

Pace Environmental Law Review

Volume 23
Issue 3 *Special Edition 2006*
*The Intersection of Environmental and Land
Use Law*

Article 11

September 2006

Disaster Mitigation through Land Use Strategies

John R. Nolon

Follow this and additional works at: <https://digitalcommons.pace.edu/pelr>

Recommended Citation

John R. Nolon, *Disaster Mitigation through Land Use Strategies*, 23 Pace Env'tl. L. Rev. 959 (2006)

DOI: <https://doi.org/10.58948/0738-6206.1101>

Available at: <https://digitalcommons.pace.edu/pelr/vol23/iss3/11>

This Article is brought to you for free and open access by the School of Law at DigitalCommons@Pace. It has been accepted for inclusion in Pace Environmental Law Review by an authorized administrator of DigitalCommons@Pace. For more information, please contact dheller2@law.pace.edu.

Disaster Mitigation Through Land Use Strategies

JOHN R. NOLON*

I. INTRODUCTION: WHO SHOULD DECIDE?

The persistent question this [article] raises is who should decide whether and how to mitigate the damages caused by natural disasters. Our understandable preoccupation with response, recovery, and rebuilding makes it hard to focus on this question as a central, even relevant, one. But it persists, nonetheless. The high-profile “blame game” played following Hurricane Katrina’s devastation of the Gulf Coast is emblematic. In pointing fingers first at the Federal Emergency Management Agency (FEMA), then at the City of New Orleans, and then at the State of Louisiana, public officials exhibited an appalling lack of understanding of the roles that each sector and level of government should play.

To illustrate this point, the following “dialogue” is constructed from public statements uttered immediately following Katrina when both floodwaters and tempers were elevated:

“Under the law, state and local officials must direct initial emergency operations. The federal government comes in and supports those officials.” – Michael Chertoff, Secretary of the U.S. Department of Homeland Security.¹

“The moment the President declared a federal disaster, it became a federal responsibility. The federal government took ownership over the response.” – Jane Bullock, former FEMA Chief of Staff.²

“Clearly the FEMA response has been slow. We got a lot of good people on the ground here that are with FEMA and with the state

* This is a slightly abridged version of a chapter that will appear in the forthcoming Environmental Law Institute publication, *NATION ON EDGE: LOSING GROUND* (Daniel Rodriguez & John R. Nolon eds. 2006).

1. Peter G. Gosselin & Alan C. Miller, *Why FEMA Was Missing in Action*, L.A. TIMES, Sept. 5, 2005, at B12.

2. *Id.*

agencies. They wear their badges, and they look good. But unfortunately, we just have not seen all the assets and all the resources that we need in our city.” – Pascagoula, Mississippi Mayor Matthew Avara.³

“This is a national emergency. This is a national disgrace. FEMA has been here 3 days, yet there is no command and control. We can send massive amounts of aid to tsunami victims, but we can’t bail out the city of New Orleans.” – Terry Ebbert, homeland security director for the City of New Orleans.⁴

“My mistake was in recognizing that . . . Mayor Nagin and Governor Blanco were reticent to order a mandatory evacuation I guess you want me to be the superhero that is going to step in there and suddenly take everybody out of New Orleans The reason that this primary responsibility, this first response is at the local level is that it is inherently impractical, totally impractical for the federal government to respond to every disaster of whatever size in every community across the country.” – Former FEMA chief Michael Brown testifying before Congress.⁵

“Governor Blanco has refused to sign an agreement proposed by the White House to share control of National Guard forces with the federal authorities. ‘She would lose control when she had been in control from the very beginning,’ explained [the Governor’s] press secretary Bottcher.”⁶

“You mean to tell me that a place where you probably have thousands of people that have died and thousands more that are dying every day, that we can’t figure out a way to authorize the resources that we need? Come on man. I need reinforcements. I need troops, man. I need 500 buses, man. This is a national disaster I keep hearing that it’s coming. This is coming, that is coming. And my answer to that today is BS, where’s the beef?

3. *Mayors Fault FEMA Response*, CNN, Sept. 11, 2005, at <http://www.cnn.com/2005/US/09/10/Katrina.impact/index.html>.

4. Elisabeth Bumiller, *Democrats and Others Criticize White House’s Response to Disaster*, N.Y. TIMES, Sept. 2, 2005, at A16.

5. *Brown Puts Blame on Louisiana Officials*, CNN, Sept. 27, 2005, at <http://www.cnn.com/2005/POLITICS/09/27/katrina.brown/index.html>.

6. Scott Shane, *After Failures, Officials Play Blame Game*, N.Y. TIMES, Sept. 5, 2005, at A1.

. . . . Get off your asses and let's do something." – New Orleans Mayor Ray Nagin.⁷

"The Department of Defense is not a first responder. You need to be invited." – Defense Secretary Donald Rumsfeld.⁸

"Katrina exposed serious problems in our response capability at all levels of government and to the extent the federal government didn't fully do its job right, I take responsibility." – President George W. Bush.⁹

"There were failures at every level of government – state, federal, and local. At the state level, we must take a careful look at what went wrong and make sure it never happens again. The buck stops here, and as your governor, I take full responsibility." – Louisiana Governor Kathleen Blanco.¹⁰

This bickering over roles and responsibilities was not caused simply by the chaos of the moment. It is endemic in our American system of land use control. Katrina and Rita struck the lower reaches of the Mississippi River watershed, which, in its totality, extends over more than 40% of the contiguous United States, reaching from Canada to the Gulf of Mexico and from Colorado to New York. The third-largest floodplain river in the world, the Mississippi is bordered by 10 states, and its watershed extends into more than 20 other states and provinces.¹¹

The natural complexities of the Mississippi Basin ecosystem are overlaid by the fixed boundary lines of states and municipal governments, and by a tangle of laws and policies that regulate the land. At the federal level alone, the National Academy of Sciences' Committee on Watershed Management has identified 22

7. *New Orleans Mayor Lashes Out at Feds*, CNN, Sept. 2, 2005, at http://www.cnn.com/2005/US/09/02/katrina.nagin/index.html?section=cnn_latest.

8. Giles Whittell, *Warnings Were Loud and Clear – But Still City Drowned*, THE TIMES, Sept. 8, 2005, available at http://www.timesonline.co.uk/article/0,,23889-1770245_1,00.html.

9. *Bush: 'I take responsibility' for U.S. failures*, CNN, Sept. 13, 2005, at <http://www.cnn.com/2005/US/09/13/katrina.impact/index.html>.

10. *Leadership Vacuum Stymied Aid Offers*, CNN, Sept. 16, 2005, at <http://www.cnn.com/2005/US/09/15/katrina.response/index.html>.

11. See JAMES G. WIENER ET AL., U.S. GEOLOGICAL SURVEY, STATUS AND TRENDS OF THE NATION'S BIOLOGICAL RESOURCES: MISSISSIPPI RIVER (1999), available at <http://biology.usgs.gov/sTM/SNT/noframe/ms137.htm>.

federal agencies that deal with the hydrologic cycle.¹² Following the great Midwest floods of 1993, a five-state consortium of natural resource managers reported that—in addition to relevant federal statutes—there existed in the Upper Mississippi Basin

a planning, regulatory, and management framework that includes at least 20 different categories of agencies (from federal to local) with jurisdiction over one or more of some 33 different functional areas of activity on the river. This includes at least six federal agencies with significant roles, 23 state agencies in five states, and 233 local governments.¹³

This same inter-jurisdictional complexity and confusion frustrates effective action regarding transportation planning,¹⁴ stormwater management,¹⁵ surface water pollution prevention,¹⁶ protecting

12. NATIONAL RESEARCH COUNCIL, COMMITTEE ON WATERSHED MANAGEMENT, NATIONAL ACADEMY OF SCIENCES, *NEW STRATEGIES FOR AMERICA'S WATERSHEDS* 279 (1999), available at <http://www.nap.edu/books/0309064171/html/>.

