

**MAKING THE “MEDITERRANEAN OF THE WESTERN
HEMISPHERE” A SUSTAINABLE COMMUNITY: THE
CONNECTICUT COASTAL MANAGEMENT ACT AND THE
LONG ISLAND SOUND**

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INTRODUCTION

[A] fresh, green breast of the new world.

—F. Scott Fitzgerald, 1925¹

In 1979, Connecticut adopted its Coastal Management Act (CCMA). This law essayed to authorize coastal management of the Long Island Sound and its urbanized coastline. While recognizing the presence of the urban life that bordered the Sound, the law embodied a variety of ecosystem management terms and techniques. After its passage and for the next thirty years, a proliferation of federal laws and state actions were undertaken to protect the Sound and its coastal resources. These laws responded to the problems of coastal access, fishery management, energy development, non-point source pollution, tidal wetlands depletion, even air deposition, as well as inadequate local land use regulation in coastal communities. Some of these federal and state laws were loosely linked to a holistic vision of the ecosystem management of the Sound, but most originated independently and proceeded under their own steam. Integrated coastal management suffered.

There are three major reasons for the decline of an integrated coastal management effort. First, our federal legal system, with its bureaucracies and pluralistic political system, fragments any unified system of environmental management. Second, despite its ecological language, the synoptic view taken by ecosystem management encounters a serious lack of knowledge of ecosystemic relationships and the change in those relationships over time. Third, the Sound, including its urbanized coast, is not merely an ecosystem, but also “a place”—a public culture consisting of an inshore urban community—with ongoing ways of life which are only partly compatible with natural systems. These ways of life embody a series of social norms—private property, commitments to equality and equity, the felt urgency of economic needs, the willing acceptance of environmental risks, a recognition and appreciation of the “coastscape’s” beauty, and the subordination of effective environmental protection to the requirements of representative democracy. Conflicts between the coastal ways of life and the natural setting in which they take place are inevitable.

Though the body of state and federal law just described spoke in terms of ecosystem management, its effect, as it has evolved over time, is best understood not as an effort to protect a natural coastal ecosystem, but rather

1. F. SCOTT FITZGERALD, *THE GREAT GATSBY* 189 (Simon & Schuster Inc. 1995) (1925).

as the development of a sustainable coastal community in which the natural ecosystem and coastal ways of life are maintained in a continuing balance.

Returning to these laws and their subsequent history allows me once again to assess the laws' concern with both ecosystem management and sustainability. I would like to explore the question of whether the coastal management laws and their offshoots, over the years, advanced the sustainability of the Long Island Sound through ecosystem management. Since these laws were passed, new knowledge (regarding ecosystems and estuaries), new technologies (such as aquaculture innovations), new problems (such as global warming), new concepts (such as the commons, resource regimes, adaptive management, and sustainability), and new legislation have come into being. Neither I nor my reader can hope to digest all of this material, but I can survey it and suggest some ways of thinking about it.

Following a brief personal reminiscence and reflection in Part I of this paper, I introduce two views of the Sound: first, the Sound as an elegant estuary and, second, as a somewhat tarnished urban inshore ambience which reflects the past and present ways its denizens have chosen to assault her purity. These past assaults leave a legacy of pollution compounded by a second legacy—ongoing ways of life which continue to pollute her. Part II outlines the Coastal Zone Management Act (CZMA) and the CCMA and suggests how, at a shallow level, they roughly fit the definition of ecosystem laws, but, at a deeper level, both laws fall short of what I regard to be the unattainable ideal of ecosystem management. Subsequent to their adoption, these coastal management laws have been deconstructed into a variety of more specific laws and programs that address issues of inadequate local land use regulation, unequal beach access, the loss of tidal wetlands, pollution caused by energy and electricity production, depleted fisheries, and non-point source pollution (which is evidenced in oxygen depletion of the waters of the Sound). In Part III, I trace the history of the legal treatment of these issues in the Sound and identify some specific questions arising out of this treatment. I ask in Part IV why, in light of these issues, the ecosystem management aspects of these laws failed to achieve sustainability. In conclusion, in Part V, I suggest that the Sound might be better conceived of as “an urban inshore place” that reflects and serves ways of life which are only compatible in part with the natural state of the Sound. It is the sustainability of this imperfect inshore urban community with which we should concern ourselves.

REMINISCENCE AND REFLECTION

[T]he entire history of landscape . . . is indeed a mindless race toward a machine-driven universe, uncomplicated by myth, metaphor or allegory where measurement, not memory is the absolute arbiter of value . . .

—Simon Schama, 1995²

In old age, I am trying to revisit important places of my past to recapture their meaning and assess some of the work I have done in seeking to protect them. For many years I had lived along the Long Island Sound—in Greenwich, New Haven, and Waterford. My family summered on her beaches and we supped at her coastal restaurants. I plied my Cape Cod Bullseye sailboat over her waters, sailing on one daylong reach along the entire Connecticut coast (but truth to tell, I was a lousy sailor). More than 30 years ago, in 1977, I joined with a small band of environmental attorneys to consult with Art Roque, then Director of the Connecticut Coastal Program, to draft state legislation for Connecticut's coastal management program, adopted in 1979. The assignment continued coastally-related legal work I had done in earlier years—litigating the siting of the Millstone Two Nuclear Power Plant on the Sound and drafting an amicus brief for the NRDC supporting the state's response to a takings challenge regarding the state's refusal to permit a coastal wetlands development.

Since I loved our life along the Sound (which I reluctantly left more than 30 years ago), and since my children and grandchildren now revisit her coastal beaches, it seemed to be especially suitable to return to examine the history of the Sound and the CCMA, designed in part to protect the Sound. The CCMA was Connecticut's response to the national CZMA of 1972, which itself was an early example of an ecosystem management approach to environmental protection. Late one night when researching this paper, I turned to the original CCMA we had prepared in the mid-70s. Much to my shock, there was a frank description of the real coast of Connecticut—not simply the few fishing villages, crescent beaches, and tidelands, but also the oil tanks, railroads and highways, electricity generating plants, and sewer treatment facilities—all the accouterments of urban civilization. The plan did not propose removing these. Indeed, it accepted them as part of the coastal area it was proposing to manage. At that moment, I realized that I had participated in the design of an environmental law which was not only

2. SIMON SCHAMA, LANDSCAPE AND MEMORY 14 (1995).

aimed at protecting this large estuary as an ecosystem, but also embodied concerns about the sustainability of an inshore place with a public urban culture—a law that sought to reconcile the importance of ongoing economic activities with environmental protection and restoration for both present and future generations.

I. THE LONG ISLAND SOUND AND ITS ENVIRONMENTAL RESOURCES AND THREATS

[T]hey have swept the Sound, and covered their fields with the immense shoals of whitefish with which in the beginning of summer its waters are replenished.

—Rev. Timothy Dwight, 1804³

In Norwich, two tributaries of the Thames—the Yantic and Shetucket rivers—were lined with outhouses that drained into the waterways; and in Derby, . . . “The house refuse and filth is removed by the river.”

—Connecticut Board of Health, 1879⁴

Despite these early intimations of harmful human incursion, in 1864, Daniel Webster could describe the Long Island Sound, where he had fished and hunted, as “the Mediterranean of the Western Hemisphere.”⁵ Nearly a century later, in 1925, Fitzgerald’s narrator, Nick Carraway, contemplating Gatsby’s tragically deserted mega-mansion on the Sound, imagined the first Dutch sailors stunned by their first sight of the Island in its pure state as “a fresh, green breast of the new world.”⁶

Two very different books capture views of the Sound today. The first, Mary Buckles’s *Margins*, delicately traces the natural life of the Sound—the owls, oysters, and ospreys.⁷ The other, John Stilgoe’s *Alongshore*, explores the human landscape of the coast—the boat hoists, the skiffs, the bikinis, and the battered sheds.⁸ The first view highlights the Long Island

3. TIMOTHY DWIGHT, TRAVELS IN NEW ENGLAND AND NEW YORK 213 (Barbara Miller Solomon ed., 1969).

4. TOM ANDERSEN, THIS FINE PIECE OF WATER: AN ENVIRONMENTAL HISTORY OF LONG ISLAND SOUND 78 (2002) (paraphrasing and quoting CONNECTICUT STATE BOARD OF HEALTH, FIRST ANNUAL REPORT 1878 (1879)).

5. *See id.* at 2.

6. FITZGERALD, *supra* note 1.

7. MARY PARKER BUCKLES, MARGINS: A NATURALIST MEETS LONG ISLAND SOUND (1998) (detailing the natural life of the Long Island Sound).

8. JOHN R. STILGOE, ALONGSHORE (1994) (providing a modern look at life on the Sound,

Sound as a natural saline tidal estuary, the consequence of glaciation and now an arm of the Atlantic Ocean, beginning at its race in eastern Connecticut, extending south of Connecticut and north of Long Island, New York, for 110 miles to Devil's Gate and another source of its fresh water, the East River in New York. The Sound has an average depth of 79 feet and fattens to a width of 21 miles between Shoreham, New York, and New Haven, Connecticut. It is also the terminus of the Connecticut, Housatonic, and Thames rivers. These rivers bring fresh water (as well as pollution!) into an otherwise saline water body, contributing currents of water movement to its tidal fluctuations.

Its natural shoreline features include sand beaches, mud flats, tidal wetlands, headlands, and bluffs. These provide the structural support for habitats of upland vegetation, including black oak and hickory, bayberry, and an upland border of switch grass and marsh elder. Black and salt meadows occupy the high marsh, and salt water cord grass occupies the low marsh. The intertidal mudflats may lead to barrier beaches comprised of dunes and beaches, the former with goldenrod, beach plum, pea, and dune grass. A variety of benthic organisms live on the sea floor, feeding on the plankton population. The Sound is home to a variety of crustacea including blue crabs, hermit crabs, shrimp, and lobsters. Of the last, the most well known is the American lobster, which is commercially fished. Mollusks, including soft and hard shelled clams, Atlantic bay scallops, and blue mussels, have been harvested and work is under way to improve the oyster population. The fish population includes marine fish such as the scup, flounder, blackfish, and bluefish. Resident anadromous fish include striped bass, Atlantic salmon, and shad. A variety of shorebirds, including plovers, sandpipers, ducks, geese, swans, and herons, occupy a variety of habitats—some as they pass through the area during seasonal migrations. The piping plover and the osprey are two of Connecticut's endangered species. The Sound is also home to many mammals and reptiles, including the muskrat and the diamondback terrapin, the latter an endangered species.⁹

including the people and places that make the region unique). *See generally* ANDERSEN, *supra* note 4 (detailing the natural and cultural history of the Sound, and explaining how this history affected the health of the Sound's ecosystem); BUCKLES, *supra* note 7; MARILYN E. WEIGOLD, *THE LONG ISLAND SOUND: A HISTORY OF ITS PEOPLE, PLACES, AND ENVIRONMENT* 176–77 (2004) (tracing the development of the Sound from fishing and shipbuilding villages to modern industrial ports and suburban communities, and discussing the resulting pollution problems). This Part is based on these works.

