Planning for Disaster Recovery*. ICMA Management Information Service. Vol. 25, Number 7.

Rubin, Claire. 1979. *Natural Disaster Recovery Planning for Local Public Officials*. Academy for Contemporary Problems. Columbus, Ohio.

Rubin, Claire B. and Daniel Barbee. 1985. Disaster Recovery and Hazard Mitigation: Bridging the Intergovernmental Gap. *Public Administration Review*. Vol. 45. Pp. 57-71.

Schwab, Jim, Kenneth C. Topping, Charles Eadie, Robert Deyle and Richard Smith. 1998. Chapter 3. Policies for Guiding Post-Disaster Recovery and Reconstruction, pp. 43-74. *Planning for Post-Disaster Recovery and Reconstruction*. PAS Report 483/484, Chicago, Illinois, American Planning Association.

Instructor Reading:

Sullivan, Mark. 2003. Integrated Recovery Management: A New Way of Looking at a Delicate Process. *The Australian Journal of Emergency Management*. Vol. 18. No. 2.

Objective 3.1 The disaster recovery process

Remarks:

Much of the recovery literature has focused on process, emphasizing the description of steps that occur over time following a disaster. This survey is not intended to provide a comprehensive description of the literature. Rather, it is provided to help explain how those who have studied recovery view the process. Additional references to the literature will be made throughout the course that describes specific elements of session topics.

(Slide 3-2)

A variety of theoretical frameworks have been used by the research community to describe disaster recovery. These include:

- Rational decision-making models;
- Sociological frameworks analyzing the recovery of individuals, groups and institutions;
- Planning and policy analysis; and
- The process approach (see Mileti 1999).

While these approaches provide insight, disaster recovery is perhaps the least understood aspect of emergency management, both in terms of scholarly research, the documentation of actions taken by the practitioner, and the identification of specific factors that aid recovery (Berke, Kartez and Wenger 1993).

In fact, the majority of scholarly research in this field did not begin in earnest until the 1970s. Early recovery models developed by Haas, Kates and Bowden (1977) and others describe recovery as a clearly defined set of procedures, each successive stage based on the completion of prior actions within a broader temporal framework. The later work of Rubin and Barbee (1985) and Sullivan (2003) note that while recovery processes follow a general pattern, a variety of recovery activities could occur simultaneously, each affected by a complex array of social and political factors.

(Slide 3-3)

While much of the recovery literature has focused on process, three key limitations exist. They include:

- The lack of attention placed on describing how specific process improvements can be made (Eadie, 2001);
- How to better explain the nuances of the larger recovery process; and
- The continued analysis of intergovernmental relationships and actions taken across local, state and federal institutions [see Rubin and Barbee (1985), May and Williams (1986) and (Berke, Kartez and Wenger 1993)], rather than an assessment of intra-governmental relationships or a more comprehensive network analysis of all stakeholder groups.

(Slide 3-4)

This course session is intended to refine the description of how the **recovery process** occurs following a disaster. The model proposed here will not only help explain the recovery process, it is intended to be action-oriented. The following description will set the stage for the additional discussion of how practitioners can best utilize this understanding to their advantage. Equipping those responsible for recovery with the best available information is one of the aims of this course. By improving our understanding of recovery, both the scholar and practitioner should benefit.

- Within this context, specific steps and actions can be identified that affect the degree to which a community recovers, as Anderson and Woodrow 1989, Rubin 1991, Berke, Beatley and Feagin 1992 and Mileti 1999 suggest.
- This approach also provides a means to review the complexities of group and multi-organizational interactions and how these interactions may disproportionately help some more than others. A poorly planned recovery, for example, can worsen existing social conditions and make communities more vulnerable to future natural hazard events.
- Conversely, the importance of **pre-disaster planning** has been well documented. However, the role of **adaptive planning** has not been fully explored as a key factor guiding successful redevelopment actions in the post-disaster environment (see Kartez 1984, Kartez and Lindell 1987, Smith 2003) or as a more accurate description of many local, state and federal government practices.

- Philip Berke, Jack Kartez and Dennis Wenger (1993) suggest that “adaptive learning” can take place if appropriate “institutional arrangements” are formulated that facilitate learning. Evidence of these types of institutional arrangements will be introduced in this session, including their impact on recovery. The concept of **shared governance** will be discussed in Sessions 7 and 12, respectively.
- In reality, very few communities or states maintain an effective recovery plan. Nor do most recovery plans address the concept of sustainable recovery and redevelopment.
- FEMA’s Federal Response Plan is intended to provide federal recovery planning guidance.
 - In most cases recovery “planning” is represented by a disjointed array of recovery programs rather than a coordinated effort guided by common principles (see Session 5 for a detailed discussion of recovery programs).
 - Can a community or state maximize post-disaster recovery opportunities, including the integration of sustainability, relying on an adaptive approach? This issue will be further explored in Session 9, which specifically addresses the role of planning in recovery.

(Slide 3-5)

Initially, the disaster recovery literature focused on attempts to describe the process of recovery in the context of rebuilding the physical environment (see Mileti, 1999). **Over time, the view of recovery was expanded to include:**

- The importance of pre-disaster planning (Spangle, 1987, Schwab, 1998);
- An analysis of how stakeholders within disaster-stricken communities recover (Cutter, 2001); and
- The ability of local governments to capitalize on the post-disaster window of opportunity to affect positive change.

(Slide 3-6)

Multi-objective planning, and more recently, the task of linking the recovery process to mitigation and sustainable redevelopment have been cited as methods to achieve these aims (Berke, Kartez and Wenger 1993, Mileti, 1999, FEMA 2001, No. 365, Eadie, 2001).

The implementation of hazard mitigation measures often have environmental, recreational, economic and social benefits.

- The ability to mitigate the impact of future natural hazards in the post-disaster environment has become an important link between recovery and achieving the broader goal of sustainability.
- Federal and State agencies tasked with assisting local governments recover still focus primarily on the physical damages to housing and infrastructure, often failing to address broader social and economic issues, including the critical importance of institutional capacity building.
- This short-term approach frequently results in the reoccurrence of past problems in the next disaster and fails to capitalize on the unique opportunities to achieve sustainability (see Objective 3.3 for a more detailed discussion). The manner in which identified communities succeeded or failed to achieve long-term objectives will be discussed in a series of case studies throughout the course.

(Slide 3-7)

The Disaster Recovery Process

Disaster recovery can be broadly defined as an array of actions taken by individuals, community groups, local, state or federal agencies and other organizations to restore and rebuild the physical, psychological, social, environmental and economic well being of a community, region, state or nation.

Actions taken, including the conscious decision not to act, can vary greatly depending on several factors, including:

- The nature of relationships across organizations;
- Access to information;
- The degree of past disaster experience; and
- The capacity and commitment of those involved in recovery.¹

¹ In the case of the disaster victim, duties are not assigned. Rather, individuals must seek out information regarding the type of assistance that is available to meet their needs.

