

Session 10

Holistic Disaster Recovery: Creating a More Sustainable Future

Impediments to a Sustainable Recovery (Part I)

Time: 3 hours

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Objectives:

- 10.1** **Discuss federal disaster recovery programs as an entitlement**
 - 10.2** **Discuss whether disaster recovery programs are creating more vulnerable communities**
 - 10.3** **Discuss local capability and commitment to sustainable recovery**
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Scope: Up to this point in the course, class sessions have focused on setting the context of disaster recovery, including basic definitions, a description of the process, the dimensions of recovery, roles assumed by stakeholders, inter-organizational relationships and decision-making. This session marks a change in orientation, emphasizing specific factors that impede or facilitate a sustainable recovery. Session 10 represents the first of two sessions that discuss factors that impede sustainable recovery. Specific topics include the concept of disaster recovery programs as an entitlement, recovery programs that may increase, rather than decrease hazards vulnerability, followed by a discussion of local capability and commitment to the principles and practice of sustainable recovery.

Required Readings:

Student and Instructor Readings:

Rutherford Platt. *Disasters and Democracy: The Politics of Extreme Natural Events*. 1999. Island Press: Washington D.C. Chapter 1. Shouldering the Burden: Federal Assumption of Disaster Costs. Pp. 11-46.

May, Peter. 1985. *Recovering from Catastrophes: Federal Disaster Relief Policy and Politics*. Westport, Connecticut: Greenwood Press. Chapter 4. Mount St. Helens: A Case Study. Pp.71-86. Chapter 6. Political Influence, Electoral Benefits, and Disaster Relief. Pp.104-128.

10.1 Discuss federal disaster recovery programs as an entitlement

Remarks:

Following federally declared disasters, large sums of recovery funding are provided to states and local governments and individual disaster victims. Federal disaster recovery assistance has evolved over time, initially provided on a case by case basis following a disaster, typically in the form of a Congressional appropriation. This form of disaster assistance resulted in an ad-hoc approach to recovery (May 1985, Platt 1999). In the 1950's congress began to more clearly define the type of assistance available following disasters. The 70's marked a time in which disaster assistance was increasingly expanded. In 1988, the Stafford Act was approved by Congress as a means to further clarify disaster recovery funding criteria while incorporating hazard mitigation as a form of post-disaster assistance.¹

The Disaster Mitigation Act of 2000, requires states and local governments to develop hazard mitigation plans in order to be eligible for pre and post-disaster mitigation grant program assistance. This marks a slight movement of the pendulum, wherein local and state governments are expected to take action before disasters to reduce their potential impact in order to be eligible for certain types of disaster assistance. However, the funding available through mitigation programs typically pales in comparison to the recovery programs discussed in earlier sessions, including Public Assistance and Individual Assistance, among others.

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Numerous factors contribute towards disaster recovery programs as an entitlement. They include:

- ***Supplemental Assistance.*** While many disaster assistance programs have become increasingly defined in scope, the breadth of assistance has continued to grow over time.
 - In addition to assistance triggered by a federal disaster declaration, members of Congress continue to appropriate disaster aid beyond that offered under the Stafford Act.
 - Often referred to as supplemental funding, this type of aid is closely tied to a coalition of interests' ability to effectively lobby members of Congress to appropriate additional funding.

¹ A more detailed description of recovery funding is provided in Session 5.

- ***Limited Restrictions on Development in High Hazard Areas.*** An ever increasing number of people and communities continue to build in known high hazard areas.
 - Many states and local governments are unwilling to utilize their existing governmental authority to restrict or guide growth.²
 - As a result of limited governmental controls placed on risky development, disaster costs have increased dramatically.

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- ***Public Expectations.*** Providing large sums of post-disaster federal dollars without a substantial financial commitment from states and local governments have increased governmental and public expectations regarding disaster assistance.
 - As disaster assistance programs have expanded historically and the means by which they are advertised and delivered has improved, more people are aware that they exist and have become increasingly reliant on them to recover.³
- ***Limited Disincentives.*** There are limited penalties (i.e. reduced levels of federal assistance) placed on governments, builders and citizens who choose to build in areas subject to repeated hazard-related damages.
 - The cycle of build-damage-rebuild is perpetuated in many high-risk communities.

