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A Review Of Recent Developments In Ocean And Coastal Law

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A REVIEW OF RECENT DEVELOPMENTS IN OCEAN AND COASTAL LAW

*Compiled by the editorial staff of the
Ocean and Coastal Law Journal*

I. RECENT LEGISLATION

*Statutory Enactment of the Sea Fisheries Protection Authority:
A Decentralized Approach to the Regulation of Ireland's
Marine Resources*

On January 1, 2007, Ireland's Minister for the Department of Communications, Marine & Natural Resources established the Sea Fisheries Protection Authority (S-FPA).¹ The S-FPA is independent of Ireland's Department of Communications, Marine & Natural Resources, and is statutorily authorized to enforce the European Union Common Fisheries Policy (CFP).²

In 1983, the member states of the European Commission adopted the CFP to manage wild fish stocks, as well as aquaculture raised species.³ Today, the CFP "aim[s] at a progressive implementation of an eco-system-based approach to fisheries management."⁴ The CFP also implements

1. EnviroSolutions, Establishment of Sea Fisheries Protection Authority, <http://www.enviro-solutions.com/dailynews/ucim.htm> (last visited Apr. 1, 2007).

2. *Id.* Ireland is a member state of the European Union and is a dominant force in the regional economy, with its mackerel fishery continuing to be a valuable export. Sea Fisheries Protection Authority, 2005 Fish Landings Statistics, <http://www.sfpa.ie/EN/Statistics/Fish+Landings/2005.htm>. Mackerel landings amounted to € 42,731,578 in 2005. *Id.*

3. European Commission, About the Common Fisheries Policy, http://ec.europa.eu/fisheries/cfp_en.htm (last visited Apr. 1, 2007).

4. *Id.* "Ecosystem-based fishery management (EBFM) is a new direction for fishery management, essentially reversing the order of management priorities to start with the ecosystem rather than the target species." E. K. Pikitch, et al., *Ecosystem-Based Fishery Management*, SCIENCE, July 16, 2004, at 346.

conservation policies, structures the available fish resources and provides fleet management, maintains a profitable market, and organizes partnership agreements on an international level for conservation efforts.⁵

Although the S-FPA is regionally important for its continual enforcement of the CFP, its effects are also felt locally because it enforces general fisheries law and food-safety laws.⁶ Local duties include “quota management, collection of statistics, technical control measures and seafood safety issues at all stages from onboard vessels to processed fish and shellfish exports.”⁷

The S-FPA decentralizes the regulation of Ireland’s marine affairs. The S-FPA is managed by up to three Authority Members, which are aided in their efforts by Regional Fisheries Control Managers.⁸ Ireland is divided into three regions, each of which is controlled by one of the Regional Fisheries Control Managers.⁹

S-FPA’s management style is similar to the Regional Fishery Management Councils established by the Magnuson-Stevens Fishery Conservation and Management Act¹⁰ in the United States, in which council members are authorized to prepare and implement fishery management plans.

An ecosystem management-based approach, coupled with decentralized management of Irish fisheries, is a recipe for future sustainability of the region’s fisheries.

Japan and the International Whaling Commission: Stalemate Could Endanger Southern Ocean Whale Populations

Japan’s fleet set sail in late November, 2006 for the Southern Ocean, and planned to hunt 935 Antarctic minke whales and 10 endangered fin whales.¹¹ The fleets, however, were denied access to Australia’s ports this winter. They were also harassed on the high seas by vessels operated by the conservation organizations, Sea Shepherd Conservation Society and Greenpeace.¹²

5. European Commission, About the Common Fisheries Policy, *supra* note 3.

6. *Id.*

7. Sea Fisheries Protection Authority, Core Activities Home, <http://www.sfpa.ie/EN/Core+Activities/> (last visited Apr. 1, 2007).

8. *Id.*

9. *Id.*

10. 16 U.S.C. §§ 1801-1882 (2000).