(Slide 3-8)

In the best of circumstances, recovery results in a community that is in better shape than it was before the event (i.e. more sustainable). **Factors limiting a sustainable recovery include:**

- The over reliance on the implementation of existing federal recovery programs without stepping back and assessing, in a comprehensive fashion, the pre and post-disaster needs of the community. This approach can disproportionately affect a locale's most vulnerable groups and individuals.
- The recovery process, as it is currently implemented in the United States, is too regimented and dependent on programmatic rules and poorly coordinated aid programs. Typically, federal funding drives outcomes rather than the local search for innovative solutions and the means to achieve them. These issues will be explored in Sessions 5, 8, and 10.

(Slide 3-9)

Pre-disaster recovery planning is frequently cited by researchers as a key to a successful disaster recovery (Schwab, 1998).

- A growing body of literature has sought to study the degree to which planning can impact redevelopment decisions (Spangle and Associates 1990, Berke, Kartez and Wenger 1993).²
- The lack of effective recovery planning at the local level can result in rebuilding a community as it was prior to the event and therefore failing to capitalize on the window of opportunity to affect positive change.
- Perhaps nowhere are the opportunities to capitalize on predictable outcomes more evident than in case of mitigation, where post-disaster funds can be used in a way that makes a community less vulnerable to future events. **Specific mitigation actions may include:**
 - The adoption of more stringent building codes;
 - The creation of mitigation and recovery plans;
 - Relocating structures away from identified hazard areas (e.g. floodplains, steep sloped areas prone to landslide, earthquake zones, barrier islands, etc.;
or

² The role of state and federal recovery planning as a means to improve local recovery is still evolving, and will be analyzed in Session 8.

- Guiding future growth away from known hazards using a variety of land-use planning techniques.³

(Slide 3-10)

Post-disaster recovery and redevelopment decisions can make a community a less desirable place to live. Examples may include:

- Increasing hazard vulnerability via poor post-disaster reconstruction practices that fail to meet local or state building codes;
- Making poor land-use decisions in relation to known hazards; and
- Negatively impacting existing social networks or the physical dislocation of communities.
 - Care must be taken when implementing recovery programs so that the social fabric of a community is not excessively impacted or destroyed as a result of the relocation of neighborhoods out of the floodplain, for example.
 - Research conducted by Geipel (1982) and others demonstrates how disasters can exacerbate existing class inequalities (see Objective 3.4).

Disasters are frequently associated with the loss of life and damages sustained to the built environment. Deaths and injuries and the level of damages sustained to homes, businesses and community infrastructure frequently garner the most media attention.

Recovery is also about people getting back to their normal day-to-day activities. Disasters can cause major psychological and social disruptions to individuals, groups and organizations. The degree to which they are permanent is driven to a large extent by how well available formal and informal aid networks are utilized. Local, regional, state, or even national economies may be affected (see Sessions 5 and 7).

³ An extensive listing of hazard mitigation techniques evaluated by several hazards scholars can be found in *Cooperating with Nature: Confronting Natural Hazards with Land Use Planning for Sustainable Communities*. Burby, et. al. 1998. Chapter 6. Managing Land Use to Build Resilience. Pp. 176-177.

(Slide 3-11)

In the broadest sense, the recovery process can be characterized as encompassing two components:

- 1) The short-term measures taken to address immediate needs; and
- 2) The long-term processes associated with rebuilding the physical, social, environmental, and economic components of a community, region, state or nation.

There exists a significant overlap between these elements and a clear demarcation does not exist. It is important to note that some individuals, families, organizations and governments may never fully recover to their pre-disaster condition, whereas others may stand to gain economically.

(Slide 3-12)

Early research by Haas (1977) suggests that the recovery process can be broken into four basic phases:

- 1) Emergency;
- 2) Restoration;
- 3) Reconstruction I and;
- 4) Reconstruction II

The *emergency phase* includes the first few days, or in larger events, may last as long as several weeks following a disaster. Specific actions may include:

- Search and rescue;
- Mass care (feeding and sheltering); and
- Certain types of debris removal that may cause a significant threat to the public (such as the immanent threat of a building's collapse).

The *restoration phase*, typically lasting several months, includes:

- The immediate operationalization of public utilities and community infrastructure (water, sewer and electrical services); and
- The identification and repair of damaged homes and businesses.

The *Reconstruction I* phase focuses on the repair or rebuilding of damaged structures.

- In most cases, this process is focused on the reconstruction of the built environment to its pre-disaster condition. More sustainable reconstruction practices involve the incorporation of mitigation measures whenever possible.

The final element, referred to as the *Reconstruction II phase*, involves those actions tied to new economic development above that directly impacted by the disaster or physical improvements to the built environment.

- Construction may incorporate mitigation techniques or serve to commemorate past events.

(Slide 3-13)

The Haas model assumes that recovery follows a predictable, sequential pattern. Like many models, it represents a simplified version of reality.

- In concept, the process approach provides a good starting point to describe in a general way the events that occur in the aftermath of a disaster.
- The disaster recovery process is more accurately described as a complex array of overlapping activities, which are frequently uncoordinated due, in part, to the lack of pre-disaster planning, differential access to power, institutional deficiencies and the reliance on adaptive planning (Smith 2003).

(Slide 3-14)

- Disaster recovery can vary significantly across units of local governments and differing segments of society.
 - Issues of race, access to power, poor planning and institutional deficiencies, similarly contribute to differentiated levels of recovery.
 - The transition from the initial response period to the initiation and completion of recovery is difficult to identify.
 - Recovery may take years, or even decades to achieve. Some segments of society may never fully recover economically and damaged infrastructure, homes or public buildings may never be repaired or replaced.

(Slide 3-15)

Klintberg (1979) describes how disasters temporarily reduce “economic and social standards” found in communities pre-disaster.

- Over time, the recovery process can lead to improvements, achieving desired aims and expanding **“recovery possibilities.”** Following a disaster, the decline in standards reaches its lowest point prior to the initiation of short-term recovery.
- The **“approximate assistance period”** where state and federal aid is given and received bridges the short term and the beginning of long term recovery, eventually leading to **“early options and outcomes.”** Depending on the nature of the recovery this can lead to outcomes less than, approximating, or exceeding pre-disaster economic and social standards.

Klintberg’s work serves as the precursor to the more recent analysis of disasters as representative of existing resource and power imbalances or an opportunity to achieve multi-objective post-disaster planning and sustainable redevelopment.

(Slide 3-16 and 3-17)

In the “Rocky Mountain Model of Disaster Recovery,” Claire Rubin argues that the recovery process is analogous to a mountain range comprised of three peaks each rising in height as the process advances over time. Progress is obtained via identified “drivers” and enablers” that facilitate moving from one peak to the next.

Movement from the first peak, titled *minimalist/restoration*, to the second titled *foresight/mitigation*, is linked to drivers such as:

- A federal disaster declaration;
- National Flood Insurance Program requirements; or
- State laws and regulations affecting recovery.

Enabling factors may include:

- Training courses;
- Exercises; and
- Peer exchanges.

(Slide 3-18)

The second level, foresight/mitigation, involves expanding the traditional approach to recovery to include mitigation measures and other programs as a means to achieve multiple aims.