² Specific tools that states may employ include public expenditures, the selective placement of state-owned facilities and public infrastructure and the enactment of laws that empower local governments to act. Local governments can utilize zoning, the adoption of a Local Flood Damage Prevention Ordinance, subdivision ordinance requirements, and their police power.

³ The National Flood Insurance Program represents one of several federal programs that help victims recover from disasters. While obtaining flood insurance requires a property owner to pay annual premiums, they are subsidized in order to encourage participation. As a result, property owners do not pay an amount that accurately reflects their risk. Many have made the argument that the National Flood Insurance Program actually encourages development in the floodplain rather than serving as a deterrent to building in a known hazard area.

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In *Disasters and Democracy* (1999) Rutherford Platt provides a detailed analysis of how disaster recovery programs have evolved over time, including how federal programs more broadly defined have encouraged development in hazardous areas.

- Platt refers to investment decisions made by individuals, businesses and communities that do not effectively account for hazard threats due, in part, to the degree of federal disaster assistance as a “**moral hazard**” and a type of “codependency” based on the repetitive cycle of “loss, compensation, reconstruction, and new losses.” (p. 9).

Platt identifies three key factors that bear discussing in more detail. They include:

- The scope of disaster assistance;
- Federal assistance as a means to supplement state and local capabilities; and
- Rising disaster costs.
 - **The Disaster Relief Act of 1970 (PL 91-606)**, marked a shift in US disaster policy in which the federal government assumed a much greater role in providing assistance.
 - This included an increased array of benefits far beyond what the original intent of the **Disaster Relief Act of 1950**. Initially, federal disaster assistance was provided to units of government.
 - With the passage of the **Disaster Relief Act of 1970**, following Hurricane Camille, disaster assistance was expanded to include aid to individuals.
 - Prior to that time, disaster assistance was provided primarily to state and local units of government. In addition, the United States Congress has regularly provided supplemental appropriations above that found in past Disaster Relief Acts.
 - A common theme of the Disaster Relief Acts of 1950 and 1970 and the **Robert T. Stafford Disaster Relief and Assistance Act** (established in 1988) includes the notion that federal assistance is provided to assist states and local governments when they are unable to effectively respond to and recover from a disaster.
 - According to Platt, this is simply not the case. Rather, assistance is provided regardless of state or local capability to aid disaster victims.

- The federal government does not currently assess state or local capability to effectively respond or recover from disasters.⁴
 - It is difficult, if not impossible, to accurately assess the threshold at which a federal disaster declaration should be made for differing states.
 - The federal disaster declaration criteria are subject to broad interpretation and can become highly politicized (see Session 2).
- Disaster costs and the number of federally-declared disasters have continued to rise since the initiation of codified federal assistance to aid states, municipalities and disaster victims began in earnest in the 1950's.
 - However, with the exception of the **Disaster Mitigation Act of 2000**, little has been done to link disaster assistance to specific measures taken to reduce future hazard vulnerability.

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As disaster costs continue to rise, disaster assistance has begun to increasingly rely on congressional appropriations beyond that provided in the annual federal budget. **This approach can prove problematic for several reasons.**

- Rules governing eligible supplemental appropriations are developed on an ad hoc basis following disaster declarations.
- Therefore, supplemental appropriations may reflect the special interests of those members of Congress whose constituents are affected, rather than relying on a more rational and consistent approach.⁵
 - Supplemental appropriations are notorious for the addition of non-essential requests, including both disaster and non-disaster-related items.
 - Pork barrel politics are frequently the result. Members of Congress accept this technique, realizing that they too may seek this type of aid if their constituents are impacted in the future.