13. UPPER MISSISSIPPI RIVER CONSERVATION COMMITTEE, *FACING THE THREAT: AN ECOSYSTEM MANAGEMENT STRATEGY FOR THE UPPER MISSISSIPPI RIVER* (Dec.1993), available at <http://www.mississippi-river.com/umrcc/Call-for-Action.html>.

14. The metropolitan transportation planning process created by the Federal-Aid Highway Act of 1962 and subsequent legislation has required regional transportation agencies to achieve consistency with land use plans that are predominantly local in nature and not consistent with one another at the regional level. Under the recently enacted Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users or "SAFETEA-LU," P.L. 109-59 (Aug. 10, 2005), each metropolitan planning organization (MPO) is encouraged "to consult with officials responsible for other types of planning activities that are affected by transportation in the area (including State and local planned growth, economic development, environmental protection, airport operations, and freight movements) or to coordinate its planning process, to the maximum extent practicable, with such planning activities. Under the metropolitan planning process, transportation plans and TIPs [transportation improvement programs developed by MPOs with States under § 134(j)] shall be developed with due consideration of other related planning activities within the metropolitan area . . ." 23 U.S.C.A. § 134(g)(3) (2005). The Act also encourages "each Governor with responsibility for a portion of a multistate metropolitan area and the appropriate metropolitan planning organizations to provide coordinated transportation planning for the entire metropolitan area" (*Id.* § 134(f)(1)), and authorizes interstate compacts in support of transportation planning (*Id.* § 134(f)(2)). A "Growing Smarter Through Transportation Infrastructure Act of 2005," H.R. 3686, was introduced in Congress on Sept. 7, 2005, "to promote the integration of local land use planning and transportation planning."

15. Federal Water Pollution Control Act, 33 U.S.C.A. §§ 1251 et seq. *See* § 1342(p) (Phase I and Phase II stormwater discharge control programs). The federal regulations implementing this legislation are found at 40 C.F.R. § 122.

16. The Total Maximum Daily Load (TMDL) program established under the Clean Water Act requires states to identify and list waters not meeting federally established water quality standards. 33 U.S.C.A. § 1313(d).

the public from chemical hazards,¹⁷ mercury emissions, greenhouse gas control, and the transport of pollutants,¹⁸ among others.

II. THE LOCAL ROLE IN DEVELOPING DISASTER RESILIENT COMMUNITIES

Another question that animates this article is how to integrate land use decision-making—a role generally assigned to local governments under our federal system—with disaster mitigation planning—a function assumed largely by the federal and state governments. Not only are municipal governments the first responders when disasters strike but their state legislatures have delegated to them the principal legal authority to determine how much and what type of development may be built in disaster-prone areas. This authority comes from several sources of state law, including state constitutions, zoning enabling acts, planning enabling acts, special land use control authority, home rule authority, special police power legislation to protect health and safety, the power to protect the local physical environment, and targeted authority to deal with disaster mitigation.

Using this authority, local governments can create disaster resilient communities that have increased capacity to adapt to the effects of natural disasters, resulting in less property damage, environmental impact, and loss of life.¹⁹ The United Nations International Strategy for Disaster Reduction defines “resilience” as:

17. Emergency Planning & Community Right to Know Act (EPCRA), 42 U.S.C.A. §§ 11001 et seq. (1986). Also known as Title III of the Superfund Amendments and Reauthorization Act (SARA), 42 U.S.C.A. §§ 9601 et seq. (1986), EPCRA was enacted by Congress as the national legislation on community safety, designed to assist local governments in protecting the public and the environment from chemical hazards.

18. Cindy Skrzycki, *States Rush in Where the Feds Fear to Tread*, WASHINGTON POST, Sept. 13, 2005, at D1, quoting John Graham, the Bush administration's regulatory overseer at the Office of Management and Budget: “The Administration generally respects the Jeffersonian view that states should be given leeway to shape regulatory policies in ways that respond to state needs and preferences. However, we also respect the Hamiltonian view that, in some situations, a proliferation of conflicting state policies can frustrate national policy or interfere with interstate commerce and economic development.”

19. The use of the word “resilience” in the context of ecosystems studies has been traced to C.S. Holling, *Resilience and Stability of Ecological Systems*, 4 ANNUAL REV. OF ECOLOGICAL SYSTEMS 1 (1973). See Richard J.T. Klein et al., *The Resilience of Coastal Megacities to Weather-Related Hazards*, in BUILDING SAFER CITIES: THE FUTURE OF DISASTER RISK, WORLD BANK DISASTER RISK MANAGEMENT SERIES NO. 3, 101, 111 (Alcira Kriemer et al. eds. 2003), available at http://www-wds.worldbank.org/ser/vlet/WDSCContentServer/WDSP/IB/2003/12/05/000012009_20031205154931/Ren-dered/PDF/272110PAPER0Building0safer0cities.pdf. See also DAN HENSTRA ET AL.,

The capacity of a system, community or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of organizing itself to increase its capacity for learning from past disasters for better future protection and to improve risk reduction measures.²⁰

It should be immediately apparent that local governments can use this same legal authority to develop the adaptive capacity to conduct land use planning that builds centers and neighborhoods, increases their tax base, provides for needed transportation and other infrastructure, provides affordable housing and jobs, prevents stormwater runoff, protects coastal environments, preserves wetlands and habitats, and accomplishes a host of other land use objectives that implicate state and federal interests.

Hurricanes Katrina and Rita demonstrate the critical importance of having a response and recovery plan that fully engages the municipal role and coordinates federal, state, and local responsibilities and resources. Developing disaster resilient communities—and rebuilding after a disaster strikes—similarly requires local competency and intergovernmental coordination regarding community and land use planning. There is evidence of a shift in governmental policy towards the vertical integration of federal, state, and local governmental action in order to most effectively and comprehensively address land development in disaster prone areas as well as a host of other economic development and environmental problems.

INSTITUTE FOR CATASTROPHIC LOSS REDUCTION, BACKGROUND PAPER ON DISASTER RESILIENT CITIES, § 3.0 *The Disaster Resilient City: A Conceptual Analysis* (March 2004), available at <http://www.dmr.org/resources/Henstra.et.albackground%20paper%20on%20disaster%20resilient%20cities.pdf>; PATRICIA JONES KERSHAW, CREATING A DISASTER RESILIENT AMERICA: GRAND CHALLENGES IN SCIENCE AND TECHNOLOGY: SUMMARY OF A WORKSHOP OF THE DISASTERS ROUNDTABLE, NATIONAL RESEARCH COUNCIL, NATIONAL ACADEMIES OF SCIENCES (2005); DENNIS S. MILETI, DISASTERS BY DESIGN: A REASSESSMENT OF NATURAL HAZARDS IN THE UNITED STATES (1999), available at <http://www.nap.edu/books/0309063604/html/R1.html>; COOPERATING WITH NATURE: CONFRONTING NATURAL HAZARDS WITH LAND USE PLANNING FOR SUSTAINABLE COMMUNITIES (Raymond J. Burby, ed., 1998), available at <http://books.nap.edu/catalog/5785.html>; Ramond J. Burby et al., *Creating Hazard Resilient Communities Through Land-Use Planning*, 1 NAT. HAZARDS REV. 99 (2000); David R. Godschalk, *Urban Hazard Mitigation: Creating Resilient Cities*, 4 NAT. HAZARDS REV. 136 (2003).

20. United Nations International Strategy for Disaster Reduction, *Terminology: Basic Terms of Disaster Risk Reduction*, available at <http://www.unisdr.org/eng/library/lib-terminology-eng%20home.htm>.