11. Environment News Service, *Emotional Anti-Whaling Battle Escalates in Southern Ocean*, Jan. 16, 2007, <http://www.ens-newswire.com/ens/jan2007/2007-01-16-04.asp>.

12. *Id.*

Japan justifies the whale hunt for scientific purposes. According to the Japanese Marine Fisheries Research and Development Department, hunting whales provides researchers with data on what whales eat and how old they are.¹³ This information may correlate to the decline in the wild fish stocks, as Japanese researchers have postulated that while the number of whales has been increasing, the wild fish stock populations have steadily decreased.¹⁴ Japan further justifies whaling because of its cultural and traditional significance. Indeed, whaling has been a national pastime for over 400 years.¹⁵

In sustaining its whaling tradition, Japan contends that provisions in the International Whaling Commission (IWC) regulations allow annual whale hunts for scientific purposes.¹⁶ The IWC was established under the International Convention for the Regulation of Whaling, which was signed in Washington, D.C. in 1946, and is supported by seventy-three member nations, including the United States.¹⁷ The primary purpose of the IWC is to regulate international whaling.¹⁸ To facilitate this regulation, a permitting program was established in which IWC member countries are permitted to hunt whales for scientific purposes,¹⁹ including: monitoring the effects of environmental change, such as global warming, on whale populations; acoustic tracking of whales; and genetic experimentation.²⁰

In response to the antagonism towards Japan's recent whale hunts, Japanese IWC commissioner Minoru Morimoto called a special meeting on February 13, 2007, among member nations to lift the moratorium on

13. BBC News, *The Forces that Drive Japanese Whaling*, June 15, 2006, <http://news.bbc.co.uk/2/hi/asia-pacific/5080508.stm>.

14. *Id.*

15. *Id.*

16. Environment News Service, *supra* note 11.

17. International Whaling Commission, IWC Members and Commissioners, <http://www.iwcoffice.org/commission/members.htm> (last visited Apr. 1, 2007).

18. International Whaling Commission, IWC Information, <http://www.iwcoffice.org/commission/iwcmain.htm> (follow "History and Purpose" hyperlink). The IWC: provide[s] for the complete protection of certain species; designate[s] specified areas as whale sanctuaries; set[s] limits on the numbers and size of whales which may be taken; prescribe[s] open and closed seasons and areas for whaling; and prohibit[s] the capture of suckling calves and female whales accompanied by calves.

Id.

19. International Whaling Commission, International Convention for the Regulation of Whaling, Art. VIII, ¶¶ 1-3, *available at* <http://www.iwcoffice.org/commission/convention.htm#convention> (last visited Apr. 1, 2007).

20. International Whaling Commission, IWC Information, *supra* note 18 (follow "Scientific Research" hyperlink).

commercial whaling that was enforced by the IWC in 1986.²¹ The purpose of the special meeting was to re-draft some of the IWC regulations, potentially leading to a management approach that adopts commercial whaling, instead of maintaining the traditional conservationist approach in the 1986 moratorium. This meeting, however, was boycotted by at least thirty-eight member nations, including the United States, Australia, and the United Kingdom.²²

Polarization between IWC member countries is evident, with the anti-whaling countries refusing to reform the IWC as suggested by pro-whaling countries, such as Japan, Norway, and Iceland. This clash might imperil the Southern Ocean minke whale population, which, according to one U.S. scientist, is not rebounding as successfully as Japanese scientists have postulated.²³ If regulatory measures are not implemented by the IWC, the whale hunts will continue: Japan has already declared its intention to hunt humpback whales next year.²⁴

The Pros and Cons of Revising Canada's Fisheries Act

In December 2006, Canada's Minister of Fisheries and Oceans proposed numerous revisions to the Fisheries Act (Act),²⁵ the goals of which are to foster sustainable growth of the nation's fisheries and to provide the nation's fishermen with greater access to the decision making process.²⁶ The revisions are long overdue; as the Act has not been revised since it was enacted in 1868, when British Columbia, Newfoundland, and Labrador were not part of Canada.²⁷