⁴ States, in collaboration with the National Emergency Management Association and the National Governors Association, have developed the Emergency Management Assessment Program (EMAP). The primary aim of EMAP is to assess the readiness of state and local emergency management programs. The evaluation is intended to be a first step towards a nationally recognized accreditation process. This program will be discussed in more detail in Session 14, Future Trends and Implications.

⁵ The relationship between the amount and type of supplemental appropriations and the role influential members of Congress play in these appropriations is worthy of future research.

- Members of Congress may not aggressively challenge requests. Doing so may give the impression that they are insensitive to the needs of disaster victims.

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- **The ability to garner supplemental appropriations is shaped by several factors. They include:**
 - ***The size and scope of a disaster.*** Larger disasters or those that cause dramatic damages or loss of life typically cause greater public concern and are less likely to be challenged when additional disaster assistance is sought. The occurrence of larger or more highly publicized disasters may siphon money away from smaller or less widely recognized events.
 - ***The timing of the disaster (e.g. when Congress is in session or when an omnibus bill is being crafted).*** Requests for supplemental assistance must coincide with the time in which members of Congress are in session. Successful supplemental appropriation requests may require quickly assembling a package of information for review before Congress adjourns.
 - Major events, including those that are highly publicized, can be quickly forgotten over time.
 - In many cases, supplemental assistance packages are placed in massive omnibus bills that include an array of items that dwarf disaster-related requests.
 - These larger spending bills often contain numerous federal pork barrel spending projects from across the country.
 - In some cases, bills move through Congress as members from both sides on the aisle want their pet projects funded and are willing to support others in order to get the bill passed.

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- ***The ability of state and local officials to develop a thorough and data-driven request package.*** In addition to the intensely politicized nature of supplemental funding, federal agencies are tasked with the initial review of state requests prior to submitting them to Congressional committees.
 - It is in the best interests of FEMA, for example, to review the data collected and submitted by states for accuracy and completeness.
- ***The political power of those members of Congress whose districts were impacted.*** Powerful members of Congress, such as those that sit on the appropriation committees of federal agencies, can play influential roles in moving bills through committee and to the floor for debate.
- Powerful Representatives and Senators possess can influence others to support desired funding packages, particularly those who may depend on them for political capital.

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- Supplemental appropriations often fail to accurately capture the disaster relief needs of states and local governments and disaster victims.
 - Gross estimates of need are established by states.
 - Once funding is allocated to states, it can prove difficult to recapture if the available funding exceeds the needs of those affected.

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Growing disaster costs are a result of several factors. They include:

- ***Rapid growth in areas subject to repeated disaster-related impacts.*** Among the most rapidly growing areas in the United States include coastal regions, and the west coast, which is subject to earthquakes.
- ***An increased willingness to declare federal disaster areas, thereby resulting in the provision of federal funds.*** Disaster declarations can be highly politicized events that offer a unique opportunity for politicians to gain significant political capital.
- ***The reliance on the use of politicized supplemental appropriations.*** While supplemental funding served as the initial means of providing federal disaster assistance, it remains a heavily utilized means to obtain assistance beyond that available under the Stafford Act. Supplemental appropriations typically contain fewer stipulations regarding their use. This can have the effect of further reducing local and state financial commitment to recovery.

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- ***The unwillingness of the federal government to limit disaster assistance to states and local governments who undertake meaningful measures to limit development in identified high hazard areas.*** While the Disaster Mitigation Act requires states and local governments to develop hazard mitigation plans, the plans tend to address existing at-risk structures.
 - Federal and state governments are very reluctant to require substantial changes in existing land use policies that account for hazards.
- ***Reliance on “engineering approaches” like levees and beach nourishment projects that create a sense of false security, resulting in more intensive development nearby.*** When an event of a sufficient magnitude occurs, more development has occurred than may have all else being equal, resulting in a higher level of exposure and loss.
- ***Existing federal recovery programs that repair at-risk infrastructure and housing without requiring the incorporation of hazard mitigation measures.*** This results in a de facto subsidization of risk, borne by the federal government, rather than a more comprehensive integration of mitigation into recovery processes.