- **Multi-objective planning is indicative of this phase. Movement from the second to the third peak, titled *visionary/community betterment*, is represented by actions taken to improve the community's quality of life relative to that which existed before the disaster.**
- **The linking of sustainable development principles and disaster recovery is representative of this phase. Enablers include:**
 - The provision of technical information;
 - Specialized training and assistance from peers; and
 - The reliance on consultants and recovery experts.

(Slide 3-19)

While Rubin does begin to describe the role of dialogue as a means to facilitate a more comprehensive recovery, the disaster recovery models discussed above, do not effectively capture:

- The *impacts* of policy dialogue;
- Social learning;
- Negotiation and dispute resolution; or
- Politicized decision making on the overall recovery process.

(Slide 3-20)

These factors are crucial to explaining how recovery actually happens. Nor do these models effectively describe the inter-organizational relationships between local, state and federal organizations, which ultimately drive the creation of policy and distribution of assistance post-disaster.

- Research by Rubin and Barbee (1985), Berke, Kartez and Wenger (1993) and May and Williams (1986) provide insight into the role of inter-organizational networks, but have not been applied to an in-depth analysis of recovery processes over time (see Session 7 for a discussion of horizontal and vertical integration).
- Relationships can change over time, due in part to policy dialogue, negotiation and social learning (See Session 13). Similarly, positions can become entrenched, hindering the ability of those tasked with recovery to provide adequate assistance to individuals and groups or effectively rebuild communities.
- This has been noted by Berke, Kartez and Wenger (1993): “Research is needed on how institutional arrangements act as incentives or barriers to adapting responses that meet local needs, capacities, and opportunities during recovery. In particular, this approach can be applied at both the micro (intra-community) and macro (intergovernmental) levels of analysis” (p.98). In addition, the authors note: “The basic challenge is to specify the conditions in which adaptive learning can take place before a disaster strikes” (p.97). In fact, most communities do not undertake meaningful disaster recovery planning until they have been significantly impacted.
- Capitalizing on adaptive planning and the concept of social learning can, in fact, be achieved through the establishment of community-based, multi-departmental work groups or task forces designed to rapidly assess needs and develop solutions to identified problems. The manner in which this occurs will be discussed in Sessions 7 and 12 and in Session 9 case studies.

Significant permutations within the process regularly occur due to how local, state and federal players interact. Alterations in existing policy and seemingly standardized actions taken at the federal and state level during recovery can have major impacts on how the actual implementation of recovery occurs at the local level.

- The actual “process” of disaster recovery may change slightly or shift dramatically during a disaster. Work by Jones (1993), Chong (1991) and other political scientists describe how significant policy shifts can occur within general periods of incremental change. These changes can dramatically affect recovery.
 - Rubin has clearly demonstrated this phenomenon as it relates to disaster recovery through the creation of a “disaster recovery timeline” which tracks significant federal disaster policy development, including specific events that have precipitated major policy change (2001).

Policy making, including the interpretation of existing rules and regulations vary across FEMA regional offices and state emergency management agencies. Significant latitude is provided or achieved through sometimes painful and heated debate between federal and state officials. A state’s proven capabilities in grant’s management, disaster response, or an ability to effectively negotiate an agreed upon interpretation of federal policy, play key roles in how the process evolves in each disaster. Access to, and the direct or indirect use of power at the state and local level can also trigger significant change (see Sessions 5, 7, and 12).

(Slide 3-21 and 3-22)

In actuality, the recovery process does not adhere to orderly phases. Rather, the process more closely resembles the movement across a *disaster recovery continuum*, which can be slowed or achieved to a lesser degree when “countervailing factors” exist. These factors may include, for example:

- The lack of recovery experience;
- Resources; or
- Commitment.

Likewise, “**enabling factors,**” similar in concept to those proposed by Rubin, result in the creation or alteration of policies, rules or actions that improve the speed of recovery or expand the benefits received by disaster victims, communities, states or regions.

- The distribution of benefits may result in a zero sum game - a policy that benefits one group may harm another. Thus, certain enabling factors, such as a given policy change, may face resistance, in part, because of the perceived outcome among differing groups.
- Certain countervailing factors and enabling factors may run counter to one another. For example, the provision of aid would seem to represent a key enabling factor. In most cases this is true. However, federal recovery programs may have conflicting objectives which can limit the degree to which mitigation is incorporated into recovery, for example.

The methods utilized to achieve desired recovery objectives will be discussed in detail throughout the course. The factors which determine the ability to achieve these aims exist at the individual, group and organizational level.

- Local, state and federal levels of government play the most significant role as it relates to policy and the distribution of aid. Thus, factors must be studied within this multi-organizational context in order to more fully understand how they interact to affect the recovery process at the local level where assistance ultimately is provided to those in need.
- Key factors can interrupt the flow of actions normally associated with the recovery process or decrease the likelihood that the process follows a standard sequential order described in much of the recovery literature.
- The degree to which the range of factors affect the smooth and effective transition across phases or limit recovery altogether will be further explained throughout the remainder of the course sessions and case studies.
- Finally, the lessons learned at the local, state and federal level will be discussed in the context of how the process can be improved and identified countervailing factors can be overcome.

(Slide 3-23)

Supplemental Considerations:

The instructor should engage students in a preliminary identification of recovery indicators based in part on Session 2 readings and class lecture. Indicators may include, but are not limited to:

- Business re-openings;
- Implementation of federal and state recovery programs, including reconstruction projects;
- Counseling requests;
- Loan program payouts; and
- Individuals located in group shelters.

(Slide 3-24)

Next, students should discuss those factors that may impede recovery processes, recognizing that a greater understanding of recovery constraints will be discussed later in the course. Examples may include:

- Uncoordinated recovery programs;
- Limited recovery expertise;
- Limited capabilities; and
- Differential access to power.

Note: The instructor should revisit this list following later sessions.

Objective 3.2 Disasters as opportunity

(Slide 3-25)

Remarks:

Disasters typically cause widespread damages and human suffering. They can also represent an opportunity to initiate positive change, including the incorporation of hazard mitigation and sustainable development measures into the redevelopment and reconstruction process. Three primary characteristics can affect the degree to which sustainable recovery is achieved:

- *Disasters can cause major damages to communities, necessitating a large-scale rebuilding process.*

Large scale damages often necessitate the rebuilding of public infrastructure, housing and other key components of a community. **This provides an opportunity to “start over” or reshape the area in a way that more effectively embraces the major tenets of sustainability, including:**

- Economic vitality;
- Environmental quality;
- Social and intergenerational equity;
- Quality of life; and
- Disaster resilience.⁴

Prior to the initiation of the reconstruction process, communities can choose to adopt multi-objective planning measures.

- While multi-objective planning is frequently employed as part of day-to-day activities in many communities, it can be forgotten in post-disaster situations when local officials are overwhelmed with recovery duties and the public is pressuring the same officials to return the community to normal as soon as possible.
 - Large-scale damages can enable communities to address chronic problems, as the Kinston, North Carolina case study demonstrates.

⁴ See Eadie, et. al. 2001. Holistic Disaster Recovery: Ideas for Building Sustainability After a Disaster. Public Entity Risk Institute. P. 1-1.

- *Disasters can cause local officials and residents to re-evaluate their circumstances relative to hazards.*

This is particularly relevant to the **political will** of elected officials who may seek to change past practices that have resulted in a high exposure to natural hazards.