III. A SEA CHANGE IN FEDERAL POLICY: THE DISASTER MITIGATION ACT OF 2000

In the rancorous debate that followed Katrina, there may be hope—a breath of fresh air blown in following the gale force winds. In focusing attention on disaster mitigation, the nation's numerous recent disasters call for a review of federal policy on the matter. As it happens, Congress recently took stock of the nation's disaster response, recovery, and mitigation efforts and created a more coordinated approach to planning at all levels of government, one which assigns roles to each. Under the Disaster Mitigation Act of 2000 (DMA),²¹ a framework of federal, state, and local cooperation is evident that could be a blueprint for an integrated federalist approach to a host of land use and environmental problems.

The Disaster Mitigation Act of 2000 articulates national legislative objectives that provide an opportunity to enhance local mitigation planning and implementation and to coordinate land use planning and regulation to promote disaster mitigation. The Act provides that in order to qualify for federal hazard mitigation grants, state and local governments must “develop and submit for approval to the President a mitigation plan that outlines processes for identifying the natural hazards, risks, and vulnerabilities of the area under the jurisdiction of the government.”²² Under the Interim Final Rule issued by FEMA,²³ the responsibilities of local governments are defined as follows: “(1) Prepare and adopt a jurisdiction wide natural hazard mitigation plan as a condition of receiving project grant funds under the Hazard Mitigation Grant Program (HMGP), in accordance with § 201.6; and (2) At a minimum, review and, if necessary, update the local mitigation plan every five years from date of plan approval to continue program eligibility.”²⁴

....

The proper role of state governments under the Interim Final Rule includes coordinating “all State and local activities relating

21. Disaster Mitigation Act of 2000, P.L. 106-390 (Oct. 30, 2000).

22. *Id.* § 322, *codified at* 42 U.S.C.A. § 5165(a).

23. Federal Emergency Management Agency (FEMA) Interim Final Rule, 67 Fed. Reg. 8844 (February 26, 2002), *codified at* 44 C.F.R. § 201.

24. *Id.* § 201.3(d).

to hazard evaluation and mitigation”²⁵ and providing “technical assistance and training to local governments to assist them in applying for HMGP planning grants, and in developing local mitigation plans.”²⁶ Under DMA regulations, state governments are to submit to FEMA either “standard”²⁷ or “enhanced”²⁸ plans. FEMA has now approved Multi-Hazard Mitigation Plans for all 50 states. Of these, three—from Missouri, Oklahoma, and Washington—are enhanced plans.²⁹

Standard plans require a mitigation strategy that includes “a general description and analysis of the effectiveness of local mitigation policies, programs, and capabilities.”³⁰ They also require: “An identification, evaluation, and prioritization of cost-effective, environmentally sound, and technically feasible mitigation actions and activities the State is considering and an explanation of how each activity contributes to the overall mitigation strategy. This section should be linked to local plans, where specific local actions and projects are identified.”³¹

Enhanced plans must meet all the requirements of standard plans as well as various additional provisions forming a “comprehensive mitigation program.”³² This approach includes demonstrated integration with other state and/or regional plans,³³ documented implementation capability,³⁴ and a system of review and assessment of completed mitigation actions, including an economic measure of the effectiveness of each.³⁵ An enhanced plan must demonstrate that the state is committed to a comprehensive state mitigation program; this may include “a commitment to support local mitigation planning” through workshops, grants, and training of local officials.³⁶

25. FEMA Interim Final Rule § 201.3(c).

26. *Id.* § 201.3(c)(5).

27. *Id.* § 201.4.

28. *Id.* § 201.5.

29. A list of approved state and local plans is available on the FEMA web site: *FEMA-Approved Multi-Hazard Mitigation Plans*, at http://www.fema.gov/fima/approved_plans.shtml.

30. 44 C.F.R. § 201.4(c)(3)(ii).

31. *Id.* § 201.4(c)(3)(iii).

32. *Id.* § 201.5(a).

33. *Id.* § 201.5(b)(1).

34. *Id.* § 201.5(b)(2).

35. *Id.* § 201.5(b)(2)(iv).

36. *Id.* § 201.5(b)(4)(i).

Local mitigation plans are intended to, among other things, “serve as the basis for the State to provide technical assistance and to prioritize funding.”³⁷ The Interim Final Rule insists that “[a]n open public involvement process is essential to the development of an effective plan.”³⁸ Local plans must be submitted to the State Hazard Mitigation Officer for “initial review and coordination.”³⁹ The State then forwards the plan to FEMA for “formal review and approval.”⁴⁰ FEMA has now approved more than 1,100 local plans.⁴¹

These regulations describe an intelligently interwoven system of mitigation planning and implementation. According to anecdotal information from those who prepared the first round of state and local disaster mitigation plans submitted to FEMA, however, there is little emphasis in them on the use of effective local land use strategies to create disaster resilient, or adaptive, communities. The reasons for this are, at best, speculative, but include the fact that disaster mitigation planning encompasses a large number of critical issues including education, response, and recovery; and the lack of clear understanding of the considerable authority that local governments have to use land use authority to properly shape and strengthen community development in the interest of disaster resiliency.

Colorado Case Study

That the Disaster Mitigation Act of 2000 can be used to integrate federal, state, and local planning, including the full engagement of the local land use control system, is evident in Colorado, where the State adopted a FEMA-approved “standard” plan that emphasizes the development of regional mitigation plans addressing specific local needs.⁴² The Denver Regional Council of Governments includes nine counties and 58 local governments.⁴³ The

37. *Id.* § 201.6.

38. *Id.* § 201.6(b).

39. *Id.* § 201.6(d)(1).

40. *Id.*

41. See FEMA-Approved Multi-Hazard Mitigation Plans, *supra* note 29.

42. COLORADO DIVISION OF EMERGENCY MANAGEMENT, STATE OF COLORADO NATURAL HAZARD MITIGATION PLAN 2004, available at <http://www.dola.state.co.us/oem/Mitigation/MIT1.HTM>. See also *Colorado Division of Emergency Management: Local Programs*, at <http://www.dola.state.co.us/oem/Plans/plans.htm>.

43. DENVER REGIONAL COUNCIL OF GOVERNMENTS, DENVER REGIONAL NATURAL HAZARD MITIGATION PLAN (2003), at 7, available at http://www.drcog.org/documents/Denver_Regional_Natural_Hazard_Mitigation_Plan_10-17-03.pdf.

Denver Regional Natural Hazard Mitigation Plan recognizes that “[a]ll of the community growth and development is guided by local comprehensive plans in the region. These plans should reflect the natural hazard vulnerabilities and risk and include objectives to direct and guide growth away from these areas where they cannot be adequately mitigated.”⁴⁴

At the local level, the Boulder Valley Comprehensive Plan (BVCP),⁴⁵ a joint plan between the City of Boulder and Boulder County, regulates land use and development in disaster-prone areas. The plan was first adopted in 1978 and has had major updates at five-year intervals. Its planning “timeframe” is a period of 15 years; each update extends the planning period by another five years.⁴⁶ The plan divides the City of Boulder and adjacent lands into three areas.⁴⁷ Area I is the city itself. Area II is land that may be annexed during the planning period. Area III is made up of a Planning Reserve Area, where development may eventually be permitted, and a Rural Preservation Area, where no new urban development is allowed during the planning period, and which includes “sensitive environmental areas and hazard areas that are unsuitable for urban development.”⁴⁸

The BVCP mandates the delineation of “[h]azardous areas which present danger to life and property from flood, forest fire, steep slopes, erosion, unstable soil, subsidence or similar geological development constraints⁴⁹ and the careful control or prohibition of development in these areas. The BVCP addresses particular natural disasters. To minimize losses from wildfires, it requires both city and county to require measures “to guard against the danger of fire in developments adjacent to forests or

44. *Id.* at 9. *See also id.* at 2: “The Federal Disaster Mitigation Act of 2000 (DMA 2000) provides new and revitalized approaches and support for comprehensive hazard mitigation planning. It continues the requirement for a State Mitigation Plan as a condition of federal disaster assistance and establishes a new requirement and funding for local government mitigation planning. The DMA also provides for the preparation and adoption of multi-jurisdictional plans by local governments to meet these requirements. The Denver Regional Natural Hazard Mitigation Plan was prepared to support the requirement of a mitigation plan for the participating local governments in the Denver region.”