9. *See* BUCKLES, *supra* note 7 (examining, from a naturalist's perspective, the ecosystem of the Sound and showing that, despite threats from pollution, it is still a vibrant community). The Long Island Sound provides natural habitat to more than 1,200 species of invertebrates, 170 species of fish, and dozens of migratory birds. LONG ISLAND SOUND STUDY, LONG ISLAND SOUND STUDY ACTION

In Stilgoe’s *Alongshore*, however, the Sound is not merely a set of environmental resources.¹⁰ It is “a place” with a rich history and the setting of unique ways of life found in its city harbors, small coastal towns, and the clustered vacation retreats that line its coast, as well as in its waters crowded with barges, sail boats, submarines, and fishing vessels. This way of life is supported by a variety of water-related activities, ranging from ports and marinas, shoreline restaurants, and small cove beaches, to ship-building, commercial fishing, and water-dependent manufacturing. Its occupants also include non-water dependent uses—interlopers such as oil tanks, railroads and highways, and coal and oil fired power plants—upon which those who ride the roads or use electricity depend. Behind both the natural and man-made life is a “coastal magic”—unique natural and human created sights, a bouillabaisse of sounds and smells that the residents relish. Unfortunately, such a coastal way of life also includes a myriad of coastal and non-coastal activities that its residents have either intentionally or accidentally undertaken, treating the coastal waters as dumping grounds of all forms of pollution.

Despite the present-day activity of the Sound, it is difficult to imagine that it was the center of a whaling industry in the 18th century and an oystering empire in the 19th and early 20th centuries. First individual skiffs, then fleets of dredging vessels plied the waters of the Sound, seeding and collecting oysters from both shallow and deeper waters for a world-wide market. It was this kind of lucrative oystering activity that stimulated the famous 1842 coastal case of *Martin v. Waddell*. In this famous case, the Supreme Court held that the oystering mudflats in New Jersey (and hence other northeastern coastal states) were the property of the state and not of private parties who claimed them under patent from the English king.¹¹ Only after typhoid from sewage crept into the oysters of a Wesleyan College fraternity party, when several students fell deathly ill or died, did the industry collapse.¹² It was discovered that these filter feeders were “fattened” by leaving them in shallow rivulets of sewage on the coast!¹³ The

AGENDA: 2011-2013 3 (2011), available at <http://longislandsoundstudy.net/about/our-mission/sound-agreements/action-agenda-2011-2013/>.

10. STILGOE, *supra* note 8.

11. *Martin v. Waddell*, 41 U.S. (16 Pet.) 367 (1842).

12. See Charles Harrington, *Some Reported Cases of Typhoid Fever Attributed to Contaminated Oysters, with Certain Facts Concerning this Means of Infection*, 144 BOS. MED. & SURGICAL J. 439 (1901) (discussed in ANDERSEN, *supra* note 4, at 95–99) (reporting on how oysters contaminated by pollution served at fraternity and sorority dinners were the possible cause of a typhoid fever outbreak).

13. *Id.*

oyster industry collapsed. On the other hand, the problem of sewage, as we shall see, lingers on in a new form today!

The Sound is both loved and abused, its wounds hidden like the submarines that ply its depths. The resulting assaults profoundly affect this natural system, its habitats, its flows of water and nutrients, and its stocks of plants and animals, in ways which are not often visible. In the late-18th to the mid-19th century, a venerable early history of whaling enabled the ports along the Sound to thrive, and New London reached its pinnacle. The collapse of whaling due to new sources of oil not only left a depleted world-wide stock of whales, but also an elegant row of whaler's homes in New London. This whaling port was second in size only to New Bedford and Nantucket, the towns epitomized for the world in Melville's classic, *Moby Dick*.¹⁴ After the whaling era, the Sound saw the rise of a variety of industrial uses located both along its shores, as well as in the tributary rivers and nearby valleys. One such industry was the brass industry in the Naugatuck Valley, which, while making the brass buttons on our soldiers' uniforms, polluted the Housatonic River. The brass industry thus left a legacy of chemicals and metals, especially copper, in the estuary bottom sediments of today—a legacy that affects, among other things, the present-day mollusk population of the Sound.¹⁵ The industrial legacy of the 19th century is well illustrated in *Keyser v. Coe* (1871), in which the plaintiff, a Connecticut shoreland resident, sued in nuisance, claiming that the defendant's business on Goose Island—a manure business in which artificial manures were made up of dead fish “and other offensive materials”—resulted in offensive smells affecting the plaintiff's property.¹⁶

A variety of manufacturing and electrical generating activities have continued to both enliven and assault the Sound, including such denizens as Electric Boat, a company which builds nuclear submarines;¹⁷ the U.S. submarine base, which operates them; and, until recently, the Pfizer Drug company, which used to dump its drug-related waste in the race of the

14. See generally ANDERSEN, *supra* note 4, at 63–66 (examining the rise and fall of the whaling industry in Connecticut); HERMAN MELVILLE, *MOBY DICK; OR, THE WHALE* (1851), reprinted in GREAT BOOKS OF THE WESTERN WORLD (Robert Maynard Hutchins ed., Encyclopedia Britannica, Inc., 1952).

15. See generally ANDERSEN, *supra* note 4, at 69, 94–95 (examining the history of the brass industry in Connecticut and its effect on the oyster population in Long Island Sound).

16. *Keyser v. Coe*, 9 Blatchf. 32 (C.C.D. Conn., 1871) (on plea to the jurisdiction that Goose Island was in New York, held on the facts that it was in Connecticut).

17. See generally *Electric Boat: The Past, Present and Future of Submarines*, GENERAL DYNAMICS ELECTRIC BOAT, <http://www.gdeb.com> (last visited July 15, 2012) (depicting generally the company's business, both on the Sound and worldwide).

Sound.¹⁸ In my ecology class, we took samples of this waste, spread it on the land, and watched it cook fledgling plants with the heat it generated. These activities are in addition to more common types of ocean dumping (including garbage and sewage initially, and now dredge spoils from the deepening of the Sound’s ports). Electrical production, in the form of oil and coal fired power plants, distributes dry and wet acid “rain” on the Sound. Nuclear plants, meanwhile, spew warm water to the Sound at the expense of winter flounder. Energy production, in the form of a proposed natural gas pipeline and an immense terminal that promised to loom over the Sound, has threatened to harm the shellfish beds at the bottom of the Sound as well as harm other fisheries. Over the years, there has been a significant depletion of coastal wetlands not only from residential developments, but also from marina developments seeking to promote recreation activities on the Sound. There are less dramatic but even more harmful pollutants that are the direct consequence of population growth and suburbanization of the watershed. The effluent of coastal and inland sewer treatment facilities combines with non-point source run-off (some of which is deposited by air) from Connecticut cities and farms to contribute to the hypoxia in the western Sound. In addition, over-fishing, the spraying of insecticides, and excessive harvesting of bivalves and crustaceans have all threatened the clam, oyster, and lobster populations.

These assaults on the Sound have stimulated the coastal communities surrounding the Sound to seek to regulate environmentally-harmful activities and foster restoration efforts to protect and increase the Sound’s resources and beauty. What follows is the story of one such law—the CCMA—and the laws which followed in its wake.

II. THE COASTAL ZONE MANAGEMENT ACT AND THE CONNECTICUT COASTAL MANAGEMENT ACT

The waters of Long Island Sound and its coastal resources, including tidal rivers, streams and creeks, wetlands and marshes, intertidal mudflats, beaches and dunes, bluffs and headlands, islands, rocky shorefronts and adjacent shorelands form an integrated natural estuarine ecosystem which is both unique and fragile.

—Connecticut Coastal Management Act, Legislative Findings, 1979¹⁹

18. WEIGOLD, *supra* note 8.

19. CONN. GEN. STAT. ANN. § 22a-94 (West 2010).

A. The Coastal Zone Management Act of 1972

In the waning days of the Nixon administration, Congress adopted the CZMA.²⁰ In one sense, this new law was one of several environmental laws adopted in the glow of Earth Day—the Federal Water Pollution Control Act (FWPCA), the Clean Air Act (CAA), and the National Environmental Policy Act (NEPA).²¹ Unlike these laws, the CZMA was a federal-state law that provided grants to coastal states (including those which border the Great Lakes, though not Lake Champlain) to develop and administer federally-approved coastal management programs to regulate land and water uses. On the one hand, the law echoed NEPA by seeking to inject consideration of coastal policies into the decision making of those state and local agencies which conducted coastally related activities and regulations. On the other hand, the CZMA echoed the fashionable land use regulations of the time. It was originally part of a proposed (and later discarded) National Planning Act, which encouraged state land use control by regulating “critical areas” and “developments of regional impact.”²² The CZMA followed this “zoning” approach with its provisions for protecting critical areas of the coastal zone, enabling coastal programs to assess the impacts of land and water uses of coastal activities, and encouraging states to assign “priority of uses” according to zones on the land and in the water.²³

The CZMA introduces a “tier one” dimension of ecological thinking—taking the first steps by defining the coastal zone as “coastal waters . . . and the adjacent shorelands . . . strongly influenced by each other,” invoking a

20. Marine Resources and Engineering Development Act of 1966, Pub. L. 89-454, 80 Stat. 203 (1966); Coastal Zone Management Act of 1972 § 302, Pub. L. 92-583, 86 Stat. 1280 (1972) (codified and amended at 16 U.S.C. § 1451 (2006)).

21. Federal Water Pollution Control Act, 33 U.S.C. §§ 1251–1376 (2006) [hereinafter Clean Water Act]; Clean Air Act, 42 U.S.C. §§ 7401–7671 (2006); National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321–4347 (2006).

22. 3 U.S. SENATE, 92ND-CONGRESS—SECOND SESSION, *Legislative History of Coastal Zone Management Act of 1972*, in U.S. CODE, CONGRESSIONAL AND ADMINISTRATIVE NEWS, 4776 (West Publ'g Co., 1973).