- Hazards become more **salient** when disasters strike a location repeatedly. In such cases, disasters may become recognized as more than a “once in a lifetime” occurrence that must be addressed directly – before the next event.
 - As a result, decision-makers may be more willing to push for new initiatives that would otherwise remain unrealized.
- In the field of policy making, John Kingdon (1984) has referred to this as the “**window of opportunity**” – a relatively short-lived period of time to initiate policy change.
 - In the context of hazards, this can be applied at the federal, state and local levels of government. Elected officials may recognize the political benefit of changing the status quo and citizens may demand action that reduces the vulnerability of their community to future property damage and loss of life.⁵
- Disasters may disproportionately impact certain segments of society that are less able to recover financially.
- At the broader community level, disasters may expose existing societal problems, including poor housing conditions, environmental problems, inadequate or outdated public infrastructure, etc (see Objective 3.4).
- Rebuilding these communities can result in significant improvements if principles of sustainability are included in the pre-construction planning process.

⁵ **(Slide 3-26) Supplemental consideration:** The instructor may choose to discuss the political science and policymaking literature that addresses policy change. Texts to consider include Kingdon’s *Agendas, Alternatives and Public Policies* (1984), Jones’ *Reconceiving Decision-Making in Democratic Politics* (1993) Stoker’s *Reluctant Partners* (1991), and Jenkins-Smith’s *Democratic Politics and Policy Analysis* (1990). The application of this body of literature to natural hazard policies formulation may represent a potential class discussion or paper topic.

(Slide 3-27)

- Individuals, communities and states vary widely in the degree to which they take action to reduce the impact of future hazards.
- Nor do most seek innovative ways to link federal assistance or local means to address pre-existing community problems in the post-disaster environment.
- Instead, local and state governments are typically over reliant on post-disaster federal assistance to repair damages and rebuild at-risk communities as they were pre-disaster.
- Federal recovery assistance is often taken for granted. The predominant view of federal disaster recovery programs as an entitlement will be discussed as an impediment to sustainable recovery in Session 10.

(Slide 3-28)

- *Federally-declared disasters often result in the disbursement of large sums federal dollars to aid in recovery.*

Savvy communities can take advantage of these circumstances by linking identified community needs, many of which pre-date the disaster, to available funding sources, particularly those that facilitate a rebuilding effort that makes the community more sustainable.

- Matching federal assistance with state or local sources of funding can stretch federal dollars and help to achieve multiple objectives.
- Since funding sources often have differing eligibility requirements, community planners and grants managers must figure out ways to piece together funding strategies that capture the needs of the community given these parameters.
- The Kinston, North Carolina case study that follows provides an example of how post-disaster adaptive, multi-objective planning was used to make the flood-prone community more sustainable.

Objective 3.3 Short-term versus long-term perspectives

Remarks:

Sustainable disaster recovery requires a high level of commitment from government officials, citizens, business leaders and non-profit organizations, including a willingness to adopt a long-term redevelopment perspective.

- Political support must be provided for those tasked with the implementation of this approach. Those elected to political office must be willing to take the time required to assess the degree and type of damages sustained as well as identify innovative strategies to link post-disaster opportunities, existing community goals and sustainable redevelopment principles.
- This approach must be communicated to citizens and community leaders given the longer implementation horizon when compared to traditional disaster recovery which emphasizes rebuilding the community to its pre-disaster condition as quickly as possible.
 - When a short-term approach is utilized, numerous sustainable recovery opportunities are missed, including taking the steps necessary to reduce the likelihood of future disasters.
- Taking a long-term approach often involves creating a recovery plan or a post-disaster recovery ordinance (see Session 8 for a detailed discussion on recovery planning and Schwab, 1998 pp. 149-167 for an example of a model recovery and reconstruction ordinance).
- Plans and ordinances typically identify immediate, mid and long-term community goals, and link specific tasks required to meet identified objectives to those agencies or departments responsible for their implementation.
- Connecting identified tasks with known funding sources further enhances their functionality.
- Tasks like adopting a temporary building moratorium in order to assess community needs can prove controversial. Disaster victims often express the desire to rebuild as quickly as possible, failing to recognize the importance of creating a sound redevelopment strategy.
- Community leaders need to clarify how actions, particularly planning processes, will ultimately result in a more sustainable community and one that is less vulnerable to the impacts of hazards.

Listed below are a series of specific local actions associated with short versus long-term perspectives.

(Slide 3-29)

Characteristics of a short-term recovery perspective includes:

- Ad-hoc recovery;
- Issuing building permits without adequate review of reconstruction implications;
- Limited public participation in recovery and reconstruction decision-making;
- Rebuilding to pre-disaster conditions (failure to identify mitigation or other sustainable recovery opportunities); and
- Over-reliance on state and federal recovery funding

(Slide 3-30)

Characteristics of a long-term recovery perspective includes:

- Developing a recovery plan;
- Establishing a temporary building moratorium;
- Conducting an in-depth local damage assessment;
- Integrating hazard mitigation techniques into reconstruction efforts;
- Identifying local resources to aid in the recovery process;
- Involving the public in decisions that affect recovery;
- Identifying sustainable recovery objectives; and
- Linking recovery opportunities with existing community goals.

Listed below are a series of specific local outcomes resulting from a short versus long-term recovery perspective.

(Slide 3-31)

Possible outcomes assuming a short-term perspective include:

- Reduced economic viability;
- Increased hazard vulnerability;
- State and federal paternalism;
- Out migration of residents;
- Declining tax base; and
- Declining sense of place.

(Slide 3-32)

Possible outcomes assuming a long-term perspective include:

- Greater economic vitality;
- Reduced hazard vulnerability;
- Greater environmental well being;
- Enhanced public health;
- Enhanced community self-reliance;
- Increased tax base; and
- Enhanced sense of place.

Objective 3.4 Disasters as a clarifying agent, highlighting existing or underlying local, state and federal roles and relationships

(Slide 3-33)

Disasters have a way of exposing problematic and beneficial societal, economic and organizational relationships that may lie beneath the surface of day-to-day interactions and everyday life.

- Bolin argues that the overall recovery process is influenced by the social dynamics already present in the pre-disaster social structure (1991). Problems are frequently magnified during times of disaster due to the differential impact of disasters on those members of society who are most vulnerable.
- This coupled with pre-disaster feelings of disenfranchisement sets the stage for heightened conflict. Disasters often disproportionately affect the disenfranchised and those that are most economically vulnerable, including low-income residents, people of color, non-English speaking residents, single-parent households and the elderly.
- **Social vulnerability** has been well documented by Cutter (1996) and other hazards researchers. The disenfranchised have poor access to power, further limiting their ability to be heard and assisted. Disasters are also highly visible events, drawing significant media and political attention.
- Decisions made regarding who is assisted and the form of aid provided often proves to be highly contentious and may be used for political gain (Platt, 1999).
- Those tasked with the provision of assistance, including local, state and federal organizations and agencies, must confront the demands of the victim while each level of government seeks what they believe is needed to affect an adequate recovery. As a result, disasters expose the strengths and weaknesses of this inter-dependent system.
- The relationship between local, state and federal governments can become strained as those charged with the stewardship of recovery assistance programs must work with those who have requested help. Program eligibility determinations and the type of assistance offered may not mesh with the requests of state and local government officials and disaster victims.
- Disasters can elicit charitable or unscrupulous acts, both from recovery organizations and from individuals and groups whose primary mission may not be disaster-related.