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Supplemental Considerations: Based on the material discussed in Sessions 1 through 9, should the current federal disaster relief program be revised? If so, what specific changes should be made? The instructor should solicit input from students regarding how current disaster relief policy could be redefined by asking specific questions to encourage discussion. Specific examples from the Mount Saint Helens' case study reading (May 1985) should be used to clarify issues where appropriate.

Questions may include:

- How would you propose to evaluate the capability of states and local governments to respond to and recover from disasters?
- Should the ability of a state or local government to pay for some or all disaster assistance determine whether they receive federal aid?
- Should states and local governments be expected to do more to reduce hazard vulnerability in order to receive federal disaster assistance? If yes, what specific measures should be taken?
- Do you believe the current disaster assistance programs facilitate or hinder sustainable recovery? Give specific examples.

10.2 Discuss whether disaster recovery programs are creating more vulnerable communities

Remarks:

Stafford Act recovery programs emphasize the repair or replacement of homes and community infrastructure to its "pre-disaster condition." Thus, many federal recovery programs actually increase the risk faced by communities. In addition, engineering solutions that seek to harden structures and construct protective measures like the channelization of rivers, the construction of levees and the renourishment of beaches provide short-term solutions. In many cases, these measures can encourage development in areas that would otherwise be subject to repeated hazards. The repair of flood-prone homes, damaged infrastructure, the construction of levees and the renourishment of beaches all contribute to an increased level of risk in the long run. The following examples discussed below provide specific examples of how recovery funding can exacerbate hazards vulnerability.

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Specific characteristics of current federal disaster recovery programs and processes that contribute to more vulnerable communities include:

- The vast majority of federal assistance funds are used to replace existing infrastructure, housing and critical facilities to their pre-disaster condition regardless of their vulnerability to future events.
- Repairing damaged infrastructure often includes bringing outdated facilities up to more recent codes and standards, which has the unintended effect of encouraging additional development in these areas.
- The continued cycle of repairing at-risk communities creates an underlying expectation among public officials and potential disaster victims that they will be provided federal assistance when the next event occurs.
 - There is little incentive for local governments or citizens to take the initiative to reduce their level of hazard vulnerability.⁶
 - Limited incentives to alter behavior may cause individuals and government officials to take on greater risk, assuming that they will be compensated should a disaster occur.⁷

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- Regardless of the number of times a municipality or region has been impacted by disasters, most federal recovery programs provide 75% of the cost to make repairs. States frequently pay some or the entire non-federal match.
 - There is little incentive for local governments to include the potential economic impacts of disasters, including how to pay for unsound development decisions.
- The federal commitment to post-disaster hazard mitigation represents a small part of overall post-disaster assistance.
 - The Hazard Mitigation Grant Program, which is the primary means to fund hazard mitigation activities post-disaster, represents only 15% of total disaster costs.

⁶ Attempts by the insurance industry to encourage the implementation of hazard mitigation measures have met with limited success.

⁷ This belief can prove costly, given that most flood-related losses do not occur as a result of federally-declared disasters. Rather, most damages associated with flooding are the result of localized events.

- The Public Assistance 406 Mitigation Program is widely underutilized, due to a lack of sufficiently trained federal and state officials, and a general reluctance of FEMA staff to spend additional funds in a program that has historically sought to contain disaster costs.
- The over reliance on engineering solutions that alter natural systems, such as the channelization of rivers and streams, the construction of levees and seawalls, and the draining of wetlands, can result in more severe disasters in the long run (Burby 1998).
- Land-use measures, implemented pre-disaster, that guide development away from identified hazard areas are significantly underutilized.