23. Coastal Zone Management Act, 16 U.S.C. § 1452(2) (2006). See generally Kristen M. Fletcher, *Managing Coastal Development*, in OCEAN AND COASTAL LAW AND POLICY 147–79 (Bauer, Eichenberg & Sutton eds., 2008) (explaining how the CZMA works); RICHARD BURROUGHS, COASTAL GOVERNANCE 108–09 (2011) (assessing actions taken by states in coastal management). For “the fashionable land use regulations of the time,” see FRED P. BOSSELMAN & DAVID L. CALLIES, *THE QUIET REVOLUTION IN LAND USE CONTROL* (1972) (examining the “innovative land use laws of several states”); Sara C. Bronin, *The Quiet Revolution Revived: Sustainable Design, Land Use Regulation, and the States*, 93 MINN. L. REV. 231 (2008) (examining the shift from governmental authority to local authority in the protection of critical coastal zones).

number of ecological values, identifying key coastal ecosystem features, recognizing coastal ecological problems, and setting aside “fragile” coastal areas.²⁴ The founders of coastal management did not see the coast purely in terms of natural ecosystems. After all, the major concerns at the time were offshore oil and the growth of recreational boating! Unlike many environmental laws of the time, the CZMA recognized the importance of economic development on the coast. It thus required states to balance economic development and the environment in a variety of ways, including the fostering and control of “water dependent” uses and permitting uses serving important “national needs.”²⁵ One important device for balancing the environment and development was the Act’s “consistency provisions,” which require federal activities and permitting of developments to be “consistent” with state-adopted and federally-approved state coastal programs. If a state finds a development to be consistent or inconsistent with these programs, parties may appeal such “consistency determinations” to the U.S. Secretary of Commerce.²⁶ Thus, despite the CZMA’s enactment during the full flower of the environmental era and its focus on the coastal ecosystem, the law also promoted sustainability in its recognition of the need to reconcile environmental and economic values for both present and future generations.

B. The Connecticut Coastal Management Act (CCMA)

Connecticut’s Coastal Management Act, a late arrival to the coastal management game, was adopted in 1979. The state already had a variety of coastal protection programs on the books, well established local wetlands laws, and a study of its Long Island Sound.²⁷ In regard to coastal matters, political power in the state rested in large part in the coastal cities of New Haven and Bridgeport, as well as within the state bureaucracy and its constituent fishery and recreation interests on the coast. Much of Connecticut’s population lived inland and was indifferent to coastal issues. The strategy for securing passage of the law was to defer to local regulation as well as the existing activities of state agencies. The legislation delineated a “coastal area” bounded by the state’s jurisdiction three miles seaward of the low water mark and the inland boundaries of the respective coastal

24. Coastal Zone Management Act, 16 U.S.C. §§ 1453(1), (2), (7), 1455(d)(9) (2006).

25. *Id.* § 1452(2)(D), (3).

26. *Id.* § 1456(c).

27. Rivers and Harbors Act, 33 U.S.C. § 403 (2006); Clean Water Act, 33 U.S.C. § 1344 (2006).

towns.²⁸ A more limited “coastal boundary” extended from the landward side of the coastal flood line or 1,000 feet inland to the seaward limits of the state jurisdiction.²⁹ Finally, a municipal coastal boundary could be set by the locality.³⁰

The new law modified the already existing state permit requirements for developments in coastal wetlands and for dredge and fill operations, as well as local planning, zoning, and subdivision requirements, by requiring permits to comply with a detailed list of coastal policies and findings drafted as part of the new statute.³¹ Existing state plans were also to be modified and coordinated in light of these findings and policies. The state law enabled municipal coastal programs that required the municipal plan of development, municipal ordinances, and zoning regulations to be incorporated within or “consistent” with the coastal findings and policies. To enhance the bridge between the statement of policies and the local planning and zoning regulations, a special provision required state preparation of a model municipal plan and set of regulations, a statement of planning methodologies, and methods for ensuring conformity between regulations and policies.³² To ensure compliance between local plans and regulations, the state law mandated “coastal site plans” for all zoning and subdivision related developments.³³ These coastal site plans were to incorporate the findings and policies of the state coastal law, and were subject to state review by the state Commissioner of the Environment.³⁴

Although the federal CZMA introduced the notion of “coastal management programs,” an early version of ecosystem management, the theory of ecosystem management did not flower until after the law was adopted. Ecosystem management may be schematically outlined as based upon an identifiable ecosystem, an enabling law focused upon a given ecosystem, a collaborative governance process, a collection of ecosystem information, an adoption of a plan or program, a specification of ecosystem policies, standards and permit criteria, mechanisms for coordinated ecosystemic regulation, and a system of monitoring and evaluation.³⁵ At one

28 CONN. GEN. STAT. ANN. § 22a-94(a) (West 2010).

29 *Id.* § 22a-94(b).

30 *Id.* § 22a-94.

31 *Id.* §§ 22a-100–10.

32 *Id.*

33 *Id.*

34 *Id.*

35. See RICHARD O. BROOKS, ROSS JONES, & ROSS A. VIRGINIA, *LAW AND ECOLOGY: THE RISE OF THE ECOSYSTEM REGIME* 261–85 (Richard O. Brooks & Ross A. Virginia eds., 2002) (depicting the components of an idealized ecosystem regime management program); Patrick A. Parenteau, Donald

level, the CCMA, its regulations, and the preceding and subsequent Long Island Sound studies together contain each of these factors. The history of the Sound, as well as its resources and their regulation, reveals the necessary “public culture of place.”³⁶ The second Long Island Study was the product of an environmental movement of citizens; there was a public uproar at the “discovery of hypoxia” and the prospect of a natural gas terminal in the Sound.³⁷ Thus, the CCMA (together with both the laws it incorporated and the subsequent legislation and plans it influenced) embodied ecosystem considerations and provided a loose matrix of enabling laws focused upon the ecosystem.

III. THE “DECONSTRUCTION” OF COASTAL REGULATION

Deconstruction would be the effort to take this limitless context into account

—Derrida, 1988³⁸

There are many ways of understanding the CCMA within the historical march of Connecticut’s coastal legislation. If one looks at it from the perspective of a starting point of coastal management in 1979, it might be viewed as the beginning of adaptive management, in which a variety of subsequent laws modify and adjust coastal management in light of encounters with newly recognized coastal problems.³⁹ Under this view, the coastal laws are hypotheses to be tested in action and, if necessary, rectified

C. Bauer, & Jennifer L. Schorr, *Legal Authorities for Ecosystem-Based Management in U.S. Coastal and Ocean Areas*, in OCEAN AND COASTAL LAW AND POLICY 597–654 (Bauer, Eichenberg, & Sutton eds., 2008) (establishing how the process of ecosystem management through the system functions).

36. See generally RICHARD O. BROOKS, *NEW TOWNS AND COMMUNAL VALUES* (1974) (writing about the public and communal culture of Columbia); SCHAMA, *supra* note 2 (describing the importance and advantages of a public culture for the community and the environment); EDWARD C. CASEY, *GETTING BACK INTO PLACE: TOWARD A RENEWED UNDERSTANDING OF THE PLACE-WORLD* (2d ed. 2009) (examining, from a philosophical standpoint, the importance of place and locality).

37. See ANDERSEN, *supra* note 4, at 153–54 (explaining the public reaction to the Long Island Sound Study, which found hypoxia to be an impending problem in the Sound).

38. JACQUES DERRIDA, *Afterword: Toward an Ethic of Discussion*, in LIMITED INC 111, 136 (Samuel Weber trans., 1988).

39. See generally U.S. DEP’T OF THE INTERIOR, *ADAPTIVE MANAGEMENT: THE U.S. DEPARTMENT OF THE INTERIOR TECHNICAL GUIDE 1–7* (rev. 2009), available at <http://www.doi.gov/initiatives/AdaptiveManagement/TechGuide.pdf> (defining adaptive management and providing conditions for its implementation); KAI N. LEE, *COMPASS AND GYROSCOPE: INTEGRATING SCIENCE AND POLITICS FOR THE ENVIRONMENT* (1993) (describing the concept and science of adaptive management).

by later amendments and other laws. Thus, the coastal management law initially sought to change local land use decision making and ensure beach access, protect the tidelands, restore fisheries, prevent coastal water pollution, and facilitate water dependent uses and developments serving national needs. From this perspective, the federal CZMA, after its early “test run,” required changes. These changes included amendments to the CZMA to protect barrier beaches, improve shell-fish areas, restore urban water fronts, promote further access to coastal resources, control non-point sources, and conduct estuarine research and management.⁴⁰

Despite the temptation to view coastal management and subsequent legislation as simply a continuous exercise in adaptive management, such an interpretation would fail to recognize that, even before the CZMA and the CCMA were adopted, there were other laws bearing upon the protection of Connecticut’s coast and the Long Island Sound. After the coastal management legislation, new laws were adopted and brought to bear upon the coast and the Sound with little or minimal attention to coastal management. Federal environmental legislation involving water pollution (non-point sources), air pollution control (air deposition), fisheries management, control of ocean dumping, and protection of marine sanctuaries are some of the laws adopted or expanded after the coastal management legislation. In addition, a variety of development-oriented laws, including new energy and aquaculture legislation, facilitated developments in the Sound.⁴¹

The subsequent laws pose the following questions: Why were they needed? Were they necessary to correct the inadequacies of the initial CZMA and CCMA and, if so, what were those inadequacies? Moreover, since those laws were passed, and since many of them had little explicit relationship to the coastal management program, were such state and federal programs “coordinated” by CZMA and CCMA and, if not, why not? What lessons regarding the feasibility of an integrated coastal management

40. Coastal Zone Management Improvement Act of 1980, Pub. L. 96-464, 94 Stat. 2060 (codified as amended at 16 U.S.C. §§ 1451–65 (2006)) (amending 16 U.S.C. §§ 1452, 1455 (1972)); Consolidated Omnibus Budget Reconciliation Act of 1985 § 315, Pub. L. 99-272, 100 Stat. 82 (codified as amended at 16 U.S.C § 1461 (2006)); Omnibus Budget Reconciliation Act of 1990 § 6217, Pub. L. 101-508, 104 Stat. 1388 (codified as amended at 16 U.S.C. § 1455b (2006)). *See generally* Fletcher, *supra* note 23, at 151–52 (explaining how amendments affected the CZMA and its application).

41. Clean Water Act, 33 U.S.C. § 1328–1329 (2006); Clean Air Act, 42 U.S.C. §§ 7651–51o (2006); Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §§ 1801–03 (2006); Marine Protection and Reserve and Sanctuary Act, 33 U.S.C. §§ 1401–05 (2006) [hereinafter Ocean Dumping Act]; Marine Protection and Reserve and Sanctuary Act, 16 U.S.C. §§ 1431–45 (1994) [hereinafter National Marine Sanctuaries Act]; Energy Policy Act of 2005, 43 U.S.C. § 1337p (2006) (relating to offshore alternative energy leases).

program (allegedly focusing upon an ecosystem) can be learned from this history?