- Charitable acts by those dedicated to disaster assistance may include the provision of shelter, food or clothing by the Red Cross and Salvation Army, or the repair and construction of new housing by faith-based organizations.
- Other groups may choose to help because they believe it is the right thing to do. Large-scale disasters often result in enormous donations from well-meaning individuals, churches and other organizations.⁶
- Price gouging and looting can occur in the post-disaster environment.⁷ Inflating the cost of food and necessary supplies such as chain saws and generators or specialized services like home repair are examples of price gouging.

(Slide 3-34)

In order to understand actions taken during disaster recovery one must recognize the social, political and economic context of the impacted area. This applies to individual victims, groups, communities and governmental officials and their departments or agencies.

- For example, disaster recovery is often shaped by issues of race and class. Additional, closely related issues of perceived power imbalances and justice play key roles in defining the recovery process. Francaviglia (1978) found that power significantly affected the speed and degree to which differing midwestern communities recovered. A more in-depth discussion of this issue will follow in Sessions 4, 5 and 6.
- Disaster victims, particularly those that have not experienced past recovery processes are surprised by the amount of rules, eligibility requirements and bureaucracy. The very nature of a disaster implies that local and state resources are stretched beyond their capacity to effectively deliver basic resources. The ability to render aid is further taxed by the challenges associated with the implementation of complex and sometimes competing disaster recovery programs.
- The psycho-social prism through which disaster victims view the efficacy and equity of recovery efforts undertaken by federal, state and local government officials is colored by their views of where they fall within their community's class structure.

⁶ Donations management can prove to be a major challenge following disasters. All too often the donation of goods do not mesh with local needs and requires additional staff to organize and distribute items to needy individuals and families, or stockpile items in warehouses indefinitely.

⁷ Research has shown that looting, while often discussed by the media, in fact, occurs infrequently following disasters (Quarantelli and Dynes 1970).

- For some, this can result in a defeatist attitude among poorer disaster victims, particularly the elderly and single parent households.
- Disenfranchised individuals and groups who identify a recovery advocate or join together to address perceived inaction typically prove more effective in learning the nature of existing recovery programs, applying for, and receiving what they believe to be sufficient levels of assistance.
- Individuals and groups who have historically experienced the sting of racism in their day-to-day lives may view the recovery process as another example of differential treatment by those in power.
 - For the uninitiated, recovery is a painfully slow process for those directly affected by disaster, regardless of race or social class.
 - When the typical delays associated with disaster recovery occur, claims of racism may result. This being said, pockets of indifference and outright discrimination can occur as Francaviglia suggests.

(Slide 3-35)

- Poorer disaster victims and those of color, who are often disproportionately impacted by hazards, are less likely than more wealthy individuals to fully recover economically.
 - Access to limited resources results in fewer recovery options.
 - The current design of federal recovery programs are not intended to make people “whole.” Rather, they are intended to assist with recovery needs.
 - However, the economic and social disruptions that are associated with disasters can have a greater long-term destabilizing impact on people who do not maintain significant savings or access to credit.
 - Many low-income individuals subsist paycheck to paycheck, leaving little cash for emergencies.
 - For example, many poor disaster victims cannot afford to travel significant distances or pay the higher costs associated with lodging outside of their immediate neighborhood.
 - Shelters are usually comprised of low-income families. Staying with friends or relatives serves as an option for many. This too, can cause problems over time as stays are extended.

- Disasters have a way of stripping away or exposing the frailty of organizational relationships.
 - Specific relationships include the Federal-State “partnership”, state-local relations as well as inter and intra-organizational relationships across Federal, State and local levels of government.
 - Organizational fragility is most evident during disasters for a number of reasons. State-federal relationships can become strained as local governments seek technical and funding aid that is predominantly provided by the federal government.
 - In most cases, the federal government maintains a greater capacity to deliver assistance than state agencies.
 - Following large-scale disasters, even federal capabilities may be overtaxed or weaknesses exposed.

(Slide 3-36)

In addition to general capability, the level of efficiency across organizations given access to adequate resources can suffer due to inadequate pre-planning and intergovernmental cooperation.

- Mushkatel and Weschler and Rubin and Barbee describe the challenges associated with inter-governmental relationships in emergency management in the January 1985 publication of *Public Administration Review*.
- Mushkatel and Weschler provide an early look at the intergovernmental system responsible for the administration of the emergency management “process” (i.e. preparedness, response, recovery and mitigation).
 - Their review results in the formulation of a matrix titled the **“intergovernmental emergency management policy process”** (1985, p.54).
 - The matrix includes a description of the process on the x axis and a description of the “policy process” on the y axis.
 - The policy process includes the formulation, adoption, implementation and evaluation of policies by FEMA, state agencies and local governments.

- Each cell is designed to characterize a specific policy task across one of the phases of emergency management. Within each cell, federal, state and local participants may debate, negotiate and reach consensus or a stalemate.
- Outcomes can be shaped by technical and political factors, including access to information or the political will to limit development in high hazard areas, for example. **The matrix is intended to shed light on potential opportunities while clarifying potential problems. Challenges include:**

(Slide 3-37)

- Recognizing local fiscal, technical and political capacity to formulate, adopt, implement and evaluate hazards policy;
- Amending federal and state policies to meet local needs and existing resources;
- Managing federal assistance to include adequate leadership and resources across both the policy and emergency management processes;
- The creation of a shared policy system (the concept of shared governance will be discussed in Session 7);
- Monitoring of policy effectiveness as a means to improve the distribution of scarce resources; and
- Adequate resource development across federal, state and local participants in the emergency management system.

(Slide 3-38)

In Disaster Recovery and Hazard Mitigation: Bridging the Intergovernmental Gap, Rubin and Barbee describe several key elements, or “strategic choices” guiding local recovery. They include:

- The ability to act;
- A reason to act;
- Knowledge of what to do; and
- Political awareness and astuteness.

Each choice is described in the context of intergovernmental relationships with state and federal agencies tasked with providing recovery assistance.

- Intergovernmental relations between state and local officials, while varied and based in part on capability and past experience with disasters, are often characterized by an awkward and at times contentious relationship.
 - In many cases, states are perceived as incapable of providing adequate assistance post-disaster.
- This coupled with an emergency management system dominated by the release of large-scale federal funding following a disaster can result in a direct federal-local relationship where the state is viewed as an unnecessary layer of bureaucracy.
 - Following federal disaster declarations, local governments may interact directly with FEMA to obtain grants and other forms of technical assistance. Problems can result when local governments are unprepared to tackle the array of recovery programs and associated rules and requirements.

(Slide 3-39)

Rubin and Barbee suggest that intergovernmental relations can be “bridged” through the use of multi-agency teams tasked with coordination (see Session 12).