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The following scenarios can result in more vulnerable communities:

- ***Repair of hazard-prone structures***
 - Decisions made regarding the repair of hazard-prone structures during recovery should be balanced with decisions regarding specific measures that can be undertaken to reduce future vulnerability.
 - Unfortunately, following many federally declared disasters, funding emphasizes the repair of these structures without significant attention paid to reducing future risk.
 - In the case of flood-prone facilities, for example, repairs are often done utilizing the Individual Assistance program (if a federally declared disaster occurs), which provides assistance to homeowners to repair the structure like it was before the disaster.
 - Following a federally-declared disaster, structures are repaired or reconstructed to current building codes, including the Local Flood Damage Prevention Ordinance, *if* the facility has been more than 50% damaged and is located in the 100-year floodplain.
 - Many of the most vulnerable structures built in the floodplain have been constructed prior to the adoption of a Local Flood Damage Prevention Ordinance.
 - As a result, the construction of the building may not have accounted for the actual flood risk.⁸

⁸ Construction techniques that pre-date the National Flood Insurance Program vary in their inclusion of hazard mitigation measures. For example, in some communities located on the outer banks of North Carolina, homes were physically relocated off the oceanfront as coastal erosion and repeated storms

- Property owners who maintain flood insurance are eligible for assistance should their home be flooded regardless of whether it was a federally declared disaster or a more localized event.
- Critics of the National Flood Insurance program argue that the program actually encourages development in the floodplain and as a result, increases, rather than decreases vulnerability to flood hazards (May and Deyle 1998, p.67).
 - The Association of Floodplain Managers, recognizing how the National Flood Insurance Program promotes development in Special Flood Hazard Areas, has begun the No Adverse Impact program, which advocates potential changes in the flood program to more effectively accounts for this problem.

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- ***Construction of flood control levees***
 - The use of flood control techniques has a long history in the United States. Numerous rivers and coastal areas have been modified as a means to “control” flooding and enhance navigable waterways.
 - The construction of levees represents one of the most prevalent techniques used to divert floodwaters. Levees are particularly prevalent along the Mississippi and Missouri Rivers in the central United States.
 - Levees serve to protect adjacent property by channeling floodwaters away from flood-prone areas.
 - **Flood control structures, like levees can cause a variety of negative effects. They include:**
 - ***Altering the natural function of the floodplain.*** The floodplain, left in its natural state, serves as a sponge, absorbing excess floodwaters and depositing rich alluvial soils during a flood.
 - When the floodplain is constricted, it alters the natural process, speeding floodwaters downstream.

encroached on barrier island homes. Many of these homes also had holes drilled in the floors to allow the water to flow into and out of the structure, thereby reducing the likelihood that the homes would float off their foundation.

- ***Worsening flooding downstream.*** The construction of levees artificially narrows the floodplain. Rather than floodwaters spreading across a broad floodplain, flows are narrowed, causing floodwaters to move downstream more rapidly.
 - Those communities that are not protected by a levee of adequate height suffer a higher degree of flooding than would have otherwise occurred.

- ***Encouraging development.*** Constructing major flood control structures can have the unintended effect of encouraging development in areas that are artificially protected from the impacts of natural hazards.
 - A false sense of security may result in new development occurring in areas that might otherwise not experience growth. As development increases immediately adjacent to the levee, the amount of structures at risk is increased.

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- ***Beach renourishment***
 - Like levees, beach renourishment involves a modification of the natural environment.
 - Barrier islands are constantly moving towards the mainland. Coastal storms and day-to-day erosion cause this gradual form of island migration. This natural process does not represent a problem unless structures are built along the oceanfront.
 - In the United States, barrier islands are frequently the site of intensive development patterns.
 - In order to maintain ocean front structures, communities frequently resort to beach renourishment projects.
 - These projects can prove to be extremely expensive, costing millions of dollars per mile of oceanfront.
 - Typically, federal dollars are used to pump sand onto the beach.
 - Beach nourishment projects frequently result in more intensive development patterns, assuming that new construction is protected.