45. BOULDER VALLEY COMPREHENSIVE PLAN, available at <http://www.ci.boulder.co.us/planning/bvcp/>.

46. *Id.* § 1.07.

47. *Id.* § 1.20.

48. *Id.* § 2.09.

49. *Id.* § 4.16.

grasslands” and “to integrate ecosystem management principles with wildfire hazard mitigation planning and urban design.”⁵⁰ In order to mitigate damages caused by flooding, the city is required to prevent redevelopment of significantly flood-damaged properties and to prepare a plan for property acquisition of flood-damaged and undeveloped land in high-hazard flood areas.⁵¹ Undeveloped high-hazard flood areas are to be retained in their natural state whenever possible while encouraging compatible uses of riparian corridors, such as wildlife habitat, wetlands, or trails.

As part of the BVCP, the City of Boulder also created the Comprehensive Drainage Utility Master Plan (CDUMP) to improve water quality and reduce property damage and hazards to life and safety.⁵² The CDUMP regulates land use and construction within areas that could be inundated by a 100-year flood. This floodplain, for purposes of regulation as well as for determining capital project priority, is divided into a flood storage area, a flood conveyance zone, and a high-hazard area.

IV. A FEDERAL FRAMEWORK LAW OF THE COASTS AND OTHER VULNERABLE PLACES

The need to coordinate among levels of government is evident in other Congressional programs that exhibit signs of cooperative federalism. The Clean Water Act provides states with federal funds to encourage land use planning to prevent nonpoint source pollution.⁵³ State and local governments are encouraged under the federal Coastal Zone Management Act to adopt plans to preserve coastal areas.⁵⁴ Federal financial aid is denied for develop-

50. *Id.* § 4.18.

51. *Id.* § 4.29.

52. *Id.* at 84.

53. 33 U.S.C.A. § 1329.

54. 16 U.S.C.A. §§ 1451 *et seq.* The Act provides grants to coastal states to develop management programs for their coastal zones. State programs must meet several requirements, including providing for management of land uses having a significant impact on coastal waters and making a clear statement of which agencies and officials are to take action to implement the program. See Linda A. Malone, *The Coastal Zone Management Act and The Takings Clause in the 1990's: Making The Case for Federal Land Use to Preserve Coastal Areas*, 62 U. COLO. L. REV. 711, 727 (1991) (stating that “[i]f the requirements for state programs were more specific, the CZMA could come close to the most controversial form of land control—federal land control. The passage of the CZMA was possible because the Act required state programs to implement federal policy rather than federal regulations.”).

ments in sensitive coastal areas under the Coastal Barrier Resources Act.⁵⁵ The modification of habitats that may harm endangered species is prohibited under the Endangered Species Act (ESA) unless the modification is allowed by a permit issued pursuant to an approved habitat conservation plan.⁵⁶ Federal highway legislation has provided regional transportation planning agencies with the authority to fund projects that reduce traffic congestion and to acquire scenic easements and create bicycle trails.⁵⁷

An intentional policy of cooperative federalism could achieve some remarkable results in integrating local land use decision making into programs that achieve state and federal objectives. This is particularly true in coastal areas, adjacent to the nation's oceans, great rivers, and lakes—areas particularly prone to flooding, storm surges, erosion, and inundation. The 2002 report of the Pew Oceans Commission observes that “America’s oceans and estuaries are international resources, yet their fates lie in the hands of thousands of individual towns, cities, and counties throughout the coastal zone. The plight of these natural systems epitomizes the plight of major ecosystems worldwide, where the structures of authority are dwarfed by the enormous implications of the decisions made.”⁵⁸

55. Coastal Barrier Resources Act, 16 U.S.C.A. § 3501 – 3510 (1994).

56. Endangered Species Act, 16 U.S.C.A. § 1531 et seq. (1994). The ESA is an example of a federal environmental law that pursues objectives other than the prevention of nonpoint source pollution and illustrates how federally prescribed standards and procedures implicate the prerogatives of local governments to control land use. Under the ESA, landowners and developers may prepare Habitat Conservation Plans (HCPs) that fully describe proposed land development activities and demonstrate measures that will mitigate their adverse impact on endangered or threatened species. § 1539(a)(2)(A). An approved HCP is a prerequisite for the issuance of a permit for land development activities that result in an incidental taking of a protected species. § 1539(a). This regulatory regime is based on the ESA's ban on taking of endangered species by any person subject to the jurisdiction of the United States. § 1538(a)(1). “Persons” subject to the Act include private citizens and entities such as local governments and officials. § 1532(13). The process of preparing and reviewing an HCP should be coordinated with local requirements contained in site plan or subdivision regulations that require developers to prepare detailed development plans and submit them to local administrative agencies for review and approval.

57. See SAFETEA-LU, *supra* note 14, 23 U.S.C.A. § 134.

58. DANA BEACH, PEW OCEANS COMMISSION, COASTAL SPRAWL: THE EFFECTS OF URBAN DESIGN ON AQUATIC ECOSYSTEMS IN THE UNITED STATES 29 (2002), available at http://www.pewtrusts.org/pdf/env_pew_oceans_sprawl.pdf.

In 2005, the final report of the U.S. Commission on Ocean Policy outlined the “complex mosaic of legal authorities” affecting coastal management in the United States:

Management of ocean and coastal resources and activities must address a multitude of different issues, and involves aspects of a variety of laws—at local, state, federal, and international levels—including those related to property ownership, land and natural resource use, environmental and species protection, and shipping and other marine operations—all applied in the context of the multi-dimensional nature of the marine environment. Several of those aspects of law may come into play simultaneously when addressing conflicts over public and private rights, boundaries, jurisdictions, and management priorities concerning ocean and coastal resources. In addition, some laws result in geographic and regulatory fragmentation and species-by-species or resource-by-resource regulation.⁵⁹

Coastal Zone Management Act of 1972

The Coastal Zone Management Act (CZMA)⁶⁰ pays close attention to integrating federal, state, and local interests in coastal areas. This law, now over 30 years old, like the more recent Disaster Mitigation Act of 2000, uses national concerns and federal resources to encourage idiosyncratic planning and implementation among affected states and their local governments. It also directly recognizes the fact that coastal management is a land use issue. Finally, it joins in one national program the interrelated concerns of economic development, which it favors and promotes, and environmental protection, which it adopts as a context for development. Saliently, the CZMA exhibits clear sensitivity to its potential to mitigate the impacts of natural disasters, suggesting a federal strategy of linked frameworks.⁶¹

59. U.S. COMMISSION ON OCEAN POLICY, AN OCEAN BLUEPRINT FOR THE 21ST CENTURY: FINAL REPORT, Appendix 6 at 2 (2005), available at http://www.oceancommission.gov/documents/full_color_rpt/welcome.html.

60. *Supra* note 54.