A rough chronology of issues arising out the coastal management law and its allied programs includes modification of traditional land use laws (beginning in the 1960s), new provisions governing beach access (beginning in the 1960s), tidal wetlands regulation (developed in the 1970s), fishery management (expanded in the 1980s), and non-point source pollution control (taken seriously in the 1990s and after). Issues concerning electricity generation and energy production extended over the full half century from the first nuclear plants in the 1960s to the recent natural gas proposals of the last few years. Each of these issues has a life cycle of its own, which can be seen as waxing and waning with the years.

A. Coastal Land Use Regulations

The adoption of the Coastal Zone Management Act in 1972 took place at a time when there was a “quiet revolution” in the land use law of many states, with an increase in the power of states to plan and control for “critical areas” and “developments of regional impact.”⁴² Although the National Planning Act, which sought “revolutionary” changes in all state and local land regulation, was not enacted, the CZMA, which was part of the original bill, was enacted in response to many of the coastal problems resulting from inappropriate land uses.⁴³ Thus, the congressional findings of the law refer to ill-planned developments and inadequate land and water use regulations—regulations that directly affect the quality of the waters and habitats.⁴⁴ The declaration of policy reiterates the law’s intent to authorize control of some coastal developments, and the management programs require “controls of land uses”⁴⁵

Because the national coastal management law directs its attention to land use planning and regulation, which had been traditionally part of state and local regulation, rather than a federal mandate, states were given the

42. FRED P. BOSSELMAN, DAVID L. CALLIES, COUNCIL ON ENVIRONMENTAL QUALITY, *THE QUIET REVOLUTION IN LAND USE CONTROL* (1971).

43. Coastal Zone Management Act, 16 U.S.C. § 1452(2) (2006). See Fletcher, *supra* note 23 (clarifying the general statutory scheme of the CZMA and explaining how the CZMA works); BURROUGHS, *supra* note 23 (examining how states have chosen to undertake coastal management); BOSSELMAN & CALLIES, *supra* note 23 (illustrating the various novel land use laws several states have adopted); Bronin, *supra* note 23 (examining the shift from governmental authority to local authority in the protection of critical coastal zones).

44. Coastal Zone Management Act, 16 U.S.C. § 1451(g), (h), (k) (2010).

45. *Id.* §§ 1452(1)(B), (D), (E), (F), 1455(2)(D).

option of undertaking a management plan. Financial incentives for state planning and administration of coastal programs were offered in the early years.

If the state chose to undertake coastal management, then it was necessary for the CZMA to require the state to ensure coordination among municipalities and between municipalities and the states. This was because the CZMA focused upon the “coastal zone” extending beyond any one municipality or county, and because, prior to its adoption, many coastal states and municipalities had undertaken comprehensive plans and zoning and subdivision regulations dealing with coastal wetlands.⁴⁶ The CZMA also offered options for states to elect the kind of management program they might adopt⁴⁷ to meet the federal criteria⁴⁸ for a satisfactory program. These options include a “direct state program” in which the state governs permitting, a program in which the state establishes criteria and standards for local implementation, or state review of all plans, projects, and regulations.⁴⁹ As indicated above, Connecticut adopted a combination of the second and third approaches, setting forth a set of detailed policies⁵⁰ that were to guide both the relevant state agencies and municipalities in their coastal projects and permitting decisions.⁵¹

As indicated elsewhere, the applications of these policies were illustrated in the drafting of a model municipal coastal program which embraced model plans, regulations, planning methods, procedures for revision of plans, and regulations to conform with coastal policies and suggested criteria and procedures.⁵² Later, a detailed state manual was prepared to help guide municipalities. Detailed requirements were set forth in the Connecticut statute for municipal coastal programs requiring revision of existing comprehensive plans, zoning, subdivision regulations, and a variety of other land use ordinances in light of the myriad of statutory policies.⁵³ The revisions are subject to review by the Commissioner of

46. *Id.* § 1455(3)(A).

47. *Id.* § 1455(11).

48. *See id.* § 1455(1)–(16) (listing the federal criteria).

49. CONN. DEP’T OF ENVTL. PROT., OFFICE OF LONG ISLAND SOUND PROGRAMS, UPDATED ASSESSMENT AND STRATEGY OF THE CONNECTICUT MANAGEMENT PROGRAM: SECTION 309 COASTAL ZONE MANAGEMENT ACT (2010) [hereinafter ASSESSMENT], available at <http://coastalmanagement.noaa.gov/mystate/docs/ct3092011.pdf>.

50. CONN. GEN. STAT. ANN. § 22a-92 (West 2010).

51. For a discussion of the rationale for the Connecticut approach, see Richard O. Brooks, “Local Options for Coastal Management: Summary” (Planning Report No. 11 Coastal Area Management December 15, 1976).

52. CONN. GEN. STAT. ANN. § 22a-96 (West 2010).

53. *Id.* § 22a-101.

Environmental Protection for consistency with the coastal policies, but need not be approved by the Commissioner to go into effect.⁵⁴ In addition, coastal municipalities had to require specific coastal site plans for all subdivisions, special exceptions, variances, and rezoning which assess the impact of proposed activities upon coastal resources and upon “any goal or policy.”⁵⁵ The approval or denial of these plans may be reviewed by the Commissioner.

As a consequence of these statutes, over the past three decades, the coastal communities revised their land use regulations and related ordinances for consistency with the coastal management policies. To offer but one example, the City of New Haven revised its comprehensive land use plan by means of a 3,700-acre overlay district under which coastal site plans are required, development standards are specified, a “coastal benefits” program is initiated, shoreline stabilization is undertaken, arrangements for coastal access are made available, and economic development programs are incorporated.⁵⁶

Many of these municipalities have also undertaken to implement the requirement of coastal site planning. Coastal municipalities may include coastal policies as part of their conservation and management plans, their zoning regulations, and their site plans. For example, since the loss of tidelands is often due to the nibbling away by small developments, regulated at the local level, this approach handed the task of tidelands regulation for smaller developments to the localities. Several cases litigated since the CCMA was enacted suggest that at least some towns and cities have included coastal policies in their plans and regulations, and the Connecticut courts have upheld the municipal denial of development based upon these regulations.⁵⁷

Evaluating the impact of these land use regulations is difficult. The updated assessment of the program suggests that there are now a low loss of tidal wetlands, an undertaking of a wide variety of management efforts to prevent or mitigate coastal hazards, improvements in coastal access, and minimization of the increase of land cover as “developed.”⁵⁸ Thus, the

54. *Id.* § 22a-110.

55. *Id.* §§ 22a-105–22a-109. These provisions were initially suggested by Professor Terry Tondro of Connecticut Law School.

56. NEW HAVEN CITY PLAN COMM’N, NEW HAVEN COASTAL PROGRAM (2006), available at http://www.cityofnewhaven.com/cityplan/pdfs/PlanningPrograms/CoastalProgram/New_Haven_Coastal_Program_June_21_2006.pdf.

57. *Pinchbeck v. Planning & Zoning Comm’n of Guilford*, 796 A.2d 1208 (Conn. 2002), cert. denied, 806 A.2d 1065 (Conn. 2002).

58. ASSESSMENT, *supra* note 49.

coastal land use plans and regulations appear on the face to retain an integrated approach to coastal management, at least on a town by town basis.

However, by delegating the regulation of a myriad of land use developments on a town-by-town basis, the coastal program was fractured into a variety of local land use decisions.⁵⁹ This fracturing of the management program makes it difficult to assess the overall impact of the coastal management program. Two exceptions are the current Sentinel Monitoring Program for Climate Change in Long Island Sound, which is presently underway,⁶⁰ and the Connecticut Coastal and Estuarine Land Conservation Program Plan.⁶¹

B. Beach Access

Unlike many coastal states, Connecticut's beaches are not impressive. Connecticut lacks the broad and long barrier beaches and, for the most part, her beaches are small crescent shaped stony affairs (a gift of the Ice Age!). Nevertheless, one residue of the civil rights movement of the 1950s was the effort to secure more equal access for minorities and others to the beaches of the coast, including those in the Sound.⁶² In the 1960s and early 1970s, the civil rights movement led to an effort to strike down exclusionary zoning laws, which excluded low-income and black residents from certain areas of the city. This effort was joined to an effort to strike down municipal residents-only restrictions on beach access, which was supported by the rise of the notion of a public trust in beach access. In the late 1960s, a federal beach access bill was proposed, followed by proposed language in the National Planning Act.⁶³ The CZMA made vague reference to beach access, and the CCMA also made some carefully crafted references.

During the drafting of the CCMA, we gave careful attention to the beach access issue. Because the Connecticut beaches were, for the most

59. To be sure, these decisions had to incorporate state wide policies, the site plans were subject to review by the Commissioner of Environmental Protection, and there were supplemental statewide controls for dredge and fill. However, there was no statewide comprehensive coastal plan.

60. ASSESSMENT, *supra* note 49, at 37–47 (discussing the Sentinel Monitoring Program for Climate Change in Long Island Sound).

61. CONN. DEP'T OF ENVTL. PROT., OFFICE OF LONG ISLAND SOUND PROGRAMS, DRAFT CONNECTICUT COASTAL AND ESTUARINE LAND CONSERVATION PROGRAM PLAN (2007), available at http://www.ct.gov/dep/lib/dep/long_island_sound/coastal_management/celcp_plan_draft.pdf.

62. See generally Mark Poirier, *Environmental Justice and the Beach Access Movements of the 1970s in Connecticut and New Jersey: Stories of Property and Civil Rights*, 28 CONN. L. REV. 719 (1996) (examining issues of race and class in the environmental movement).