One of the cornerstones of the revised Act is that the Minister of Fisheries and Oceans will no longer have absolute discretion in granting new fishing licenses.²⁸ This change will provide for decentralization of the

21. BBC News, *Anti-whalers Boycott Japan Push*, Feb. 13, 2007, <http://news.bbc.co.uk/2/hi/science/nature/6355593.stm>.

22. *Id.*

23. BBC News, *'No Surge' in Minke Whale Numbers*, Feb. 20, 2005, <http://news.bbc.co.uk/2/hi/science/nature/4282627.stm> (U.S. scientist Steve Palumbi explains an analysis of mitochondrial DNA (mDNA) revealed that there was no population "boom," but only a steady population growth for the past one million years).

24. Environment News Service, *supra* note 11.

25. Fisheries Act, R.S.C., ch. F-14 (1985), available at <http://lois.justice.gc.ca/en/ShowFullDoc/cs/F-14/en>.

26. Press Release, Fisheries and Oceans Canada, Canada's New Government to Modernize the *Fisheries Act* (Dec. 13, 2006), http://www.dfo-mpo.gc.ca/media/newsrel/2006/hq-ac46_e.htm.

27. *Id.*

28. See Fisheries Act, *supra* note 25, § 7.1 ("the Minister may, in his absolute discretion,

leasing and licensing process, as fishermen will play an active role in managing Canada's fisheries.

The change will further provide an ecosystem-based approach to the sustainability of Canada's aquatic ecosystems as reflected in the modifications regarding habitat management. In the original Act, habitat management and pollution prevention were monitored through a separate section of the Act, even though an original goal of the Act was to protect and conserve fish habitat.²⁹ With the new revisions, habitat management and pollution prevention will be integrated into the Act as a whole.

Finally, the Fisheries Management Orders (FMOs) will also be revised to reflect new quotas and size limits of Canada's multiple fisheries.³⁰ In the revised Act, the FMOs will be made by the Minister, a Department of Fisheries and Oceans officer, or a provincial officer, and will provide for, in theory, a simple and organized quota system, and for a means to inform fishermen of area closures.³¹

Although management decentralization might seem like a positive method in which members of the fishing industry can become involved in managing their livelihood, there are also benefits of a management system in which the Minister retains complete discretion over leasing and licensing. In Maine, for example, the near-shore aquaculture statutes maintain that the Department of Marine Resources Commissioner retains absolute discretion in granting finfish and shellfish aquaculture leases and licenses.³² Many nationwide policy analysts and lawyers have praised this successful regulatory approach in that it provides for a streamlined leasing process. Altering the discretionary power of the Minister, therefore, may contribute to administrative hassles and to delay in the licensing and permitting procedures.

*The Piedras Blancas Historic Light Station Outstanding
Natural Area Act of 2007*³³

The Piedras Blancas Historic Light Station Outstanding Natural Area Act of 2007 (Act) was introduced into the House of Representatives on

wherever the exclusive right of fishing does not already exist by law, issue or authorize to be issued leases and licenses for fisheries or fishing, wherever situated or carried on.”).

29. *Id.* §§ 34-42.1.

30. *Id.* § 43.

31. Fisheries and Oceans Canada, Before and After: What do *the Fisheries Act* Changes Mean, Dec. 2006, http://www.dfo-mpo.gc.ca/media/backgrou/2006/hq-ac46b_e.htm?temp.