61. See 16 U.S.C.A. § 1452 (declaration of policy for the CZMA): “(2) to encourage and assist the states to exercise effectively their responsibilities in the coastal zone through the development and implementation of management programs to achieve wise use of the land and water resources of the coastal zone, giving full consideration to ecological, cultural, historic, and esthetic values as well as the needs for compatible economic development, which programs should at least provide for . . . (B) the management of coastal development to minimize the loss of life and property caused by improper development in flood-prone, storm surge, geological hazard, and erosion-

Congress was moved to adopt the CZMA because of critical threats to the stability of the nation's coastal areas and the thorough report on coastal areas prepared by the Commission on Marine Science, Engineering, and Resources (the Stratton Commission).⁶² The Commission found that "coastal pollution is a national problem arising from the piecemeal development of coastal ecosystems without an overall strategy for comprehensive coastal management."⁶³

The breadth of congressional concern is reflected in its findings for the CZMA that coastal zones are "rich in a variety of natural, commercial, recreational, ecological, industrial, and esthetic resources of immediate and potential value" and that "state and local institutional arrangements for planning and regulating land and water uses in coastal areas are inadequate."⁶⁴

The CZMA affects 35 states and territories, including Puerto Rico, the Commonwealth of Northern Mariana, the Virgin Islands, Guam, the Trust Territories of the Pacific Islands, and American Samoa.⁶⁵ Affected states include those with coastlines on the Atlantic, Pacific, and Arctic Oceans, the Gulf of Mexico, Long Island Sound, and the Great Lakes. The Act defines a "coastal zone" as coastal waters and adjacent shorelands, including islands, transitional and intertidal areas, salt marshes, wetlands, and beaches.⁶⁶ The Act encourages responsible economic, cultural, and recreational growth in coastal zones,⁶⁷ consistent with the Stratton Commission notion that coastal management should foster "the

prone areas and in areas likely to be affected by or vulnerable to sea level rise, land subsidence, and saltwater intrusion, and by the destruction of natural protective features such as beaches, dunes, wetlands, and barrier islands"

62. COMMISSION ON MARINE SCIENCE, ENGINEERING AND RESOURCES, OUR NATION AND THE SEA: A PLAN FOR NATIONAL ACTION (1969) [STRATTON REPORT], available at <http://www.lib.noaa.gov/edocs/stratton/contents.html>.

63. Michael J. Straub, *The West Coast of New England: A Case for the Inclusion of Lake Champlain in the Federal Coastal Zone Management Program*, 16 VT. L. REV. 749 (1992), citing STRATTON REPORT, *supra* note 62, at 49.

64. 16 U.S.C.A. § 1451(b), (h). Previous legislation aimed at improving coastal zone quality includes the National Seashores/National Lake Shores program (National Park Service), the Estuary Protection Act (Department of the Interior), and the Wild and Scenic Rivers Act.

65. 16 U.S.C.A. § 1453(4).

66. 16 U.S.C.A. § 1453(1).

67. See generally 16 U.S.C.A. § 1451.

widest possible variety of beneficial uses so as to maximize net social return.”⁶⁸

The Commission also understood the proper role of state and local governments by recommending that coastal management implementation take place at a local rather than the national level.⁶⁹ Congress agreed; the Act established a process for the development of individual state coastal zone management programs.⁷⁰ Using incentives, rather than penalties, the Act urges but does not require state implementation. It offers states unobstructed power to regulate their coastal areas, without federal agency interference, if they adopt policies consistent with the standards of the CZMA, and it provides for grants to states to prepare coastal plans and to establish administrative agencies and mechanisms to implement them.⁷¹

. . . .

The CZMA not only addresses protection of vital coastal natural resources; it also encourages preparation and protection of disaster-prone areas located along the nation's coastal waters. As a national framework law, the CZMA provides structural guidance and means similar to that of the DMA. The federal government sets broad planning criteria, offers federal funding and technical assistance to those states and localities that abide by the national

68. STRATTON REPORT, *supra* note 62, at 57.

69. See 16 U.S.C.A. § 1452. Prior to the enactment of the CZMA, the Stratton Report noted: “The States are subject to intense pressures from the county and municipal levels, because coastal management directly affects local responsibilities and interests. Local knowledge frequently is necessary to reach rational management decisions at the State level, and it is necessary to reflect the interests of local governments in accommodating competitive needs [T]he States must be the focus for responsibility and action in the coastal zone. The State is the central link joining the many participants, but in most cases, the States now lack adequate machinery for [the] task. An agency of the State is needed with sufficient planning and regulatory authority to manage coastal areas effectively and to resolve problems of competing uses. Such agencies should be strong enough to deal with the host of overlapping and often competing jurisdictions of the various Federal agencies. Finally, strong State organization is essential to surmount special local interests, to assist local agencies in solving common problems, and to effect strong interstate cooperation.” STRATTON REPORT, *supra* note 62, at 56-57.

70. See 16 U.S.C.A. §§ 1452(2), 1455.

71. 16 U.S.C.A. § 1455. See Coastal Zone Protection Act of 1996, P.L. 104-150, 110 Stat. 1380 (1996). In 2004, NOAA distributed a total of \$173 million for coastal and estuary programs. See *A Coastal Zone Management Act Funding Summary 2004*, available at <http://www.ocrm.nos.noaa.gov/pdf/sumrept04.pdf>.

principles, and agrees to coordinate federal agency actions with approved state and local plans. The state governments administer the federal program, molding it to fit specific state and regional concerns, and coordinating the efforts of local governments. Municipalities further tailor the management plans to local concerns.

North Carolina Case Study

Within two years of the adoption of the CZMA, North Carolina's state legislature passed the Coastal Area Management Act.⁷² This state law provides for state and local coastal planning and implementation, declaring that it "establishes a cooperative program of coastal area management between local and State governments. Local government shall have the initiative for planning. State government shall establish areas of environmental concern. With regard to planning, State government shall act primarily in a supportive standard-setting and review capacity, except where local governments do not elect to exercise their initiative."⁷³

Taking the initiative offered to it under this law, the town of Nags Head adopted a building moratorium that is triggered by disaster events.⁷⁴ Nags Head is located on the outer banks of North Carolina, well known as a hurricane-prone area. Following a disaster, the law imposes an initial building moratorium of at least 48 hours.⁷⁵ A moratorium on the replacement of destroyed buildings is imposed for 30 days following the expiration of the initial moratorium;⁷⁶ the ordinance also suspends the right to construct under building permits issued prior to the storm event.⁷⁷ During that period, local planners and the legislative body, the Board of Commissioners, may adjust zoning standards to correspond to any new inlets or eroded areas created by the storm and

72. THE COASTAL AREA MANAGEMENT ACT OF 1974, N.C. GEN. STAT. § 113A-100 *et seq.*, available at <http://dcm2.enr.state.nc.us/Rules/cama.htm>.

73. *Id.* § 113A-101.

74. TOWN OF NAGS HEAD HURRICANE AND STORM MITIGATION AND RECONSTRUCTION PLAN (adopted October 10, 1988), available at <http://www.townofnagshead.net/vertical/Sites/{B2CB0823-BC26-47E7-B6B6-37D19957B4E1}/uploads/{F446D8C0-F9DA-4162-BB5F-E1559D6AEA5B}.pdf>.

75. *Id.* §§ 2-3(b), 2-3(c)(1).

76. *Id.* § 2-3(c)(2).

77. *Id.* § 2-3(c)(6).

to adopt new disaster mitigation standards.⁷⁸ Subsequent construction must then comply with these new area designations and regulatory standards. This innovative mechanism provides local officials the ability to redesign their standards to the circumstances existing after the disaster.⁷⁹

New York Case Study

The New York State Coastal Erosion Hazard Areas Act⁸⁰ complements the coastal zone planning program by dealing discretely with coastal erosion, a significant threat to the marine environment of coastal waters. This act emphasizes planning, governmental collaboration, and respects the municipal role. New York's coastal hazard act calls for:

- 1) an integrated system involving the identification and mapping of coastal erosion hazard areas,⁸¹
- 2) the adoption of local laws that control development and land uses within them,⁸²
- 3) the certification of such ordinances by the relevant state agency,⁸³ and
- 4) state agency permitting of certain land-based development activities within identified coastal areas.⁸⁴

Permits for land development projects are not issued unless they comply with established state standards for development in coastal hazard areas.⁸⁵

78. *Id.* § 2-3(c)(5). See TOWN OF NAGS HEAD, N.C., ZONING CODE art XX, §§ 48-741-48-744, Hurricane and Storm Reconstruction and Redevelopment; General Use Standards for Ocean Hazard Areas (1990), available at <http://www.townofnagshead.net/vertical/Sites/{B2CB0823-BC26-47E7-B6B6-37D19957B4E1}/uploads/{A3342C06-552D-4A8F-B5EB-A9B8468B85CE}.PDF>.