63. U.S. SENATE, *supra* note 22.

part, small crescent beaches controlled either by municipalities or residential associations (members of which were state political officials with summer homes on the coast), we decided to leave that battle for another day. That day arrived with the 1980 amendments to the CZMA, which adopted more explicit language providing grants to promote beach access at the same time that it provided incentives for not building upon barrier beaches. Hence, at least in theory, this lowered the amount of beach land available for development.⁶⁴ The statutory language of the CCMA remained unchanged. It was more than a decade later that the Connecticut Supreme Court upheld the right of non-residents to beach access on the Sound in *Leydon v. Town of Greenwich*, based upon a constitutional freedom of association. The plaintiffs, in their complaint, and the Connecticut Supreme Court, in its decision, made no mention of the CCMA.⁶⁵ The Connecticut Department of Environmental Protection has sought to promote beach access through better signage for state beaches and the removal of municipal erected barriers beyond the mean high tide line, but neither the state nor the program has sought to challenge the differential fees that many coastal municipalities continue to apply to residents and non-residents. A recent report evaluating the CCMA lists many state beaches and parks, as well as municipal beaches, which are now accessible to the general public; the report indicated that no programs to promote beach access were to be undertaken at the present time.⁶⁶

The beach access problem raises the fundamental question of how to think about fairness in the distribution of coastal resources and the more general issue of how environmental resources are to be distributed in pursuing sustainability. This issue has also been raised by tidelands development applicants who claim to be treated unequally and fisherman who are disputing their fish quotas and other fish regulations. The law has sought to address the issue of beach access by appealing to several doctrines: (1) the common law and statutory public trust doctrine, which is deemed to ensure lateral passage of the public beyond the mean high tide

64. Coastal Zone Management Improvement Act of 1980, Pub. L. 96-464, 94 Stat. 2060 (codified as amended at 16 U.S.C. §§ 1451–1465 (2006)) (amending 16 U.S.C. §§ 1452, 1455 (1972)); Consolidated Omnibus Budget Reconciliation Act of 1985 § 315, Pub. L. 99-272, 100 Stat. 82 (codified as amended at 16 U.S.C. § 1461 (2006)); Omnibus Budget Reconciliation Act of 1990 § 6217, Pub. L. 101-508, 104 Stat. 1388 (codified as amended at 16 U.S.C. § 1455b (2006)). See generally Fletcher, *supra* note 23, at 151–52 (explaining how these amendments affected the CZMA and its application).

65. *Leydon v. Town of Greenwich*, 777 A.2d 552 (Conn. 2001).

66. OFFICE OF OCEAN AND COASTAL RES. MGMT., NAT’L OCEANIC AND ATMOSPHERIC ADMIN., FINAL EVALUATION FINDINGS: CONNECTICUT COASTAL MANAGEMENT PROGRAM (2007), available at <http://coastalmanagement.noaa.gov/mystate/docs/ConnecticutCMP2007.pdf>.

line; (2) the constitutional doctrine of equal protection, which seeks to strike down grossly unequal municipal fees charged for access to municipal beaches; and (3) the constitutional First Amendment doctrines, which view obstacles to beach access as a barrier to free association and free speech.⁶⁷ All of these rationales suggest that different meanings can be given to coastal access.

C. Depletion of Coastal Wetlands

The coastal tidelands of the Sound were protected by a vigorous, but not totally successful, permitting program adopted in the 1950s and 60s and implemented in the 1970s prior to the adoption of the CCMA. Aside from federal legislation requiring a permit for the dredging and filling of wetlands,⁶⁸ the state had its own tidal wetlands program that required permits for developments in tidal wetlands, and that also operated to provide the required certification for federal permits.⁶⁹ There were also permits required under local zoning regulations enabled by state law.

When adopted in 1979, the CCMA provided two avenues for the applicability of coastal management policies to tidal wetlands permits. First, there was an explicit requirement that any state tidelands permitting be consistent with the range of coastal zone policies. These policies were explicitly incorporated by statutory references in both the CCMA and the tidelands law.⁷⁰ As a consequence, the regulations of the state tidal permitting program include explicit attention to both coastal policies. Thus, rather than build a new state “coastal bureaucracy” with new permits, the CCMA modified the decision-making of the existing bureaucracy. Such an approach mirrored a similar approach taken under federal law by NEPA and the approach for modifying local land use decision-making described above.

One of the central issues of the tidelands program, when fully implemented in the 1970s, was the constitutionality of the permit requirement under state and federal law. In 1974, the Connecticut Supreme Court upheld the state tidelands legislation against a takings challenge under federal and state law. The court held that, unless there is “practical

67. See Poirier, *supra* note 62 (examining issues of race and class in the environmental movement).

68. Rivers and Harbors Act, 33 U.S.C. § 403 (2006); Clean Water Act, 33 U.S.C. § 1344 (2006).

69. Connecticut Tidal Wetlands Act, CONN. GEN. STAT ANN. §§ 22a-28–22a-35 (West 2011).

70. *Id.* §§ 22a-28–22a-35, 22a-92, 22a-93(7).

confiscation” of all value of the land, the court would balance the degree of diminution of value, the nature of the harm threatened, and the alternatives available to the plaintiff.⁷¹ This case was followed by takings challenges under the CCMA, and its rationale helped to shape the administration of tidal permitting.⁷² Reports on tideland permitting in Connecticut indicate that the Department of Energy and Environmental Protection approves the vast majority of permit applications; however, most of the permits issued have conditions placed upon them. This approach reflects the natural consequence of the court opinion in *Brecciaroli*, where the court upheld the regulation in part because it left some of the property open for development.⁷³

Coastally-related Connecticut claims of unconstitutionality for either the taking of private property or violation of due process are not limited to tidelands challenges. Perhaps the most famous case is the *Kelo* case, in which there was an unsuccessful challenge to New London’s efforts to redevelop a coastal community.⁷⁴ Takings cases in the U.S. Supreme Court and other jurisdictions demonstrate that there is a generic issue inherent in the taking of private property in the regulation of coastally related activities, whether that activity is the development of tidal lands, the securing of fishery permits, or the retention of one’s house with a view of the water.⁷⁵

71. *Brecciaroli v. Conn. Comm’r of Env’tl. Prot.*, 362 A.2d 948, 951 (1975).

72. *See, e.g., DeBerardinis v. Zoning Comm’n of Newark*, 635 A.2d 1220, 1224–25 (1994) (discussing that the imposition of conditions on a coastal site plan under the CCMA was not a taking in absence of proof of a final deprivation (citing *Gil v. Inland Wetlands Agency of Greenwich*, 503 A.2d 1368 (1991))).

73. *Brecciaroli*, 362 A.2d at 951. Unfortunately, information is not available about the nature of these conditions and their enforcement. However, the reports indicate that recipients of the permits have compensated for the loss of wetlands by granting significant amounts of restored tideland areas in mitigation.

74. *Kelo v. City of New London*, 545 U.S. 469 (2005). *See* Richard O. Brooks, *Kelo and the “Whaling City”: The Failure of the Supreme Court’s Opportunity to Articulate a Public Purpose of Sustainability*, in *THE SUPREME COURT AND TAKINGS: FOUR ESSAYS* 5–21 (2006) (explaining how the Supreme Court’s failure may be a benefit to the environmental community).

75. *See Lucas v. S.C. Coastal Council*, 505 U.S. 1003 (1992) (denial of permit to build in critical beach area was a taking, when no economically viable use of property remained and state action was not based on “background principles” of law); *Palazzolo v. Rhode Island*, 533 U.S. 606, 617 (2001) (denial of permit to build in wetland was not a taking where significant portion of total parcel remained buildable, though preexisting land use regulation was not a “background principle”); *Stop the Beach Renourishment, Inc. v. Fla. Dep’t of Env’tl. Prot.*, 130 S. Ct. 2592 (2010) (holding a state beach renourishment project was not a taking of upland owners’ littoral rights, which, as reasonably interpreted by the Florida court, were “background principles”); *Gove v. Zoning Board of Appeals of Chatham*, 831 N.E.2d 765 (Mass. 2005) (denial of building permit on barrier island flood plain not a taking where some value remained and *Penn Central* regulatory takings test satisfied); *La. Seafood Mgmt. Council v. La. Wildlife and Fisheries Comm’n*, 715 So.2d 387 (La. 1998) (commercial gillnet ban not a taking).

All of these property and market claims have implications for viewing the Sound and its coast as an ecosystem.

D. Overfishing and Harvesting

In the Introduction, I identified some of the fishing-related problems of the Sound, including the overfishing of fish stocks, the overharvesting of lobsters, as well as diseases affecting oyster stocks. In addition, a variety of other activities threatened harmful conditions for the growth of future fish populations. Water pollution, developments reducing tidal wetlands and affecting sediment bottoms, and deposition of air pollutants are some of these activities. Prior to the adoption of the CCMA in 1980, there was both state and federal regulation of some aspects of fisheries. In 1976, the basic fishery management law, the Magnuson-Stevens Act, was adopted.⁷⁶ This law created eight regional fishery management councils, one of which—the New England Fishery Management Council—includes Connecticut and, thus, oversees the region that includes Long Island Sound.⁷⁷ In the 1980s, the Councils prepared fishery management plans and began the thankless task of regulating the fisheries. Amendments to this law in the 1980s included requirements to ensure the long-term health of the fisheries, protect their “essential habitat,” and specify the scientific data needed to develop adequate fishery management plans.⁷⁸

The 1990s marked a more serious effort at fishery regulation in the Sound. The Atlantic Fisheries Cooperation and Management Act of 1993 facilitated the establishment of the Atlantic States Marine Fisheries Commission to facilitate state representation in the management of the fisheries.⁷⁹ This Commission has developed fishery management plans for 24 Long Island Sound species, including the American lobster—one of the few that has currently been designated as “overfished” in the Sound region. Legislation in the 1990s, the Sustainable Fisheries Act, also began to promote giving attention to “essential habitat” as part of the fish management plans and attention to fisheries communities.⁸⁰ As a

76. Magnuson-Stevens Act, Pub. L. No. 94-265, 90 Stat. 331 (1976) (codified as amended at 16 U.S.C. §§ 1801–03 (2006)). See generally Josh Eagle, *Domestic Fishery Management*, in *OCEAN AND COASTAL LAW AND POLICY* 275–301 (Bauer, Eichenberg & Sutton eds., 2008) (explaining how fisheries management is impacted by the law).

77. 16 U.S.C. § 1852(a)(1)(A) (2006).

78. *Id.* § 1853.

79. Atlantic Coastal Fisheries Cooperative Management Act, 16 U.S.C. §§ 5101–08 (2006).

80. Sustainable Fisheries Act, Pub. L. 104-297, 110 Stat. 3565 (1996) (amending the Magnuson Fishery Conservation and Management Act, 16 U.S.C. §§ 1801–82 (1976)).

consequence, the Commission has begun to undertake limited habitat study and management efforts.

Although the CZMA and the CCMA mentioned the importance of fish resources as part of the coastal ecosystem and applied their policies to the fish habitat of tidal wetlands, the CCMA failed to establish a legal basis for an explicit and direct connection between fisheries management at the federal and state levels and its own coastal management policies. Although there has been no litigation, the fishery management plans and their regulations constitute federal activities and permits that are subject to the consistency requirement of the CZMA and the CCMA. In addition, the CCMA has sought to regulate at least some of the development activities that would affect the habitats for fisheries by inserting coastal policies as part of tidal wetland regulations.