32. 12 M.R.S.A. § 6072(1) (2005). “[T]he commissioner’s power to lease lands under this section is exclusive.” *Id.*

33. H.R. 276, 110th Cong. (2007).

January 4, 2007, by Representative Lois Capps (D-CA).³⁴ The Act was referred to the House Committee on Resources the same day.³⁵

The Act states several congressional findings, including: the Piedras Blancas Light Station (Station) contains nationally recognized historical structures; the coastline adjacent to the Station has “significant wildlife and marine habitat that provides critical information to research institutions;” the Station is an important part of the history and prehistory of the surrounding region; the coastal area around the Station was traditionally used by local Indian tribes; the Station is associated with nearby Hearst Castle; the Station “represents a model partnership where future management can be successfully accomplished among” federal, state, county, and local communities, as well as private groups; the Station would “make a significant addition to the National Landscape Conservation System;”³⁶ and that statutory protection of the Station and surrounding lands is necessary to “ensure that it remains a part of our historic, cultural, and natural heritage and to be a source of inspiration for the people of the United States.”³⁷

The Act would establish the Station and surrounding lands as an Outstanding Natural Area (ONA)³⁸ managed by the National Landscape Conservation System (NLCS), which is a division of the Bureau of Land Management.³⁹ In addition, designating the Station and surrounding area as an ONA would cause the area to be withdrawn from “all forms of entry, appropriation, or disposal under the public land laws; . . . location, entry, and patent under the public land mining laws; and . . . operation of the mineral leasing and geothermal leasing laws and the minerals materials laws.”⁴⁰

Furthermore, the Act would direct the Secretary of the Interior to create a comprehensive management plan for the ONA within three years of the

34. 153 CONG. REC. H110, 121 (daily ed. Jan. 4, 2007). Representative Capps represents California’s 23rd Congressional District. Piedras Blancas Light Station is located, not surprisingly, in Representative Capps’s district.

35. H.R. 276, *supra* note 33.

36. *Id.* §§ 2(2)-(7). For more information about the NLCS, see the NLCS website, <http://www.blm.gov/nlcs/index.html> (last visited Apr. 1, 2007).

37. H.R. 276, *supra* note 33, § 2(8).

38. “The Outstanding Natural Area designation was established by Congress primarily to protect unique scenic, scientific, educational, and recreational values for the enjoyment of current and future generations.” NLCS, Outstanding Natural Area, <http://www.blm.gov/nlcs/ona/index.html> (last visited Apr. 1, 2007). Currently, the only existing ONA is the Yaquina Head Lighthouse in Oregon. *Id.* Yaquina Head Lighthouse ONA was established in 1980. *Id.*

39. H.R. 276, *supra* note 33, § 3(a), (c).

40. *Id.* § 3(d)(1)-(3).

date of enactment of the Act.⁴¹ The management plan would include provisions to preserve, *inter alia*, the natural, scientific, and educational value of the Station,⁴² as well as goals for restoring the Station and surrounding buildings, programs for public education about the Station, and “cultural resource management strategies” for the ONA.⁴³ The Act would also guarantee that Indians and Indian tribes have access to the ONA for “traditional cultural and religious purposes.”⁴⁴

Protecting and enhancing our nation’s scenic, cultural, and historic sites is a laudable goal in and of itself, and passage of the Act will ensure that this particular site will be preserved and enhanced for generations to come. The more intriguing aspect of the Act, however, is its function as a bellwether for the willingness of this Congress to pass such conservation legislation. If the Act passes, and creates the first ONA since 1980, it may signal that Congress is willing to entertain more conservation legislation, and could create fertile ground for similar legislation.

*The Pacific Salmon Emergency Disaster Assistance Act of 2007*⁴⁵

The Pacific Salmon Emergency Disaster Assistance Act of 2007 (Act) was introduced in the Senate by Senator Barbara Boxer (D-CA) on January 4, 2007.⁴⁶ The Act currently has two co-sponsors, Senator Gordon Smith (R-OR) and Senator Ron Wyden (D-OR).⁴⁷ The Act was referred to the Senate Committee on Commerce, Science, and Transportation on the day it was introduced.⁴⁸ On the same day, Representative Mike Thompson (D-CA) introduced an identical bill with an identical title in the House.⁴⁹ The House version of the Act currently has eleven co-sponsors.⁵⁰ The House

41. *Id.* § 4(c).

42. *Id.* § 4(c)(1).

43. *Id.* § 4(c)(2), (3), (5).