79. See also DAVID J. BROWER, ANNA K. SCHWAB, & BRUCE M. BORTZ, PLAN TO MAKE NAGS HEAD, NORTH CAROLINA LESS VULNERABLE TO THE IMPACTS OF NATURAL DISASTERS (1990).

80. N.Y. ENVTL. CONSERV. LAW art. 34, §§ 34-0101 *et seq.* The text of the statute is available at: <http://www.assembly.state.ny.us/>. N.Y.S. Department of Environmental Conservation regulations for Coastal Erosion Management—6 NYCRR Part 505—are available at: <http://www.dec.state.ny.us/website/regs/part505.html>.

81. N.Y. ENVTL. CONSERV. LAW § 34-0104.

82. *Id.* § 34-0105.

83. *Id.* § 34-0105(2).

84. *Id.* § 34-0109.

85. *Id.* § 34-0109(3).

Responding to this authority, the Town of Babylon enacted its Coastal Erosion Hazard Areas Ordinance.⁸⁶ Babylon is critically located on Long Island, New York; to its north is Long Island Sound and to its south, the Atlantic Ocean—two critical marine environments. The ordinance operates as an overlay district, adding to local zoning and land use standards those needed to protect against coastal erosion within the identified and mapped coastal erosion zone.⁸⁷ In this law, one can observe a local government, with local knowledge of its own particular environment, adjusting a state law to its circumstances. The Babylon ordinance, for example, contains separate definitions and standards regarding the protection of bird nesting and breeding areas,⁸⁸ and other special wildlife habitat considerations.⁸⁹ It goes beyond the standards of the state law by prohibiting all development in near-shore and beach areas.⁹⁰

V. BUILDING ON A FIRM FOUNDATION: LOCAL LAND USE LAW AND DISASTER PREPARATION AND MITIGATION

Local land use authority is the foundation of the planning that determines how communities and natural resources are developed and preserved, and how disaster resilient communities are created. With respect to floodplain and watershed management, natural resource preservation, suburban smart growth, and urban revitalization, federal and state planners must engage the local land use decision-making process to be effective in achieving critical objectives. This can happen in the field of disaster mitigation planning. In the State of Washington, for example, the state's comprehensive land use planning program serves as a critical predicate for the state's disaster mitigation plan under the Disas-

86. TOWN OF BABYLON, N.Y., CODE, ch. 99, §§ 99-1 – 99-14.

87. *Id.* § 99-7.

88. *See id.* §§ 99-11(B)(3), 99-12(B)(1)(d).

89. *See, e.g., id.* § 99-12(A): "High, vegetated dunes provide a greater degree of protection than low, unvegetated ones. Dunes are of the greatest protective value during conditions of storm-induced high water. Because dunes often protect some of the most biologically productive areas as well as developed coastal areas, their protective value is especially great. The key to maintaining a stable dune system is the establishment and maintenance of beach grass or other vegetation on the dunes and assurance of a supply of nourishment sand to the dunes."

90. *Id.* §§ 99-10(B)(3), 99-11(B)(4).

ter Mitigation Act and as the method for integrating local land use and disaster planning with that of the state.⁹¹

In most states, it is understood that municipalities have no inherent powers, but can exercise only that authority expressly granted or necessarily implied from, or incident to, the powers expressly granted.⁹² In all 50 states, of course, localities have been authorized to control the private use of land under state zoning enabling acts and statutes that empower them to review and approve land subdivision and site development. These traditional local land use laws can be used to create disaster resilient communities as a key objective of a community's land use regime. The arguments in support of this proposition are several. First, the zoning enabling act adopted in most states makes it clear that one of its purposes is to encourage "the most appropriate use of land throughout the municipality."⁹³ Laws that lessen the prospect of damage from natural disasters certainly encourage the most appropriate use of land. Further, the statutes delegating power to localities to adopt subdivision and site plan regulations make it clear that standards may be included in such regulations that prevent and control the impacts of storms and other calamities.⁹⁴

Beyond these familiar powers, however, there is a wide array of powers that states delegate to their municipal corporations. In

91. Growth Management Act, WASH. REV. CODE 36.70A, available at <http://www.leg.wa.gov/RCW/index.cfm?fuseaction=chapterdigest&chapter=36.70A>.

92. JOHN FORREST DILLON, 1 COMMENTARIES ON THE LAW OF MUNICIPAL CORPORATIONS §237(89) (5th ed. 1911). "It is a general and undisputed proposition of law that a municipal corporation possesses and can exercise the following powers, and no others: First, those granted in express words; second, those necessarily or fairly implied in or incident to the powers expressly granted; third, those essential to the accomplishment of the declared objects and purposes of the corporation, —not simply convenient, but indispensable. Any fair, reasonable, substantial doubt concerning the existence of power is resolved by the courts against the corporation, and the power is denied All acts beyond the scope of the powers granted are void."

93. See U.S. DEPARTMENT OF COMMERCE, A STANDARD STATE ZONING ENABLING ACT, § 3 (1924; reprinted 1926). The phrase "encouraging the most appropriate use of land" was incorporated into most state laws that authorize local governments to adopt zoning laws. It explains the essential purpose to be achieved through the adoption of local land use laws. The text of the Standard Act can be found at 5 RATHKOPF'S THE LAW OF ZONING AND PLANNING APP. A (Edward H. Ziegler, Jr., ed., 2005). A PDF version of the 1926 Department of Commerce publication is available on the American Planning Association web site at <http://www.planning.org/growingsmart/enablingacts.htm>.

94. See, e.g., N.Y. TOWN LAW §§ 276-278, § 274-a; N.Y. VILLAGE LAW § 7-725-a(2); N.Y. GEN. CITY LAW § 27-a(2).

New York, as in many other states, there is additional legal authority related to achieving disaster resiliency in community planning and development. The New York State Legislature adopted the Municipal Home Rule Law (MHRL), the provisions of which are to be "liberally construed."⁹⁵ Under the MHRL, localities are given the authority to adopt laws relating to "the protection and enhancement of their physical environment,"⁹⁶ and to the matters delegated to them under the Statute of Local Governments, which allows them to "perform comprehensive or other planning work relating to its jurisdiction."⁹⁷ The grant of authority encompassed in the MHRL provides a safety net—a second tier of legal authority—for communities desiring to enact disaster mitigation laws. This, combined with the power of local governments to include disaster mitigation standards in their zoning and land use regulations provides ample authority for the state's villages, towns, and cities to create an integrated set of land use laws aimed at disaster mitigation.

In Georgia, the delegation of comprehensive planning authority to local governments is tied to the state's interest in protecting and preserving the natural resources, the environment, and the vital areas of the state.⁹⁸ Under the rules of the Department of Community Affairs, Office of Planning and Quality Growth, local land use planning is to strike a balance between the protection and preservation of vulnerable natural and historic resources and respect for individual property rights.⁹⁹ Under separate state legislation, local governments in Georgia are required to identify existing river corridors and to adopt river corridor protection plans as part of their planning process.¹⁰⁰ They have the further authority to regulate shoreland developments.¹⁰¹ Georgia municipalities may regulate land-disturbing authority in order to control soil erosion and sedimentation.¹⁰²

. . . .

95. N.Y. MUNICIPAL HOME RULE LAW § 51.

96. *Id.* § 10(1)(ii)(a)(11).

97. N.Y. STATUTE OF LOCAL GOVERNMENTS §§ 10(6) -10 (7).

98. GA. CODE ANN. § 36-70-1; § 50-8-3.

99. GA. COMP. R. & REGS. r. 110-12-1.01, available at http://rules.sos.state.ga.us/cgi-bin/page.cgi?g=GEORGIA_DEPARTMENT_OF_COMMUNITY_AFFAIRS%2Findex.html&d=1.