With the advent of the Long Island Sound Program discussed in section E below, there were additional fishery-related activities undertaken, including a variety of restoration efforts of fish, bivalve, and crustacea habitats. These activities are authorized by recent Connecticut legislation to promote aquaculture.⁸¹ This effort has been particularly successful with the production of soft-shelled clams. However, an unexpected outbreak of MSX disease recently decimated the previously restored oyster population; this population is presently recovering.⁸²

The history of fishery management, while revealing an increasing recognition of the ecosystem, also demonstrates some of the serious scientific problems that bedevil fish management on the coast or elsewhere. First, there are a variety of migratory fish populations, many of which are not limited to any one coastal area. Second, fish habitat conditions are influenced by the conditions of the tributary rivers, tidal wetlands, air deposition, sedimentation, water quality, presence of other fish species, as well as the fishery practices themselves. Knowledge of these factors remains limited as evidenced not only by the MSX outbreak, but also the recent case of *Fox v. Cheminova, Inc.*⁸³ In *Fox*, commercial lobstermen from Connecticut and New York brought a class action in tort against the manufacturers of insecticides for a massive die-off of Long Island lobsters.⁸⁴ These insecticides allegedly caused the die-off when sprayed in

81. CONN. GEN. STAT. ANN. §§ 22-11c–22-11h (West 2010).

82. See ANDERSEN, *supra* note 4, at 228 (examining the cause of the oyster and lobster die-offs in the Bay during the late 1990s).

83. *Fox v. Cheminova, Inc.*, 213 F.R.D. 113, 119 (E.D.N.Y. 2005).

84. *Id.*

New York City in 1999 to prevent the spread of the Nile Virus.⁸⁵ The court certified the class and, after two of the defendants had settled, denied the remaining defendant's motion for summary judgment in part because there were material issues of fact as to whether the spray was indeed the cause in fact of the die-off.⁸⁶ The defendants had claimed that the insecticide had been used elsewhere and at different times, that other pesticides were used, and that many other conditions of the Sound could contribute to the die-off.⁸⁷ The case illustrates the fortuitous events that can affect the Sound and the myriad of causal conditions that will determine the health of its occupants.

E. Non-Point Sources and Hypoxia in the Sound

In the summer of 1987, Barbara Welsh, a leading scientist of the Sound, recorded the lowest oxygen readings ever seen in western Long Island Sound, 1 milligram of oxygen per liter at a depth of 28 feet. What Welsh measured was the consequence of both point source pollution (especially from sewer treatment facilities) as well as non-point sources from air deposition, agriculture, construction, marinas, hydro-modification, and natural sources. The hypoxia of the Sound became the principal focus of pollution clean-up in the Sound over the past decade.⁸⁸

The chronology of the federal and state efforts to control non-point source pollution is a long and unhappy story. It began with the Federal Water Pollution Control Act of 1972, which enabled the planning for control.⁸⁹ In 1985, the second Long Island Sound study identified non-point source pollution of the Sound to be a serious problem.⁹⁰ In 1987, the federal National Estuary Program was enacted and new non-point source requirements were adopted in the amendments to the Clean Water Act.⁹¹ In 1988, the Long Island Sound became an "estuary of national significance"

85. *Id.*

86. *Id.*

87. *Id.*

88. See generally ANDERSEN, *supra* note 4, at 117–54 (examining the studies done on the Sound and the findings of the cause and effect of hypoxia on the Sound).

89. Clean Water Act, 33 U.S.C. § 1288 (2006).

90. *About the Long Island Sound Study*, LONG ISLAND SOUND STUDY: A PARTNERSHIP TO RESTORE AND PROTECT THE SOUND, <http://longislandsoundstudy.net/about/about-the-study/> (last visited July 15, 2012).

91. 33 U.S.C. § 1329 (non-point source provisions), § 1330 (National Estuary Program). See Robin Kundis Craig, *Coastal Water Quality Protection*, in OCEAN AND COASTAL LAW AND POLICY 220–21, 225–26 (Bauer, Eichenberg & Sutton eds., 2008) (explaining how non-point source pollution is tied up in ocean and water law).

in the national estuary program. In 1990, reauthorization amendments of the CZMA authorized enforceable controls for non-point sources affecting coastal waters.⁹² In 1994, the Long Island Sound Study (LISS) issued a Comprehensive Conservation and Management Plan (CCMP) and in 1996, the Governors of New York and Connecticut signed the Long Island Sound Agreement. The Long Island Sound program identified seven issues: (1) low oxygen (hypoxia); (2) toxic contamination; (3) pathogen contamination; (4) floatable debris; (5) habitat degradation and loss of health of living organisms; (6) public involvement; and (7) land use issues.⁹³ As part of the non-point source program, both states have introduced “best management practices” directly, as part of a watershed planning process and in making efforts to restore the Sound habitat.

Following the CCMP and the LISS agreement, the two states and EPA made a commitment to reduce nitrogen, primarily from sewer treatment facilities, as part of the attack on hypoxia. A three-phase plan began in 1990 with the freeze of a selection of regional sewer plants’ discharges of nitrogen and the subjecting of those plants to a non-net increase. In the second stage, reductions were adopted in selected plants by adopting low-cost nitrogen removal. As of 1996, human-caused nitrogen levels showed modest reductions. In the third phase, minimum oxygen benchmarks were set. A cost effectiveness study was conducted, which appears to show that, perhaps with a certain capital cost for upgrades, minimal oxygen improvement was attained. But, for various reasons, the third phase plan proposed to allocate responsibility for upgrades of sewer treatment facilities equally in 11 management zones.⁹⁴ However, this is modified by the nitrogen trading program.

In 2001, Connecticut adopted legislation enabling a nitrogen trading program. Initially, the participants were approximately 79 Connecticut sewage treatment plants. A cap was established by a general permit containing the Total Maximum Daily Load (TMDL) for the total nitrogen that may be discharged each year by the combined sewage plants. The cap declines each year until 2014, when the TMDL requirement is met. The permit for each plant sets its nitrogen limit, which it can meet by either

92. Pollution Prevention Act of 1990, Pub. L. No. 101-508, 104 Stat. 1388-321 (1990) (adding 16 U.S.C. § 1455b).

93. *1994 Long Island Sound Agreement*, LONG ISLAND SOUND STUDY, <http://longislandsoundstudy.net/about/our-mission/sound-agreements/1994-long-island-sound-agreement/> (last visited July 15, 2012).

94. *Water Quality*, LONG ISLAND SOUND STUDY: A PARTNERSHIP TO RESTORE AND PROTECT THE SOUND, <http://longislandsoundstudy.net/issues-actions/water-quality> (last visited July 15, 2012).

controlling its pollutants or purchasing credits from the state. Plants emitting less than their TMDL cap can sell credits to the state. Credit ratios were established to reflect the fact that some plants are in less hypoxic areas and others are in more hypoxic areas. At the end of the year, each plant that controls in an excess amount will receive payments from the state. Each plant that does not make its permitted amount by controls must purchase credits from the state. The 2010 report on the program suggests a significant amount of both distribution of credits and payments and an on-time staged reduction of nitrogen pollution.⁹⁵

Many questions remain regarding the program. How harmful is hypoxia, especially if it is temporary and occupies only one part of the Sound? How accurate is the estimation of the sources of hypoxia and, hence, what relative impact will the nitrogen controls have? Another way of asking the question is: How accurate are the TMDLs? The major location of the hypoxia is in the western Sound, where it is caused largely by New York facilities. Yet, New York chose not to participate in the trading arrangement because upgrades of their plants were already underway and some plants were subject to court orders. In fact, a 2010 report from the state on hypoxia projects very modest gains in the Sound.⁹⁶ The cost estimates provided by a 2006 report suggest that, beyond a limited capital investment, there is no significant benefit in reduced hypoxia as capital investment increases.⁹⁷ It is unclear whether the level set by the TMDL reflects this economic reality.

As of 2010, the amounts of reduction of nitrogen were on schedule as phased in over time, but what does the progress as of 2010 signify? Unlike some air quality trading, the water quality trades are affected by significant public subsidies for upgrades to participating plants, making it difficult to determine whether any improvements are due to trading or public investments. Finally, the trading program envisages ratios between areas depending upon the hypoxia levels. It is unclear what effect such ratios may have in affecting non-degradation in the future.⁹⁸

95. CONN. GEN. STAT. ANN. §§ 22a-521–22a-527 (West 2010). See CONN. DEP'T OF ENERGY & ENVTL. PROT. REPORT OF THE NITROGEN CREDIT ADVISORY BOARD FOR CALENDAR YEAR 2010, at 3 (2011), *available* *at* http://www.ct.gov/dep/lib/dep/water/municipal_wastewater/nitrogen_report_2010.pdf (describing the beneficial effects of credit and payment distributions and on-time stage reduction of nitrogen pollution has on the pollution emitted from sewage treatment plants in Connecticut) [hereinafter REPORT OF THE NITROGEN CREDIT ADVISORY BOARD].

96. See *id.* (highlighting the fact more plants will be coming online to help further reduce nitrogen pollution on the Long Island Sound).

97. REPORT OF THE NITROGEN CREDIT ADVISORY BOARD, *supra* note 89.

98. See, e.g., CHESAPEAKE BAY FOUND., *Facts About Nutrient Trading*, <http://www.cbf.org/document.doc?id=141> (last visited July 15, 2012); Christopher Gross et al., *Nitrogen*

Many of these doubts are reflected in the changing of the TMDL rule in 2010. This revision includes a recent agreement to expand the program to surrounding states.⁹⁹ Such an expansion indicates that, at a minimum, the program as targeted at the Connecticut plants is not sufficient to reduce hypoxia in the Sound. Further modeling of a wider range of nitrogen sources, including the modeling of air deposition sources, is under way. It remains to be seen whether all of these efforts will yield more dramatic results in the immediate future.