- In order to be effective, nourishment projects must be maintained over time in order to counteract the erosion of the artificial beach.⁹

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- ***Post-disaster community infrastructure reconstruction***
 - A key tool that can be used to affect sustainable recovery is the way in which public infrastructure is rebuilt following a disaster.
 - The placement of public infrastructure, including roads, water and sewer lines and public facilities (e.g. schools, libraries, public works, etc.) serves to guide overall community development patterns.
 - Following a disaster, where and how public infrastructure is rebuilt can dramatically shape future vulnerability.
 - The type of assistance that typically follows a presidential disaster declaration is driven by political pressure to repair communities as quickly as possible.
 - The incorporation of mitigation measures into the recovery process takes time. Thus short-term objectives can easily cloud the broader, more difficult to achieve goals of mitigation and hazard resilience.

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- **Specific examples of reconstruction techniques that affect community vulnerability include:**
 - Relocating public facilities (e.g. schools, government offices, waste water treatment plants, roads) as part of a larger community-level effort to move neighborhoods out of identified hazard areas.
 - Rebuilding at-risk facilities as they were before the event. This approach is frequently used following disasters.
 - Federal dollars, including Public Assistance, is typically used to repair structures as they were before the event.
 - This may result in a continued cycle of damages-rebuild-damages, particularly in areas subject to repeated disaster events.

⁹ For more information on beach nourishment see *The Corps and the Shore*, written by Orrin Pilkey and Katharine Dixon (1996).

- This approach may also have the unintended effect of actually increasing vulnerability as additional development occurs following enhancements to public infrastructure.¹⁰
- Efforts have been made by FEMA to reduce risk to public infrastructure during the recovery process through the use of 406 mitigation under the Public Assistance Program (see Session 3).

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- *Taking a short versus long-term perspective*
 - Assisting those affected by disasters seems like an ethical approach, something that our government should provide to its citizens. Most people would agree that some form of assistance is needed. However, at what point does the rebuilding of communities become folly, particularly in those areas known to be subject to repeated destructive events? **Several factors require additional consideration. They include:**
 - Areas subject to known hazards are among the most rapidly growing areas of the United States. Specific geographic regions include the shoreline of the Gulf of Mexico and the Atlantic coast and the Los Angeles Basin.
 - With this growth has come a greater investment of public infrastructure, including roads, schools, water and waste water treatment plans, etc.
 - When populated areas are struck by natural hazards that meet federal disaster declaration thresholds, large sums of federal dollars are provided to assist in the reconstruction process.
 - Local and state governments do not bear the true costs of federally declared disasters. The costs are shifted to taxpayers living in less vulnerable areas.
 - This subsidy has the unintended effect of encouraging rebuilding in these areas or the use of engineering design solutions as opposed to the search for more suitable locations away from identified hazard areas.

¹⁰ The federal government cost share to repair damaged infrastructure following a federally declared disaster under the Public Assistance program is usually 75 percent. In more severe events, the cost share may increase to 90 percent. The non-federal cost share may be borne by the state or local governments. As a result, many local governments are required to pay little, if any of the costs to rebuild damaged infrastructure. In such cases, local governments may pay to include enhancements to public infrastructure such as additional water or sewer hook ups for new neighborhoods.

- This approach does little more than postponing a catastrophic event that exceeds the design standards put in place (Mileti, 1999, p. 25).
- In the case of more frequently occurring localized events, local and state governments must bear a greater share of the costs.

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Class discussion: How should communities balance the use of engineering solutions with land use measures to facilitate a sustainable recovery? Can engineering solutions be part of a sustainable recovery?

- Guiding development away from known hazard areas appears to represent a more sustainable solution than engineered measures.
- Additional factors should be considered when choosing among alternatives. They include:
 - Preserving existing structures, communities or neighborhoods (some of which may be historic); or
 - Selecting the most cost-effective action.

In some cases, hardening structures or altering systems may be the most practical solution. For example, existing structures that play a vital public role may need to be hardened. Alternatives such as their relocation may prove too costly.

- Ideally, development decisions will take into account how these decisions affect the long-term vulnerability of a community.
- Engineering solutions should consider how altering the environment may affect adjacent properties and communities. For example, altering a stream channel may succeed in removing the water from an area, but it may exacerbate flooding downstream.