100. GA. CODE ANN. § 12-2-8.

101. GA. CODE ANN. § 12-5-241.

102. GA. CODE ANN. § 12-7-4.

In North Carolina, the state legislature adopted a legislative rule of broad construction of powers delegated to local governments.¹⁰³ Prior to that time, the courts applied Dillon's rule, strictly construing specific grants of authority to local governments.¹⁰⁴ A City of Raleigh requirement that a developer create open space in a subdivision and convey title to it to a private homeowners' association was upheld using this legislative rule of construction. The reach of this rule is evident in *Homebuilders Association of Charlotte v. City of Charlotte*,¹⁰⁵ where the power to impose user fees on applicants for rezoning, special use permits, plat approvals, and building inspections was upheld in the absence of expressly delegated authority. Legal experts in North Carolina explain that the state's zoning enabling statute, which allows localities to regulate the percentage of lots that may be occupied, the size of yards, courts and other open space, "provides authority to require buffers along waterways, to protect important natural areas, and to set requirements that authorize or even mandate clustered development schemes."¹⁰⁶ All of these techniques can be used to create communities that are more disaster resilient.

State legislatures in a number of states, like New York, have granted local governments home rule authority, providing localities broad initiative in municipal affairs. Grants of home rule power provide varying authority to municipalities to operate broadly regarding local affairs, instead of having to rely on various express grants of authority for particular purposes. The South Dakota Constitution, for example, provides that "A chartered governmental unit may exercise any legislative power or perform any function not denied by its charter, the Constitution or the general laws of the state Powers and functions of home rule units shall be construed liberally."¹⁰⁷

103. N.C. GEN. STAT. § 160A-4, available at http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/BySection/Chapter_160A/GS_160A-4.html.

104. See *supra* note 93.

105. 336 N.C. 37, 442 S.E.2d 45 (1994).

106. David W. Owens, *Local Government Authority to Implement Smart Growth Programs: Dillon's Rule, Legislative Reform, and the Current State of Affairs in North Carolina*, 35 WAKE FOREST L. REV. 671, 701 (2000).

107. S.D. CONST. art. IX, § 2, available at <http://legis.state.sd.us/statutes/DisplayStatute.aspx?Type=Statute&Statute=0N-9-2>.

State legislatures can provide broad police power authority to their municipalities. In Utah, for example, the legislature conferred upon cities the authority to enact all ordinances and regulations "necessary and proper to provide for the safety and preserve the health, and promote the prosperity, improve the morals, peace and good order, comfort and convenience of the city and the inhabitants thereof, and for the protection of property therein."¹⁰⁸ In interpreting this statute, the Utah courts have discarded the strict interpretation approach of Dillon's rule, stating, "If there were once valid policy reasons supporting the rule, we think they have largely lost their force and that effective local self-government, as an important constituent part of our system of government, must have sufficient power to deal effectively with the problems with which it must deal."¹⁰⁹

New Hampshire Case Study

In New Hampshire, state law requires that if local governments adopt zoning regulations they must adopt master plans, which may contain various elements including natural resource and natural hazard protection.¹¹⁰ Under these provisions, municipalities are authorized to develop coastal protection ordinances to carry out master plan policies regarding the protection of natural resources and natural hazard areas. New Hampshire municipalities are empowered to use a variety of innovative land use mechanisms to phase growth in an orderly way and to conserve open space and natural resources by clustering permitted development on discrete portions of land parcels.¹¹¹

A specific law in New Hampshire, from the city of Dover, illustrates how state laws, linked to federal statutes, can result in compatible changes in local law. The city legislature adopted an "Overriding Districts" ordinance¹¹² under its land use enabling authority from the state¹¹³ and to conform to the state Compre-

108. UTAH CODE ANN. § 10-8-84. *available at* http://www.le.state.ut.us/~code/TITLE10/htm/10_07083.htm.

109. *State v. Hutchinson*, 624 P. 2d 1116, 1126 (1980).

110. N.H. REV. STAT. ANN. §§ 674:2, 674:16, 674:18. Chapter 674 of the New Hampshire statutes is *available at* <http://www.gencourt.state.nh.us/rsa/html/indexes/674.html>.

111. N.H. REV. STAT. ANN. § 674:21.

112. CITY OF DOVER, N.H., ZONING CODE, ARTICLE VII, OVERRIDING DISTRICTS ORDINANCE.

113. N.H. REV. STAT. ANN. § 674:16.

hensive Shorelands Protection Act.¹¹⁴ A coastal state, New Hampshire adopted the Shorelands Act in part to conform to the policies of the federal Coastal Zone Management Act, discussed above. The Dover ordinance protects wetlands, watercourses, and steep slopes in designated shoreland areas within the town. With the maintenance of high water quality as its objective,¹¹⁵ this local ordinance aims directly at the objectives of the U.N. Convention on the Law of the Sea: under the Convention, land-based activities should not contribute to the pollution of adjacent coastal waters.¹¹⁶

VI. CONCLUSION: CAPTURE, COLLAPSE, AND CHOICE

The case studies in this [article] exhibit the fruits of a national system of linked framework laws. The influences of these laws reached Dover, New Hampshire,¹¹⁷ Nags Head, North Carolina,¹¹⁸ Babylon, New York,¹¹⁹ and Boulder, Colorado,¹²⁰ and motivated local leaders there to adopt local laws fitted to their circumstances: laws that are linked to state and federal statutes operating within the same policy framework.

The United Nations Environmental Programme recommends that national legislatures adopt framework laws for land, resource, and environmental protection.¹²¹ It describes a framework law as one that establishes basic legal principles but does not attempt to create or codify regulatory standards and provisions. Framework laws begin with a statement of land use and

114. N.H. REV. STAT. ANN. § 483-B:8.

115. CITY OF DOVER, N.H. ZONING CODE § 170-27(A).

116. U.N. CONVENTION ON THE LAW OF THE SEA, art. 197, art. 207, 21 I.L.M. 1262, Dec. 10, 1982 (entered into force Nov. 16, 1994), *available at* <http://www.un.org/Depts/los/index.htm>.

117. *See supra* notes 110-115 and accompanying text.

118. *See supra* notes 74-79 and accompanying text.

119. *See supra* notes 80-90 and accompanying text.

120. *See supra* notes 45-52 and accompanying text.

121. *See* John R. Nolon, *Fusing Economic and Environmental Policy: The Need for Framework Laws in the United States and Argentina*, 13 PACE ENVTL. L. REV. 685, 710, n. 83 (1996). UNEP has collected examples of framework laws in a COMPENDIUM OF ENVIRONMENTAL LAWS OF AFRICAN COUNTRIES, VOL. 1, FRAMEWORK LAWS AND EIA REGULATIONS (1996 & SUPPS.), *available at* <http://www.unep.org/padeli/publications/laws.html>, and in its COMPENDIUM OF INDEXED TEXTS OF NATIONAL FRAMEWORK LEGISLATION FOR ENVIRONMENTAL MANAGEMENT IN DEVELOPING COUNTRIES AND COUNTRIES WITH ECONOMIES IN TRANSITION, *see* http://www.unep.org/DPDL/law/Publications_multimedia/index.asp.

environmental goals and policies and articulate the institutional arrangements among levels and agencies of government as well as the common procedural principles for land use decision-making. Existing land use and environmental laws are not disturbed when a framework law is adopted; rather, they are left in place with the intention that they will be amended as the more integrated governmental system progresses.¹²² Notice how both the Coastal Zone Management Act and the Disaster Mitigation Act demonstrate these characteristics.

This [article] explores how federal and state framework laws themselves can be linked, vertically and horizontally. The Coastal Zone Management Act of 1972 includes among its policies the mitigation of disaster damage.¹²³ The Disaster Management Act of 2000 is a federal law that encourages state and local governments to conduct disaster mitigation planning by awarding them financial incentives if they do so.¹²⁴ These laws have horizontal consistency, promoting through institutional arrangements both economic development and environmental protection. They operate vertically as well, relying on state and local authority to adopt disaster and coastal plans and implement them with federal encouragement, funding, and assistance. Using their police power authority, the states have created comprehensive regimes for land use control relying mostly on local land use planning and regulation, completing the vertical dimension.¹²⁵ This local authority is guided, in turn, by state policies and plans enacted in response to federal coastal zone management and disaster mitigation statutes.