F. Impacts of Electricity Generation and Energy Production

Over the last fifty years, the Sound has been a magnet for proposed and actual energy production and transmission. Near a major market for energy, the Sound offers a reservoir for cooling and a medium for energy transfers through electrical lines and gas pipelines.¹⁰⁰ The CZMA does not prohibit electricity production and energy production facilities in the coastal areas and, indeed, appears to permit them, at least within some areas under its “national need” provisions. Similarly, the CCMA also did not explicitly prohibit electricity generation and energy developments to be sited on the Sound. There has been litigation over air pollution produced by coal- and oil-powered plants—such pollution may well settle over the Sound. Such litigation has not been successful,¹⁰¹ and, even if it were, it did not seek to completely prevent the deposition of sulfur oxide pollutants on the Sound. In addition, at least three nuclear power units have been built in Waterford, Connecticut; recent permits have conditioned their intake and disposal of water and other pollutants, but, unlike recent New York plants, closed cycle cooling has not been required.¹⁰² In the past decade, an electrical transmission line has been built across the bottom of the Sound, but not before a temporary moratorium was adopted by the Connecticut legislature

Trading Tool to Facilitate Water Quality Credit Trading, 63 J. SOIL & WATER CONSERVATION, 44A–45A (2008) (examining the effect of using ratios depending upon hypoxia levels).

99. See REPORT OF THE NITROGEN CREDIT ADVISORY BOARD, *supra* note 87, at 14 (stating more states will start to participate in the program).

100. TASK FORCE ON LONG ISLAND SOUND, COMPREHENSIVE ASSESSMENT AND REPORT—PART II—ENVIRONMENTAL RESOURCES AND ENERGY INFRASTRUCTURE OF LONG ISLAND SOUND 26–27 (2003), *available at* <http://www.easternct.edu/sustainenergy/taskForceWorkingGroup/AssessmentReport2.pdf> [hereinafter TASK FORCE ON LONG ISLAND].

101. Connecticut v. U.S. EPA, 656 F.2d 902 (1981), (which exemplifies the limited control of EPA over the interstate pollution from New York which might have affected the Sound).

102. Connecticut Coalition v. Millstone, Nuc. Rep. p 20, 644, 114 Fed. Appx. 36 (Nov. 16, 2004) (2004 WL 2603567).

and upheld by the courts. Interestingly, the moratorium was challenged in court as an unconstitutional taking, and, in assessing the public interest, the court looked to the coastal management legislative description of the Sound's natural resources.¹⁰³ More recently, a natural gas pipeline facility was proposed, but rejected, after extensive litigation under the Clean Water Act and the CZMA.¹⁰⁴ In addition, a natural gas terminal was proposed, but rejected, by the Secretary of Commerce on a CZMA consistency determination on an objection under the New York Coastal Management legislation.¹⁰⁵ Finally, ideas for a wind farm in the Sound have been circulated, but were abandoned in 2007 as uneconomical.¹⁰⁶

IV. THE LIMITS OF ECOSYSTEM MANAGEMENT

Our working hypothesis is that the status of knowledge is altered as societies enter what is known as the postindustrial age and cultures enter what is known as the postmodern age.

—Jean-Francois Lyotard, 1979¹⁰⁷

Nature in the twenty first century will be a nature that we make.

—Daniel Botkin, 2009¹⁰⁸

103. *Cross Sound Cable Co., LLC v. Rocque*, 2003 WL 1900775, at *3 (Conn. Super. Ct. 2003). See Brendan T. Cahill, *The Cross Sound Cable: Connecticut's Battle to Preserve the Integrity of Environmental Regulations*, VT. J. ENVTL. L. ONLINE EDITORIAL (Nov. 29, 2003), <http://www.vjel.org/editorials/pdf/ED10041.pdf> (explaining the federalism concerns related to the permitting of the Cross Sound Cable).

104. *Islander East Pipeline Co., LLC v. McCarthy*, 525 F.3d 141 (2d Cir. 2008) (concerning the Natural Gas Act and Clean Water Act); *Connecticut v. U.S. Dep't of Commerce*, No. 3:04cv1271 (SRU), 2007 WL 2349894 (D. Conn. Aug. 15, 2007) (holding the Secretary's CZMA decisions was arbitrary and capricious).

105. Decision and Findings in the Consistency Appeal of Broadwater Energy, L.L.C. and Broadwater Pipeline, L.L.C. from an objection by New York 37 (Sec'y of Commerce Apr. 13, 2009), [http://www.ogc.doc.gov/czma.nsf/49320ADEF708E3EF85257597005EFA67/\\$File/Broadwater_Decision_04-13-2009.pdf](http://www.ogc.doc.gov/czma.nsf/49320ADEF708E3EF85257597005EFA67/$File/Broadwater_Decision_04-13-2009.pdf).

106. See John Laumer, *Long Island Sound Wind Farm Project Canceled on Cost Issues*, TREEHUGGER (Aug. 24, 2007), <http://www.treehugger.com/corporate-responsibility/long-island-sound-wind-farm-project-canceled-on-cost-issues.html> (reporting on the canceled Long Island Sound offshore wind project).

107. JEAN-FRANCOIS LYOTARD, *THE POSTMODERN CONDITION: A REPORT ON KNOWLEDGE* 30 (Geoff Bennington & Brian Massumi trans., University of Minnesota Press 1984) (1979).

108. DANIEL B. BOTKIN, *DISCORDANT HARMONIES: A NEW ECOLOGY FOR THE TWENTY FIRST CENTURY* (2009) (excerpt), available at <http://www.danielbbotkin.com/books/discordant-harmonies/discordant-harmonies-excerpt>.

We saw above that the CCMA was part of a more extensive history of the coastal communities of Connecticut and New York's Long Island Sound, beginning before the whaling ships sailed out of New London and extending to the present day. The law is merely a small part of a half-century effort to both develop and protect the Sound and its resources. The events that took place after the CCMA was enacted in 1979 reveal both its strengths and shortcomings. On the one hand, the law has helped coastal communities to attend to the coastal impacts of its land use decisions and minimize the eclipse of the tidal wetlands. It has provided some legal support for community opposition to developments such as the proposed natural gas terminal and pipelines. It laid the basis for the discovery, or at least the documentation, of hypoxia, which helped to stimulate the organization of the Long Island Sound Committee that promoted the control of hypoxia in the Sound.

However, this history also reveals limitations in the original CCMA. The original CCMA did not provide any legal basis for linkage of coastal management of fish habitat to the regulation of fishery management. It remained for amendments to the fisheries laws themselves to make the connection (which still remains weak). It did not offer support for "a working Sound" supported by aquaculture and other water-related enterprises. The efforts to control the significant water pollution impacts upon the Sound from both pre-existing and later nuclear power plants had to rely upon the federal Clean Water Act and corresponding state laws rather than on the CCMA, and these efforts failed. The effort to remove the cumulative point source and non-point source pollutants within the Sound was ultimately funded, for the most part, under new legislation, and it remains to be seen whether that effort will be successful. The CCMA also failed to provide a full resolution of the problem of beach access, deferring instead to the courts to weigh in on constitutional grounds.

As a consequence of shortcomings in the CCMA, other laws stepped into the vacuum, including constitutional claims for equal beach access, amendments to the fisheries management laws, new funding for sewer treatment facilities, increased regulation of some energy facilities, and renewed attention to air deposition. These initiatives may be regarded as adaptations of the original CCMA. However, they may represent the fact that, despite the adoption of coastal legislation, the culture of the coast remains and the ways and norms of life, concerns about private property and equality, urgent economic needs, and traditional patterns of waste disposal continue.

Why has the CCMA legislation and later legislation not been more successful? First, the CCMA echoes its land use origins, focusing upon land

developments in the immediate coastal area. Hence, the law cut itself off from the planning, management, and control of water and water resources such as the fisheries. Second, the initial boundaries of the coastal area and the coastal zone did not reach to the watershed that contained many of the past industries and present sewer treatment facilities that affected the coastal resources and the water quality in the Sound. Nor did the law extend its jurisdiction to the air pollution deposition upon the Sound from sources outside the immediate coastal area. Only with the 1990 federal Clean Air Act amendments was serious attention paid to air deposition. Third, the funding of all of the laws was modest, which, in turn, limited the funds available to encourage benign water-related uses, and, equally important, pay for environmental protection and restoration.

There is, however, another reason for the failure of the CZMA's and the CCMA's efforts to ensure ecosystem management. There was no successful scientifically-guided Sound program. Despite the provisions in both the federal and state coastal management laws, proper assessments and monitoring were not undertaken. This failure is a failure to meet the principles which I call the principles of "Tier II" ecosystem management. The U.S. Ecosystem Advisory Panel identified a series of these principles: (1) the limited ability to predict ecosystem behavior; (2) the presence of thresholds and limits which, when exceeded, can effect major system restructuring; (3) the possibility of irreversible change; (4) the importance of diversity to ecosystem functioning; (5) the presence of multiple scales within and among ecosystems; (6) linked components of ecosystems; (7) open boundaries; and (8) change of ecosystems over time.¹⁰⁹

The history of regulation of the coast and the Sound reveals that knowledge is lacking in regard to this system. Fisheries management cannot predict the relative impacts of water quality, habitat condition, and other factors on the fish population. The impacts of many energy activities upon fish population and the sediment conditions are difficult to assess. The relative contributions of point sources and non-point sources to overall pollution of the Sound are difficult to quantify.

One of the principal reasons for the lack of firm knowledge about the relations among the components of the Long Island ecosystem is that these "natural relationships" are affected by the fact that the Sound and its coast are heavily influenced by a range of social and economic activities of the surrounding human community. For example, given the multiple changing

109. ECOSYSTEM PRINCIPLES ADVISORY PANEL, ECOSYSTEM-BASED FISHERY MANAGEMENT 13-17 (1998), *available at* <http://www.nmfs.noaa.gov/sfa/EPAPrpt.pdf>.

human activities influencing the flow of non-point source pollutants into the Sound, as population changes, agricultural activities shift, construction waxes and wanes, marinas grow, air pollution changes, and the natural sources of pollution change, the total amount and location of pollutants in the Sound will change. Consequently, it is necessary to see these changing relationships of natural variables as part of a larger social and political system.

The acceptance of this surrounding economic and social activity and its impact upon the natural ecosystem of the Sound poses a challenge for sustainability.

V. THE LONG ISLAND SOUND AND ITS COAST: THE PLACE OF AN URBAN INSHORE COMMUNITY

Our entire landscape tradition is the product of a shared culture . . . built from the rich tradition of myths, memories and obsessions.

—Simon Schama, 1995¹¹⁰

The state comes into existence, originating in the bare needs of life, and continuing in existence for the sake of the good life.