- The Federal **Interagency Hazard Mitigation Team** has been used with varied levels of success. Initially designed as a regional, interagency and intergovernmental team tasked with the development of a post-disaster plan of action, the team does not possess regulatory authority.
 - The degree to which policy recommendations have been implemented require the active participation of state officials after FEMA leaves, following the closing of the Disaster Recovery Operations Center.
 - **Tangible benefits have resulted, including:**
 - The creation of a mechanism that can bring together diverse parties to address emergency management issues;
 - A group of experts that have evolved over time; and
 - The creation of state and local-level teams designed to improve internal coordination.

(Slide 3-40)

Supplemental Consideration: At this point the instructor may choose to discuss Mushkatel and Weschler's article, *Emergency Management and the Intergovernmental System*, and Rubin and Barbee's article *Disaster Recovery and Hazard Mitigation: Bridging the Intergovernmental Gap* in the context of how the "Intergovernmental Emergency Management Policy Process" can be further refined to include the "strategic choices" described by Mushkatel and Weschler. This analysis could include the application of the Kinston case study as a means to explain intergovernmental relationships and their effect on local recovery processes.⁸

(Slide 3-41)

Case Study

Disasters as Opportunity: Hurricanes Fran and Floyd in Kinston, North Carolina

The city of Kinston, like many of the cities and towns in eastern North Carolina, is reliant on agriculture and the distribution of these goods to market. Kinston and much of eastern North Carolina, has been facing a declining economy and a loss of jobs. The growth rate in the city has been relatively flat for the last 40 years. Many of those who chose to stay represent low and moderate-income individuals and families with fewer opportunities to find work elsewhere. This has caused a downward spiraling effect: a declining central business district, an increased difficulty in providing necessary public services, and therefore, a reduced quality of life.

Hurricane Fran, which struck in 1996, served as a catalyst for positive change. The widespread flooding that followed, triggered substantial sums of recovery funding to assist the city rebuild. The city aggressively pursued recovery aid while developing an array of recovery planning documents to assist the city capitalize on what was viewed as an unprecedented opportunity. The recovery planning process sought to prioritize ongoing, preexisting community actions with new recovery challenges. It became evident that many local pre-disaster strategies were complimentary with the programs available post-disaster. The planning process facilitated the identification of specific needs and innovative approaches that maximized the connection between disaster recovery and economic revitalization, the provision of affordable housing and enhancing local educational opportunities. The creation of a specific plan guiding redevelopment actions, however, was not created in the traditional sense. A collection of documents were written and the principles of adaptive planning were applied. Elected city officials allowed technical experts in the planning department to develop strategic and long-term processes to achieve agreed upon objectives. This approach provided significant autonomy to those tasked with the development of an overall recovery strategy. Planning and grants management expertise among city staff was crucial to the development of meaningful recovery plans and the means to implement them.

⁸ **Note:** The roles of local, state and federal agencies and organizations tasked with recovery will be explored in Sessions 4, 5 and 6.

Kinston learned important lessons from Hurricane Fran and applied them when Hurricane Floyd struck three years later. Perhaps the most important lesson learned was how to effectively utilize all available recovery funds to achieve multiple community goals, including the effective incorporation of sustainable redevelopment into the recovery process. Following Hurricane Fran, Kinston represented the most significantly impacted municipality and largest buyout effort undertaken in North Carolina. All told over 360 homes, three mobile home parks and 68 vacant lots were slated for acquisition. When Hurricane Fran struck North Carolina, FEMA Region IV, the North Carolina Division of Emergency Management and local governments were inexperienced with large-scale acquisition projects. Over time, FEMA, the state, and local governments gained valuable experience that was applied during the Hurricane Floyd recovery process.

Following Hurricane Floyd, the city sought to acquire over 300 additional homes. Many of these had been flooded during Fran, but homeowners chose to remain in the floodplain. Others sought to be acquired following Fran once they realized that the federal/state program was resulting in the acquisition of friends and neighbors in their community. Many initially expressed skepticism that the government program would be implemented. As neighbors began the relocation process, the program became real to those that chose to stay. As a result of significant public interest, the city developed a project application that would be submitted to the state should additional funds become available. This proactive approach paid off when Hurricane Floyd struck three years later. The pre-developed application, containing over 200 homes, was approved two weeks after the storm passed. When compared with the one-year approval process following Fran, the rapid turnaround time was indicative of significant process improvements and the pre-storm identification of eligible participants.

A stated objective of the Kinston Recovery Plan was to clear the floodplain of development, a very progressive notion in North Carolina given the reluctance of many local governments to aggressively limit growth in the floodplain. When complete, it is estimated that between four to six hundred acres will be acquired. Thus a key question became - what to do with the purchased land? A conservation zone was established in the area, turning the floodplain into a state educational forest, the only one in eastern North Carolina. The project served as part of a larger attempt to turn the area into a tourist destination, particularly in light of the number of people who pass through Kinston on the way to the beaches of coastal North Carolina.

In an attempt to avert a serious loss of tax base, the city took a proactive approach to encourage homeowners slated for buyout to continue to reside within the city. The concerns surrounding the potential loss of residents following Hurricane Fran caused officials to establish the initiative Call Kinston Home. The program, established in 1998, brought together a coalition of local, state and federal agencies, non-profits and business leaders to create a marketing campaign aimed at enticing residents to stay in Kinston as part of a broader effort to revitalize existing neighborhoods through the construction or rehabilitation of new or existing housing stock. A key aspect of the program was to assist tenants become homeowners.

The program, which was fully operational when Hurricane Floyd struck, enabled the city to expand the current model to address additional redevelopment needs.

Race, the Buyout and Relocation

The City of Kinston can be generally divided into four broad quadrants based on two primary factors; race and income. In Kinston, the flooding associated with hurricane's Fran and Floyd disproportionately impacted poor black residents. The lack of available housing before the flood was significantly increased, due to the buyout of hundreds of low income homeowners and tenants. Thus, the need for affordable housing increased dramatically. The scale of the buyout was so large relative to the city's population and existing infrastructure that schools serving areas subject to the buyout eliminated the concept of a neighborhood schools system. The city is attempting to encourage development in the north east part of town where adequate educational facilities exist.

Generally speaking, the southern part of Kinston is comprised of low income black families, while the north houses predominantly middle and upper income residents, that are both black and white. Included in the north east quadrant are a significant proportion of middle income blacks. Following Hurricane Floyd, the city recognized that it would have to build a substantial number of new houses to accommodate victims who were bought out and wished to remain in Kinston. One plan was developed that sought to relocate families from the south east to the north east-side of town. In both cases the neighborhoods were predominantly black. Citizens who lived in the established neighborhood strongly objected to this approach, claiming that the type of housing proposed would lower existing home values. In fact, homes of similar size and vernacular were proposed to be constructed. Local officials suggested that disaster victims had a certain stigma attached to them, and as a result, were not welcomed into existing neighborhoods. The proposed effort was ultimately discontinued. An additional project was constructed that relocated disaster victims from the south west to North West part of town. In this case, it appears that race is playing a factor in community opposition. The North West part of Kinston is comprised of predominantly white middle and upper income residents, while the south west is made up of mainly low-income blacks.