The problem with our national land use and environmental "legal system" is that its disconnections are many and its linkages

122. The UNEP web site says: "Development of Framework Environmental Laws: In assisting developing countries to develop environmental legal and institutional arrangements, UNEP has been recommending the drafting of new framework environmental laws, so as to develop the existing use and resources-oriented laws into system-oriented legislation. Where framework environmental laws had already been enacted, UNEP has been assisting governments to draft sectoral legislation or enabling regulations to integrate the environmental framework legislation." U.N. Environmental Law Programme (UNEP), *Technical Assistance*, at http://www.unep.org/dpdl/Law/Programme_work/Technical_assistance/index_more.asp.

123. See *supra* note 61.

124. See *supra* Part III.

125. States were instructed and motivated to adopt this approach to land use control, initially, in response to a model zoning enabling statute promulgated by a federal commission. See *supra* note 94.

few. The vertical and horizontal intersections described above are relatively random within the overall system, not the result of an overt, intentional, and consistent federal policy. This article began with an embarrassing dialogue revealing the nation's confusion about the roles of each level of government in disaster response and recovery. This confusion is the norm. It is possible to demonstrate, as we have above, what can happen when federal, state, and local laws are linked, but, unfortunately, we had to dig deep to find these case studies and to describe their happy if not complete results.

The disorderly nature and partial successes achieved by the nation's legal system for controlling land use and protecting the environment raise real questions about the prevailing approach to governmental intervention in private affairs. A particularly relevant assertion is that regulatory systems are subject to "capture" by those whose interests are regulated.¹²⁶ Capture theory originally grew out of the study of the limitations of administrative agencies and the comparative advantages of other institutions such as courts and legislatures to avoid capture. Some scholars perceive that even these institutions are subject to capture.¹²⁷ Others suggest that the administrative state itself is incapable of properly directing private behaviors and that its activities should be substantially curtailed to allow individuals, as rational actors, to pursue their own private interests and leave ordering to the marketplace.¹²⁸

126. See Thomas W. Merrill, *Capture Theory and the Courts: 1967-1983*, 72 CHI.-KENT L. REV. 1039 (1997). Referring to administrative agencies that regulate private-sector interests, Merrill notes, "The principal pathology emphasized during these years was 'capture' meaning that agencies were regarded as being uniquely susceptible to the domination by the industry they were charged with regulating." *Id.* at 1043.

127. See also Zygmunt J.B. Plater, *Environmental Law and Three Economies: Navigating a Sprawling Field of Study, Practice, and Social Governance in Which Everything is Connected to Everything Else*, 23 HARV. ENVTL. L. REV. 359, 377-378 (1999): "Sometimes the problem is that the legislature itself is captured by the marketplace, as happened during the 104th Congress."

128. See Merrill, *supra* note 126, at 1053: "Finally, in the period from roughly 1983 to the present, a new conception of the administrative state, which I will call the public choice conception, has been ascendant Today, the 'public interest' is seen as something more likely to emerge from the decentralized decisions of individually rational actors pursuing their own interest, i.e. through market ordering, than as coming about either through government regulation guided by human reason or government regulation guided by a more genuinely representative administrative process."

In his book *Collapse: How Societies Choose to Fail or Succeed*, Jared Diamond reflects on the costs to society caused by ignoring early warnings of long-term problems, such as those caused by major natural disasters and other recent damage to the physical environment.¹²⁹ He describes how ancient and contemporary societies either disappeared or were significantly damaged by rigid adherence to cultural values in the face of drastic environmental change. His paradigmatic story is that of the Norse colonies in Greenland that lasted for 450 years and then vanished.¹³⁰ The error they made was assuming that Greenland's ecosystem would perpetually support their approach to agriculture. They cleared meadows, pastured cattle, grew hay to feed them during long winters, dug sod to build comfortable houses, and ate beef as their principal staple even after evidence of environmental catastrophe was upon them.¹³¹ In this and many other stories, Diamond provides sobering evidence that human beings, pursuing their self-interests, are not rational actors and, in the normal course of events, their unmediated interactions in the marketplace do not insulate societies from environmental devastation or, in some cases, extinction.

Despite the evidence he marshals regarding societal collapse, Diamond ends his book on an optimistic note. Societies, as the book's title states, can choose to succeed. One of the choices necessary for success, he posits, is to make a commitment to "practice long-term thinking, and to make bold, courageous, anticipatory decisions at a time when problems have become perceptible but before they have reached crisis proportions."¹³² He writes, somewhat tentatively, "courageous, successful, long-term planning also

129. JARED DIAMOND, *COLLAPSE: HOW SOCIETIES CHOOSE TO FAIL OR SUCCEED* (2005).

130. *Id.* at 178-276.

131. Diamond describes the work of anthropologists who explored these abandoned settlements and found the bones of newborn calves, mother cows, and pets consumed during the final winter. From this he concludes that, until the bitter end, the Norse clung to their environmentally destructive diet despite the abundance of seals and fish which were consumed by the Inuits who coinhabited the same environment. Hunting seal, consuming the meat, and burning the blubber for heat and light were anathema to the Norse. Their commitment to European agriculture and the raising and consumption of beef was a cultural value too dear to be abandoned. Diamond discusses the "landscape amnesia" that must have beset the Norse, as it does those who occupy landscapes in this country. As a result, they forgot to pay attention to what they were doing to their environment. In the end, they starved to death. *Id.* at 425-426.

132. *Id.* at 522.

characterizes some governments and some political leaders, some of the time.”¹³³ Is this what occurred when Congress adopted the CZMA and DMA and when Dover, Nags Head, and Babylon protected their coasts? “The other critical choice illuminated by the past,” Diamond notes, “involves the courage to make painful decisions about values. Which of the values that formerly served a society well can continue to be maintained under new changed circumstances? Which of those treasured values must instead be jettisoned and replaced with different approaches?”¹³⁴

The question this leaves open is the one with which this article began: Who should decide? If not rational actors in the marketplace and if not the traditional administrative state, then what mechanisms do we have through which to manifest our choice to succeed? How do we conduct the long-term planning and choice reckoning that characterize successful societies?

Is it possible to see the process of adopting linked framework laws that value and promote economic development and environmental conservation as a choice inducing mechanism? In this age of citizen participation, public hearings, open meetings, negotiated rulemaking, mediated settlement, and rapid exchange of information through technology, is it possible to see the process of adopting framework laws as a means of engaging stakeholders in deciding how the land and its resources should be used, by whom, and when?

Land use law evolves. It is a flexible and expansive vessel into which new content is poured and from which the old is drained. Consider a local comprehensive plan. Today it may contain the vision of yesterday's leaders of their community's future and the measures by which they chose to achieve their vision. As things change, the plan can be amended by local citizens, as can the land use laws selected to respond to new challenges and opportunities.

State legislatures are constantly responding to evidence of change and adopting and amending laws to manage coasts, mitigate disasters, and encourage local governments to do the same. In response to 50 years of experience of assuming greater responsibility for disaster response and recovery, the federal government

133. *Id.* at 523.

134. *Id.*

adopted a new approach in the Disaster Mitigation Act of 2000. In response to the difficulty of rebuilding without planning at the relevant scale done prior to Katrina, Rita, and Wilma, the Coastal Zone Management Act can be amended to marshal the resources, legal authority, and energies of the private market and the agencies of government to do better next time.

In developing a set of linked framework laws, can the private sector, individual citizens, and their elected representatives at all levels of government be engaged in a conversation about the hard choices our society must make? If government is subject to capture, is the antidote to diversify the decision-making process so that it is ubiquitous enough that capture becomes unlikely. Could the process of negotiating the details of vertically and horizontally connected land use laws provide the means through which our society can choose to survive?