44. *Id.* § 4(j).

45. S. 145, 110th Cong. (2007).

46. 153 CONG. REC. S36, 40 (daily ed. Jan. 4, 2007).

47. S. 145, *supra* note 45.

48. *Id.*

49. 153 CONG. REC. H110, 118 (daily ed. Jan 4, 2007). Representative Thompson represents California’s First Congressional District, which encompasses the far northern coast of California.

50. H.R. 234, 110th Cong. (2007). The current co-sponsors are: Rep. Capps (D-CA), Rep. DeFazio (D-OR), Rep. Eshoo (D-CA), Rep. Farr (D-CA), Rep. Hooley (D-CA), Rep. Lantos (D-OR), Rep. Lofgren (D-CA), Rep. Matsui (D-CA), Rep. Miller (D-CA), Rep. Woolsey (D-CA), and Rep. Wu (D-OR). *Id.*

version was referred to the House Committee on Resources on the day it was introduced.⁵¹

The Act would appropriate \$60,400,000 in a lump sum to the Pacific States Marine Fisheries Commission (PSMFC).⁵² The PSMFC would be required to

distribute such amount among fishing communities, Indian tribes, small businesses, including fishermen, fish processors, and related businesses, individuals, and other entities for assistance for the economic and social effects of the commercial fishery failure designated under section 312(a) of the Magnuson-Stevens Fishery Conservation and Management Act [MSA] to mitigate the economic losses to such communities, tribes, businesses, individuals or other entities caused by closures or other restrictions on the harvesting of Klamath River Fall Chinook salmon.⁵³

Section 312(a) of the MSA allows the Secretary of Commerce (Secretary), on his own or at the request of a state Governor, to determine if there has been a commercial fishery failure because of a natural disaster, a man-made disaster beyond the control of fishery managers, or for an undetermined cause.⁵⁴ Once the Secretary has made the determination that there is a commercial fishery failure, section 312(a) of the MSA authorizes the Secretary to

make sums available to be used by the affected State, fishing community, or by the Secretary in cooperation with the affected State or fishing community for assessing the economic and social effects of the commercial fishery failure, or any activity that the Secretary determines is appropriate to restore the fishery or prevent a similar failure in the future and to assist a fishing community affected by such failure.⁵⁵

On August 10, 2006, the Secretary declared just such a fishery failure in the Klamath River Fall Chinook salmon fishery.⁵⁶

51. *Id.*

52. S. 145, *supra* note 45, § 2(a). The PSMFC is a congressionally created agency whose "primary goal is to promote and support policies and actions to conserve, develop, and manage our fishery resources in California, Oregon, Washington, Idaho and Alaska." PSMFC, PSMFC Information, <http://www.psmfc.org/psmf-information.html> (last visited Apr. 1, 2007).

53. S. 145, *supra* note 45, § 2(a).

54. 16 U.S.C. § 1861a(a)(1)(A)-(C) (2000).

55. *Id.* § 1861a(a)(2).

56. Press Release, Carlos M. Gutierrez, Secretary of Commerce, Declaration Concerning

The Act would specifically designate not only the amount the Secretary must appropriate for the disaster in the Klamath River Fall Chinook salmon fishery, but would also direct that the funds be distributed to the PSMFC. By essentially removing the Secretary's discretion in allocation and distribution of funds, the Act would significantly constrain the Secretary's ability to respond to the fishery failure in the Klamath River Fall Chinook salmon fishery. This Act may be an attempt by Congress to preempt the Secretary's appropriation decision for fear that the amount appropriated will be too low. The Act may also signal frustration on the part of several members of Congress with the administration of relief after a commercial fishery failure.