—Aristotle, 384-322 BC¹¹¹

The CCMA was enacted before most laws began to express the evanescent and diaphanous ideal of sustainability.¹¹² “Sustainability” is a term that assumed public popularity with the World Commission on Environment and Development’s *Our Common Future* in 1984.¹¹³ Since then, sustainability has been a popular idea and one which has festooned the titles of several more recent environmental laws, such as the “Sustainable Fisheries Act.”¹¹⁴

110. SCHAMA, *supra* note 2, at 14.

111. ARISTOTLE, *THE POLITICS* 59 (T.A. Sinclair trans., Trevor J. Saunders ed., Penguin Books 1981).

112. See generally BRYAN NORTON, *SUSTAINABILITY: A PHILOSOPHY OF ADAPTIVE ECOSYSTEM MANAGEMENT* (2005) (examining the theory of sustainability); C.S. Hollings, *Theories for Sustainable Futures*, 4(2) *CONSERVATION ECOLOGY* 7 (2000), available at <http://www.consecol.org/vol4/iss2/art7/> (examining different perspectives on sustainability).

113. Rep. of the World Comm’n on Env’t and Dev., *Our Common Future*, ch. 2, U.N. Doc. A/42/427; GAOR, 42d Sess., Supp. No. 25, Annex (Aug. 4, 1987), available at <http://www.un-documents.net/ocf-02.htm>.

114. Sustainable Fisheries Act, Pub. L. 104-297, 110 Stat. 3565 (1996) (amending the Magnuson Fishery Conservation and Management Act, 16 U.S.C. §§ 1801–82 (1976)).

I do not plan an extended discussion of the nature of sustainability here. I am content to adopt Bryan Norton's schematic definition in his now classic work, *Sustainability*, as "a relationship between generations such that the earlier generations fulfill their individual wants and needs so as not to destroy or close off, important and valued options for future generations."¹¹⁵ According to Norton, the implicit values of such sustainability are: (1) "community-procedural values," in which the individuals' relationship to the environment is defined as a shared responsibility of the relevant community to present and future generations; (2) "weak sustainability values" indicated by economic measures of the value of the environment and its services now and in the future; (3) risk avoidance values, in which unacceptable risks are avoided, now and in the future; and (4) community identity values which individuals develop in their ways of life over time and project, through their life ways, for future generations.¹¹⁶

If one were to examine the history of the laws pertaining to the Sound, there is little doubt that "community-procedural values" have been expressed in frequent and widespread citizen action to "save the Sound." Some of the federal and state laws listed above seek to ensure the protection and development of the Sound by enabling citizen participation. Although we neglected to include an explicit citizen participation provision in the CCMA, the law was adopted with a substantial number of public hearings and the law indirectly incorporates the participation mandated as part of local planning and zoning laws.¹¹⁷ Earlier and subsequent federal and state laws strengthened the standing of citizens to sue.¹¹⁸ Turning to the second

115. NORTON, *supra* note 108, at 363.

116. *Id.* at 365.

117. *See, e.g.*, Coastal Zone Management Act, 16 U.S.C. §§ 1455(d)(1), (4), 1455b(d)(5), 1457 (2006); Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §§ 1852(h)(3), 1852(i)(2)(D) (2006); National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321–4347 (2006); Administrative Procedure Act, 5 U.S.C. § 553 (2006); CONN. GEN. STAT. ANN. § 22a-32 (West 2011) (requiring hearing for tidal wetlands designation); CONN. GEN. STAT. ANN. §§ 22a-101–22a-109 (incorporating procedures of CONN. GEN. STAT. ANN. §§ 8-2 for adoption of coastal provisions of municipal plans and zoning regulations). *But see* Marc B. Mihaly, *Citizen Participation in the Making of Environmental Decisions: Evolving Obstacles and Potential Solutions through Partnerships with Experts and Agents*, 27 PACE ENVTL. L. REV. 151 (2010) (standing for the proposition that while politicians like citizen participation provisions, they rarely change their minds through this process).

118. *See, e.g.*, Clean Water Act, 33 U.S.C. § 1365 (2006); Endangered Species Act, 16 U.S.C. § 1540(g) (2006); Clean Air Act § 304, 42 U.S.C. § 7604 (2006). For other federal citizen suit provisions, *see* Cass R. Sunstein, *What's Standing After Lujan? Of Citizen Suits, "Injuries," and Article III*, 91 MICH. L. REV. 163, 165 n.11 (1992) (listing the citizen suit provisions in major environmental statutes). At least 26 states have some form of citizen suit provision in their environmental laws, *see*

measure of sustainability within the planning process, there have been sophisticated efforts to measure the economic values of the Sound—although much of this effort remains limited to the valuing of fisheries resources.¹¹⁹ In the case of energy facilities, cost/benefit analysis is applied to nuclear development as part of environmental assessments and/or environmental impact statements.¹²⁰ These include the controversial estimation of economic value of future benefits as indicated by a present value measured by the use of discount rates. Great debate continues to swirl around cost/benefit analysis and discount rates.¹²¹ The third dimension of sustainability—the avoidance of present and future unacceptable risks—characterizes most of the environmental protection efforts in the Sound, but each of the laws clearly embraces something less than zero risks. Thus, for example, the management measures adopted for non-point source control under the CZMA have to be “economically achievable.”¹²²

It is the fourth dimension of sustainability—the projection of community identity values—that I deem to be most important. Community is implicit in the participation of citizens in the management of the Sound. A community’s values are reflected as they seek to balance both the economic values of the past and future, as well as the appropriate level to be set between economic and environmental goals.¹²³ But the sustainability

James R. May, *The Availability of State Environmental Citizen Suits*, 18 NAT. RESOURCES & ENV’T 53, 55–56 (2004) (laying out the various citizen suit provisions in state environmental laws).

119. See generally Joseph E. Blumberg, *Sound Values*, LONG ISLAND SOUND STUDY: A PARTNERSHIP TO RESTORE AND PROTECT THE SOUND, <http://longislandsoundstudy.net/2010/03/sound-values/> (last visited July 15, 2012) (computing the commercial, recreational, and non-use values of the Sound); *Status and Trends: LISS Environmental Indicators*, LONG ISLAND SOUND STUDY: A PARTNERSHIP TO RESTORE AND PROTECT THE SOUND, <http://longislandsoundstudy.net/2010/06/oyster-harvest/> (last visited July 15, 2012) (showing the value of fisheries in various states); CONN. MARITIME COAL., INC. & CONN. DEP’T OF ECON. & CMTY. DEV., ECONOMIC IMPACT STUDY OF MARITIME INDUSTRIES IN CONNECTICUT (2010), available at http://www.ctmaritime.com/final_conn_maritime_report_051810.pdf (analyzing the impact the maritime industry has on the economy of the state of Connecticut).

120. See *Cross Sound Cable Co., L.L.C. v. Rocque*, 2003 WL 1900775, at *17 (assessing the environmental impacts of energy development).

121. Frank Ackerman and Lisa Heinzerling, PRICELESS: HUMAN HEALTH, THE ENVIRONMENT AND THE LIMITS OF THE MARKET (2004). See, e.g., LISA HEINZERLING & FRANK ACKERMAN, PRICING THE PRICELESS: COST BENEFIT ANALYSIS OF ENVIRONMENTAL PROTECTION (2002), available at <http://ase.tufts.edu/gdae/publications/c-b%20pamphlet%20final.pdf> (examining whether environmental cost/benefit analysis and discount rates promotes sustainability).

122. Coastal Zone Management Act, 16 U.S.C. § 1455b(g)(5) (2006).

123. See BROOKS ET AL., *supra* note 35; BROOKS, *supra* note 36 (writing about the public and communal culture of Columbia); SCHAMA, *supra* note 2 (describing the importance and advantages of a public culture for the community and the environment); CASEY, *supra* note 36 (examining the concept of place and one’s relationship to it).

of the Sound calls for something more—the values of a place-based social culture of the inshore community—the working landscape of a way of life that is not captured in ecosystem language. It is the underpinnings of this way of life that interfere with any mechanical understanding of the natural workings of the Sound and its coast as a whole.

This projection of a way of life is captured in the recent 2009 decision in the *Consistency Appeal of Broadwater Energy LLC and Broadwater Pipeline LLC*.¹²⁴ In this decision regarding the proposed Long Island Sound natural gas terminal and pipeline, the U.S. Secretary of Commerce held that, although the project served the national interest by serving the needs for natural gas in the Northeast, these national needs did not outweigh the adverse coastal effects—especially the effects on scenic and aesthetic enjoyment. The Secretary found that, “[w]hile the scenic and aesthetic effects might carry less weight if located elsewhere, they are significant when occurring in an area that is nationally prized by federal, state, and local governments in a manner calculated to protect its unique scenic and aesthetic character.”¹²⁵

The Secretary based this conclusion, in part, on New York’s argument:

The visual landscapes of the Sound are valued for their sweeping, unbroken water vistas, with views to the distant Connecticut shoreline and the transient passage of freighters, ferries and commercial fishing vessels. These landscapes are a ‘major contributor to the character’ of the region and the primary basis for public appreciation of the Sound’s landscape.”¹²⁶

In short, what underlay the landscape of the Sound to be protected was not the ecosystem alone, but the scenic identity resting upon the workings of the inshore way of life.

124. Decision and Findings in the Consistency Appeal of Broadwater Energy, L.L.C. and Broadwater Pipeline, L.L.C. from an objection by New York 16 (Sec’y of Commerce Apr. 13, 2009), [http://www.ogc.doc.gov/czma.nsf/49320ADEF708E3EF85257597005EFA67/\\$File/Broadwater_Decision_04-13-2009.pdf](http://www.ogc.doc.gov/czma.nsf/49320ADEF708E3EF85257597005EFA67/$File/Broadwater_Decision_04-13-2009.pdf).

125. *Id.* at 20.

126. *Id.* at 18–19.

CONCLUSION

In writing this paper, I discovered that not only did the federal and Connecticut coastal management laws that I have described seek to protect the large estuary that is Long Island Sound as an ecosystem, but they also embodied concerns about sustainability, seeking to reconcile the importance of ongoing economic activities with environmental protection and restoration for both present and future generations. This discovery was a shocking one to me. I had hoped to celebrate the coastal management laws as embodying a continuous holistic ecosystem view, implemented to protect the Sound over the years. What I discovered is that the coastal management laws were not fundamentally an ecosystem management tool; they were not designed primarily to protect the nature of the Sound, but to perpetuate the urban sea of which I had been a happy resident. I found that the problems which the coastal laws adopted subsequently to the CCMA, and litigation related to them, concerned activities well beyond nature itself, appealing to legal and political norms that were not part of the original ecosystem management effort, but that were part of our political and legal culture. Most shocking, I came to believe that, ultimately, the Sound and its urbanized coast is best understood as a place-based urbanized inshore community embodying both a natural environment and a cultural history which reflect and shape—in contradictory ways—the current and future ways of life of its denizens. As *Broadwater* shows, these ways of life can be sustained only in continual tension with the natural environment.