*The City of Kinston Urban Growth Plan:
Linking Mitigation, Recovery and Sustainable Redevelopment*

The City of Kinston has linked issues of growth management, disaster recovery and hazard mitigation. Four primary principles guided this approach:

Mitigation should be incorporated into all aspects of city planning and redevelopment following a disaster;

Economic development should recognize that making the entire community less vulnerable to the effects of natural hazards is good business;

Smart growth practices should be incorporated into the locally adopted “urban growth plan;” and

Disaster recovery funding provides a key means to achieve desired community goals.

The Urban Growth Plan focused on several broad policy objectives, including housing and residential development, economic development, public facilities and utilities, agriculture and rural development, parks and open space, and natural resources and the environment. Perhaps most significant, from a land-use perspective, the Plan linked “primary, secondary and tertiary” uses with areas identified outside of flood hazard areas. Incentives and disincentives were established that guided future development away from flood-prone areas. For example, the city’s Capital Improvement Plan, established differing levels of infrastructural assistance to developers based on the proposed site relative to the city center (which was outside the 100-year floodplain) versus outlying areas, many of which were in the heart of the floodplain.

Following Hurricane Fran the city placed a moratorium on future development in the floodplain. This was due, in part, to a state-imposed moratorium on future sewer connections to the primary waste water treatment plant, which was regularly releasing waste into the Neuse River. This provided an opportunity for the city to address a state-mandated requirement, while implementing an effective growth management tool to limit future flood-related damages. In the aftermath of Fran, some property owners questioned the approach taken by the city, citing the apparent limits placed on future growth. Yet after Floyd, property owners recognized that they too no longer wanted to live, nor support future development in an area that was so vulnerable to flooding.

Housing and Employment Leading People to Success (HELPS), and Call Kinston Home: Implementing Locally-Driven Initiatives

A key part of disaster recovery involves the provision of aid to individual homeowners. Existing federal programs are generally not meant to “make people whole” following a disaster. Rather they are intended to assist people get back on their feet. In North Carolina, additional state programs were created to fill the gaps in federal aid. In Kinston following Hurricane Fran, the city sought to take this approach one step further, capitalizing on existing sources of funding and packaging local assistance to achieve multiple goals. Initially, selected officials questioned why the city was “in the housing business.” Yet it had become clear that the need for low and moderate-income housing was not being addressed by private developers, who asserted that the construction of low income housing was not a profitable venture. As a result, the housing stock needed to relocate displaced disaster victims was not being built. Eventually, local officials were able to convince members of city council that taking advantage of new state recovery programs made sense if the city wanted to retain their population and tax base.⁹ Two locally-driven programs exemplify this approach: Housing and Employment Leading People to Success and Call Kinston Home.

The Housing and Employment Leading People to Success (HELPS) linked the acquisition program, the provision of job training and the movement of tenants to home ownership as a means to promote self reliance. Training programs focused on building construction, the rehabilitation of existing housing stock, and the “deconstruction” or recycling of useable materials from homes slated for acquisition.¹⁰ A common problem following disasters impacting low and moderate-income communities is the ability to find construction firms that are willing to focus on the repair or replacement of this type of housing stock. This problem can be particularly acute in rural areas. Profit margins are typically lower when compared to the construction or repair of more expensive housing. In an attempt to address this concern, Kinston sought to create locally-based expertise that would be willing to fill this niche market, thereby addressing localized recovery needs and creating jobs for those living in the area.

⁹ The physical relocation of disaster victims to new housing presented several challenges to local officials, victims and elected officials. Local officials were faced with the identification of suitable replacement dwellings and attempts to relocate entire communities, thereby maintaining established neighborhood ties. Individuals were given a range of relocation options in an attempt to meet their social and economic needs. The large-scale relocation effort had political implications as well. The movement of large numbers of people from one voting district to another resulted in some elected officials questioning the motives of redevelopment efforts.

¹⁰ The deconstruction process involves salvaging materials that could be used in other construction projects. Materials may include flooring, doors, cabinetry, windows, framing material, molding, bricks and other items. In the case of flood-damaged housing, salvageable materials used in home construction should not include those damaged by floodwaters. As a general rule, the deconstruction of four homes results in the materials necessary for the construction of one home. An additional benefit of this process is the significant reduction of demolition debris sent to the landfill.

Identifying and training the people that can assist in the redevelopment of needed housing stock was an important first step. Call Kinston Home represents the second phase, encouraging economic investment and revitalization in the central business district and adjacent neighborhoods. Creating the economic stimulus for new housing construction involved a broad coalition. Members included the Kinston Housing Authority, Lenoir County Community College, the Chamber of Commerce, local, state and federal officials, Habitat for Humanity, North Carolina Homebuilders Association and private lending companies.

Linking Mitigation and Recovery Goals with Broader Community Objectives

Kinston officials had developed plans prior to Hurricane Fran that would address chronic problems such as a declining population and economy, loss of jobs, lack of safe and sanitary housing, and an overall decline in the quality of life among residents. The primary challenge facing Kinston was the lack of available resources to comprehensively address identified needs. While the city was successful in obtaining grants and loans to tackle a variety of problems, the amount of funding was not sufficient to comprehensively revitalize the city. When Hurricane Fran struck, city officials reviewed and amended their comprehensive plan, emphasizing ways to connect recovery programs to pre-identified goals and objectives. This required analyzing program eligibility constraints and pre-identified community needs. Once completed, the plan provided a roadmap for local officials linking recovery funding with pre-identified community goals. A massive influx of state and federal money followed, bringing major physical, economic and societal change. Several community officials have noted that Hurricanes Fran and Floyd “were the best thing that could have happened to the city.” Following Hurricane Floyd, the city created and adopted a hazard mitigation plan to more clearly delineate risk reduction strategies alluded to in the Urban Growth Plan. Specific objectives included enhancing standards identified in the Local Flood Damage Prevention Ordinance, expanding the use of buyouts to acquire flood-prone properties and increasing the size and number of floodplain conservation areas, creating a Redevelopment Plan to guide the post-Floyd rebuilding process, citing new communities in areas facing lower flood risk, and reassessing the accuracy of current flood maps.

Multiple disasters allowed the city to implement long-standing goals of economic revitalization and development, enhance recreational and tourism opportunities, address serious environmental concerns, and improve the overall quality of life in Kinston. Post-disaster funding enabled the city to acquire over 400 hundred homes,¹¹ develop new communities that focused on replacement housing for disaster victims, relocate a flood-prone waste-water treatment plant, and acquire automobile junkyards located in the floodplain. These actions necessitated developing innovative strategies to assist individual disaster victims and the community as a whole through partnerships with state historic preservation groups, faith-based volunteer groups, the North Carolina Division of

¹¹ Lenoir County, in which the City of Kinston is located, is in the process of acquiring several hundred homes due to flooding associated with Hurricanes Fran and Floyd.

Emergency Management, Division of Water Quality, Division of Community Assistance and the Hurricane Floyd Redevelopment Center.