*The Ocean and Coastal Exploration and NOAA Act*⁵⁷

The Ocean and Coastal Exploration and NOAA Act (OCEAN Act or Act) was introduced in the Senate on January 4, 2007, by Senator Ted Stevens (R-AK).⁵⁸ The Act was referred to the Senate Committee on Commerce, Science, and Transportation on the same day it was introduced.⁵⁹ The Senate Committee on Commerce, Science, and Transportation ordered the Act favorably reported to the full Senate on February 13, 2007.⁶⁰

The Act directs the Secretary of Commerce, through the Administrator of the National Oceanic and Atmospheric Administration (NOAA) and in consultation with the National Science Foundation, to "establish a coordinated national ocean exploration program within [NOAA] that promotes collaboration with existing programs of the agency."⁶¹

Some aspects of the exploration program will include: "interdisciplinary exploration voyages . . . to survey little known areas of the marine environment, inventory, observe, and assess living and nonliving marine resources . . . ;" to locate and document historic shipwrecks, to "promot[e] the development of improved oceanographic research, communication, navigation, and data collection systems, as well as underwater platforms and sensors;" and to establish a forum for

the Klamath River Fall Chinook Salmon Fishery (Aug. 10, 2006), available at http://www.commerce.gov/opa/press/Secretary_Gutierrez/2006_Releases/August/Klamath.pdf.

57. S. 39, 110th Cong. (2007).

58. 153 CONG. REC. S36, 37 (daily ed. Jan. 4, 2007).

59. S. 39, 110th Cong. (2007).

60. 153 CONG. REC. D179, 180 (daily ed. Feb. 13, 2007).

61. S. 39, *supra* note 59, § 102.

explorers and others to “enhance the scientific and technical expertise and relevance of the national program.”⁶²

The Act would also create a task force comprising representatives of NOAA, NASA, the U.S. Geological Survey, the Office of Naval Research, and others to facilitate technology transfer, improve communications infrastructure, develop an integrated data management system, perform public outreach, and encourage cost-sharing.⁶³ Additionally, the Act would appropriate \$30,500,000 to NOAA for the administration of the exploration program in fiscal year 2008, with increased funding every year until fiscal year 2017, when the appropriation would reach \$71,917,000.⁶⁴

In addition to the exploration program, the Act directs the Administrator of NOAA to “establish and maintain an undersea research program.”⁶⁵ The stated purpose of the research program is “to increase scientific knowledge essential for the informed management, use and preservation of oceanic, coastal and large lake resources through undersea research, exploration, education and technology development.”⁶⁶

The research program would have individual programs aimed at advanced undersea technology: “[u]ndersea science-based education and outreach programs to enrich ocean science education and public awareness of the oceans and Great Lakes[,] . . . [d]evelopment of advanced undersea technology associated with seafloor observatories, remotely operated vehicles, autonomous underwater vehicles, and new sampling and sensing technologies[,]” and “[d]iscovery, study, and development of natural products from ocean and aquatic systems.”⁶⁷ The Act appropriates funding for the research programs totaling \$17,500,000 in fiscal year 2008 increasing to \$41,064,000 by fiscal year 2017.⁶⁸ The funding is allocated between east coast and west coast Regional Centers and the National Technology Institute.⁶⁹

The Act is a very ambitious attempt to increase the focus on oceanic exploration and research. If passed, the Act would enable NOAA to commence programs that would greatly increase both undersea technology and our knowledge of the world’s oceans. Such forward thinking legislation is likely to run into significant resistance on Capitol Hill, but the

62. *Id.* § 103(1)-(3), (5), (7).

63. *Id.* § 104(1)-(5).

64. *Id.* § 106(1)-(10).

65. *Id.* § 202.

66. S. 39, *supra* note 59, § 203.

67. *Id.* § 205(2)-(5).

68. *Id.* § 207(1)-(10).

69. *Id.*

favorable report out of the Senate Committee on Commerce, Science, and Transportation gives hope that the United States will begin aggressively exploring the undersea world in much the same vein as we explore outer space.