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An additional question the instructor may choose to address includes:

- What specific post-disaster steps could be taken to reduce the future level of hazard vulnerability? **Specific examples may include:**
 - Limiting federal expenditures for the repeated repair of public infrastructure in known high-hazard areas;
 - Limiting the ability of homeowners to obtain repeated flood insurance claims;
 - Limiting future federal assistance in areas that continue to build in known hazard areas after a federally-declared disaster;
 - Requiring local governments to pay a greater share of disaster costs, unless it can be shown that this represents a significant economic hardship;
 - Establishing greater insurance incentives for homeowners and municipalities to implement pre-disaster mitigation measures; and
 - Rewarding communities that implement and sustain hazard mitigation measures.

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Class discussion: The instructor should ask students to identify other specific examples of reconstruction in high hazard areas. Following the identification of each, students should suggest specific mitigation measures that should be considered. The recommendations should be discussed in terms of their technical and political feasibility.

Two examples include:

- ***Rebuilding homes, roads and other public infrastructure on steep sloped areas.*** Hazard risk can be magnified if reconstruction follows a fire in which the vegetation provides a primary means of slope stabilization. Reconstruction on steep sloped areas that are also earthquake-prone magnifies the likelihood of a landslide occurring.
 - Possible mitigation techniques include: retrofitting homes with increased pile depths, rebuilding in areas less susceptible to landslides, limiting development densities, limiting investment of public infrastructure, re-grading areas prior to reconstruction, reconstructing with flame retardant materials, and increasing fire hydrant spacing.

- Technical and political feasibility factors to consider include: cost of engineering approached (pile depths, re-grading), the political feasibility of relocating residents, limiting reconstruction on private land or limiting public reinvestment.
- ***Rebuilding of oceanfront property.*** Coastal storms (including hurricanes, tropical storms and nor'easters) and long-term erosion are typical along the United States coast.
 - Possible mitigation techniques include: relocating homes to areas of lesser risk, elevating homes in place, reconstructing damaged dune systems, beach renourishment, limiting reinvestment of public infrastructure in high hazard areas, purchasing flood insurance.
 - Technical and political feasibility factors to consider include:
 - The strong opposition of property owners to relocate;
 - The long-term effectiveness of coastal engineering projects; and
 - The costs associated with such projects - versus the strong political debate for and against these measures.
 - Most coastal engineering and geology experts view the reconstruction of dunes and renourishment of beaches as short term measures that provide limited protection from future storms and the long-term processes of coastal erosion and island migration.
 - Homeowners and coastal officials frequently cite the importance of maintaining a wide beach to protect citizens and provide recreational opportunities for tourists who often represent a major source of income for coastal communities.

10.3 Discuss local capability and commitment to a sustainable recovery

Remarks:

The degree to which local governments adopt a comprehensive approach to sustainable recovery is dependent on the dual, interrelated roles of local **capability** and **commitment**. The level of capability to act following a disaster can be assessed across the following indicators: fiscal, technical, administrative, legal, and political. Commitment is more difficult to measure. It represents a willingness of those in power to assist all segments of the population living in their community, region or state.¹¹

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Capability can be described across the following indicators:

- **Fiscal capability** is best defined in the context of the pre and post-disaster environment. Fiscal capability simply defined, is the wealth of the community.
 - In order to be effective, the local resources must be made available by those in power while simultaneously looking for state, federal and non-profit funding.
 - Pre-disaster wealth enables local governments to provide high-quality services to those living within a given jurisdiction.
 - In the realm of post-disaster recovery, savvy local governments stand to benefit substantially from the influx of federal and state funds. **Examples include:**
 - Aggressively capitalizing on mitigation dollars before the next event, thereby reducing the need for recovery funds in the future.
 - Using local funds or resources.
 - Decision makers must make difficult choices regarding the apportionment of limited funds to both pre-existing needs and those faced in the aftermath of a disaster.
 - The strategic use of existing and post-disaster funding resources to achieve multiple community aims is a frequently underutilized approach.