Summary and Conclusions

In Kinston, the capacity of local government officials extended beyond the administration of post-disaster grant programs. Staff proactively developed innovative strategies to address pre-identified local needs. The complex and often confusing process of recovery and redevelopment were learned over time as a result of Hurricane Fran, and honed during the recovery following Hurricane Floyd. Kinston officials realized how to coordinate funding sources to achieve existing and future goals and objectives delineated in their Comprehensive Plan. The large influx of disaster aid provided heretofore unprecedented opportunities. When Hurricane Floyd struck three years later, the city had developed a strategic vision whose goals included clearing the floodplain of development, guiding development away from known hazard areas, revitalizing downtown, expanding the quantity of affordable housing, and improving the overall quality of life for the citizens of Kinston. In order to achieve these aims, Kinston effectively capitalized on existing technical and political support.

(Slide 3-42)

Discussion Topic: The instructor may choose to assign the Kinston case study reading in class or prior to Session 3. **Once read, students should discuss the case study in the context of Session 3 objectives, including:**

- The disaster recovery process;
- Disasters as opportunity;
- Short-term versus long-term perspectives; and
- Disasters as a clarifying agent, highlighting existing or underlying local, state and federal roles and relationships.

As part of the discussion, the instructor may consider the following questions:

- Which recovery model best describes the path taken by the City of Kinston;
- How did Kinston officials take advantage of recovery opportunities following Hurricanes Fran and Floyd;
- Describe the perspective (short or long-term) taken by the City of Kinston;
- Describe specific social issues and relationships highlighted during recovery.

(Slide 3-43)

Supplemental Considerations:

Using a class discussion, compare the City of Kinston, North Carolina case study, the topics discussed in Session 3 and Chapter 3, Policies for Guiding Planning for Post-Disaster Recovery and Reconstruction in Schwab, 1998. **Topics discussed should include:**

- To what extent did the Kinston case study describe taking a long-term versus short-term approach (e.g. development of recovery strategies, linkage with other pre-existing plans)? What were some tangible outcomes of this approach (e.g. construction of affordable replacement housing, enhanced recreational opportunities, economic development, reduced vulnerability to flood-hazards, etc.)?
- Describe some immediate post-disaster decisions that affected long-term recovery goals, including sustainable recovery (e.g. building moratorium, development of post-disaster recovery plan, etc.).
- Are there actions that the City of Kinston could have taken that would have enhanced their ability to rebuild in a more sustainable way (e.g. development of a formalized recovery task force – see Schwab, 1998, pp. 50-51)?
- Discuss the means used by Kinston officials to take advantage of post-disaster opportunities, including sustainability and hazard mitigation (e.g. linking goals with identified state and federal funding sources, acquisition of flood-prone homes, linking state-imposed building moratorium with growth management and hazard mitigation, etc.).

Objective 3.5 Revisit principles discuss in the session**Remarks:**

The instructor is encouraged to summarize the principles discussed in the current session and set the stage for the next class. Each session is designed to build on information discussed up to this point in the course. The instructor should therefore discuss how the concepts of the disaster recovery process, disasters as opportunity, short and long-term recovery perspectives and disasters as a clarifying agent relate to Session IV: Roles in Recovery.

4.1 Identify stakeholders and their roles in recovery

References

- Anderson M. and P. Woodrow. 1989. *Rising from the Ashes: Development Strategies in Times of Disaster*. Boulder, Colorado: Westview Press.
- Berke, Philip, Timothy Beatley and Clarence Feagin. 1992. "Hurricane Gilbert Strikes Jamaica: Linking Disaster Recovery to Development." *Coastal Management*. Vol. 21. pp.1-23.
- Berke, Philip, Jack Kartez, and Dennis Wenger. 1993. Recovery after Disaster: Achieving Sustainable Development, Mitigation and Equity. *Disasters* 17(2): 93-109.
- Bolin, R. and L. Stanford. 1991. Shelter, Housing and Recovery: A Comparison of U.S. Disasters. *Disasters* 15 (1): 24-34. 1991
- Chong, Dennis. 1991. *Collective Action and the Civil Rights Movement*. Chicago: The University of Chicago Press.
- Cutter, Susan. 1996. Vulnerability to Environmental Hazards. *Progress in Human Geography*. 20 (4): 529-539.
- Cutter, Susan. 2001. *American Hazardscapes: The Regionalization of Hazards and Disasters*. Washington, D.C.: Joseph Henry Press.
- Eadie, Charles et. al. 2000. *Holistic Disaster Recovery: Ideas for Building Local Sustainability after a Natural Disaster*. Natural Hazards Research and Applications Center: University of Colorado, Boulder

- Federal Emergency Management Agency. 2000. *Rebuilding for a More Sustainable Future: An Operational Framework*. FEMA Report No. 365. Washington, D.C.
- Francaviglia, Richard. 1978. Xenia Rebuilds: Effects of Predisaster Conditioning on Post-Disaster Redevelopment. *Journal of the American Institute of Planners* 44 (1): 13-24.
- Geipel, Robert. 1982. *Disaster and Reconstruction*. London: George Allen & Unwin Ltd.
- Haas, J. Eugene, Robert Kates, and Martyn J. Bowden, eds. 1977. *Reconstruction Following Disaster*. Cambridge, Massachusetts: MIT Press.
- Jenkins-Smith, Hank C. 1990. *Democratic Politics and Policy Analysis*. Pacific Grove, California: Brooks/Cole Publishing Company.
- Jones, Bryan D. 1994. *Reconceiving Decision-Making in Democratic Politics: Attention, Choice, and Public Policy*. Chicago: The University of Chicago Press.
- Kartez, Jack. 1984. "Crisis Response Planning: Toward a Contingent Analysis." *American Planning Association Journal*. Winter. Pp.9-21.
- Kartez, Jack and Michael Lindell. 1987. "Planning for Uncertainty: The Case of Local Disaster Planning." *American Planning Association Journal*. Pp.487-498.
- Kingdon, John. 1984. *Agendas, Alternatives and Public Policies*. Boston: Little, Brown.
- May, Peter. J. 1985. *Recovering from Catastrophes: Federal Disaster Relief Policy and Politics*. Westport, Connecticut: Greenwood Press.
- May, P.J. and W. Williams. 1986. *Disaster Policy Implementation: Managing Programs Under Shared Governance*. New York: Plenum.
- Mileti, Dennis. 1999. *Disasters by Design: A Reassessment of Natural Hazards in the United States*. Washington, D.C.: Joseph Henry Press.
- Platt, Rutherford. 1999. *Disasters and Democracy: The Politics of Extreme Natural Events*. Washington D.C.: Island Press.
- Quarantelli, E.L. and R. Dynes. 1970. Property Norms and Looting. *Phylon* 31: 168-182.
- Rubin, Claire. 2001. Disaster Recovery Timeline. <http://www.disaster-timeline.com/dtl.html>.

Spangle, William E. Ed. 1987. *Pre-Earthquake Planning for Post-Earthquake Rebuilding*. Southern California Earthquake Preparedness Project. State of California Printing Office.

Spangle and Associates. 1990. *Rebuilding After Earthquakes: Lessons from Planners*. International Symposium on Rebuilding After Earthquakes. Stanford University, Stanford California. Sunnyvale, California: Consolidated Publications, Inc.

Stoker, Robert. 1991. *Reluctant Partners: Implementing Federal Policy*. Pittsburgh, Pennsylvania: The University of Pittsburgh Press.