¹¹ Unfortunately, a small number of communities chose to assist certain segments of the population while excluding others. In these cases, local non-profits often served as the primary source of assistance.

- The ability to do so enables local governments to capitalize on the number of recovery programs while meeting community goals.
- Other examples may include shifting existing personnel to the recovery effort, or hiring new staff.

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- **Technical capability** refers to the ability of local governments to use those tools that can aid in data collection and analysis.
 - Gathering and analyzing information is frequently used when establishing new policy or developing applications for recovery funding.¹²
 - One of the best examples includes the use of Geographic Information Systems (GIS) to assess a community's vulnerability to natural hazards.
 - In order for tools like GIS to be effective requires technical experts capable of creating, manipulating and interpreting the data. However, local officials can still craft meaningful policy using basic information and simplified analytical tools.
- **Political capability** - or political will - represents an action or actions taken by those in a position of authority that may face significant opposition by powerful interests.
 - For example, the willingness of elected officials to adopt policy decisions in the post-disaster environment that temporarily slow or limit reconstruction options, knowing that this action may face significant opposition, requires political will.
 - Local governments face pressure to rebuild quickly. This often results in replacing things as they were before the event.
 - Taking the time to review potential recovery options and changing the way things have been done in the past requires strong political leadership.
 - Such decisions may run counter to the local "growth machine" found in many local governments (see Logan and Molotch, 1987).
 - The coalition of development interests found in most cities are particularly effective in shaping local policy decisions affecting growth.

¹² One of the key trends in the emergency management profession is the increasing use of technology.

- Typically these decisions are made by a small collection of individuals who directly benefit from unchecked development.
- Technical experts can affect change in the post-disaster environment if certain factors are present.
 - Strong leadership and an inclusionary process bolstered with the use of good data may be able to convince members of the growth machine that certain limits on growth are legitimate and are in the best interests of the community.

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The level of **commitment** to recovery and mitigation among local governments is in some ways fundamentally different from capability. In other circumstances it is closely linked.

- The government's willingness to rebuild and recover from a disaster is not only tied to its level of capability.
- The degree to which a community with limited capability demonstrates a strong level of commitment usually involves the presence of a recovery or mitigation advocate.
 - The advocate, in turn, may temporarily build local capacity and/or seek assistance from those outside the community.
 - If done effectively, recovery options can be expanded significantly. This may take the form of working closely with state and federal officials or working directly with a disaster recovery consultant.
 - If a local recovery advocate does not exist, some of the most needy disaster victims may not receive the aid needed to recover. Without basic assistance, some may never recover financially.
 - Local power is best understood within the socio-political context of each community and may vary accordingly.
 - In some cases, those in power may be a locally elected governing body or a particularly charismatic individual.
 - In other cases, technical experts, such as a local planning director or local floodplain administrator, may be able to influence decision-makers through the use of information presented in a persuasive manner.

- Leaders within the religious community or advocates for the disenfranchised may prove the most effective in influencing the actions of local officials or they may seek aid outside the community power structure.

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- Commitment is closely linked with the identification of problems and seeking creative solutions.
 - This necessitates the use of local officials proficient in a range of skills, including, but not limited to, grants management, public administration and both strategic and long-term comprehensive planning.
 - It may mean seeking creative ways to link existing programs to achieve multiple aims while establishing new means of providing locally-driven assistance not available using traditional post-disaster programs.
 - Local commitment can play an important role in reaching beyond the resources available within a unit of local government.
 - Individuals, small groups and organizations can significantly enhance the ability of local governments to recover.
 - Community groups and non-profit organizations are frequently established in order to address specific issues and problems that local governments may not be adequately equipped to handle.
 - These problems, many of which exist prior to a disaster, are typically magnified in the post-disaster environment.
 - The availability of affordable housing, for example, can be significantly compromised following a major event.
 - Local groups may provide local officials with a reality check, identifying issues and advocating for those who may not have a voice in policy decisions that directly affect them.

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