Acts to Protect Marine Life

Several decades ago, anyone who spent time along the Maine coast could easily spot green, spiny sea urchins in the tidal pools along the shore. Today, these spherical echinoderms are harder to find due, in great part, to overfishing.⁷⁰ Recognizing the increasing risk to the species, the Maine Department of Marine Resources (DMR) created sea urchin fishing zones that remain open to fishermen for limited time periods during the year.⁷¹

In 2001, the DMR, in cooperation with the industry, the Sea Urchin Zone Council, scientists, and students at the University of Maine, began researching the problem with an annual sea urchin dive survey.⁷² Five years later, the study showed declines in the sea urchin stock biomass, particularly in certain coastal regions.⁷³ Based on the study, DMR plans to better protect sea urchins by amending the season to reallocate the days available for fishing, setting daily catch limits, as well as making other changes.⁷⁴ DMR also plans to decide whether to suspend or reinstate the license lottery.⁷⁵

Another step toward protecting sea urchins is An Act to Provide Flexibility for Sea Urchin Zones, sponsored by Senator Dennis Damon.⁷⁶ If passed, this Act would authorize the Commissioner of the Department of Marine Resources to adopt the rules needed to create sea urchin management areas, including management areas that are different from

70. AMANDA V. LELAND, ET AL., RESEEDING THE GREEN SEA URCHIN IN DEPLETED HABITATS: FINAL REPORT TO THE MAINE DEPARTMENT OF MARINE RESOURCES 2, <http://www.maine.gov/dmr/rm/seaurchin/Cape%20Elizabeth%20Final%20Report.pdf> (last visited Apr. 1, 2007).

71. Maine Department of Marine Resources, Green Sea Urchins (*strongylocentrotus drobachiensis*) in Maine, <http://www.maine.gov/dmr/rm/seaurchin/index.htm> (last visited Apr. 1, 2007).

72. Maine Department of Marine Resources, Maine's Sea Urchin Survey (Feb. 8, 2007), <http://www.maine.gov/dmr/rm/seaurchin/survey2-8-07.pdf>.

73. *Id.* The regions experiencing greatest decline include: Regions 2 "(Phippsburg to Bremen), 3 (Friendship to Rockland), 6 (Frenchman Bay to Steuben), and 7 (Milbridge to Jonesport)." *Id.*

74. Maine Department of Marine Resources, Sea Urchin Survey, *supra* note 72.

75. *Id.*

76. L.D. 139 (123d Legis. 2007).

those in place in surrounding zones.⁷⁷ Licensed persons would be subject to these rules while fishing for sea urchins inside the management areas.⁷⁸ Hopefully, these administrative and legislative efforts will work to sustain the fishery and sea urchins will again become a common sight along Maine's coastline.

An Act to List the Shortnose Sturgeon as a Marine Endangered Species

The sturgeon family, one of the most primitive of the bony fishes, is on the brink of extinction.⁷⁹ The species' depletion is in part due to the construction of dams, ongoing pollution, and commercial exploitation.⁸⁰

Dennis Damon has sponsored a bill, An Act to List the Shortnose Sturgeon as a Marine Endangered Species, to protect the sturgeon by adding it to Maine's endangered species list.⁸¹ This Act would also authorize the inclusion of the fish in the Department of Marine Resources' Section 6 Cooperative Agreement with the National Oceanic and Atmospheric Administration (NOAA), allowing federally funded research of the species in Maine waters.⁸²

A Controversial Act to Change Fishing Regulation

An Act to Permit the Landing of Lobsters Harvested by Methods other than Conventional Traps would amend Maine state law to allow incidental landings of bycatch lobsters in Maine ports by ground fishermen.⁸³ Under current state law, Maine fishermen must throw their lobsters back or take their catch out of state to sell them. "Maine is the only state in New

77. *Id.*

78. *Id.*

79. National Oceanic and Atmospheric Administration (NOAA), Office of Protected Resources, Shortnose Sturgeon, <http://www.nmfs.noaa.gov/pr/species/fish/shortnosesturgeon.htm> (last visited Apr. 1, 2007). The shortnose sturgeon is the smallest of the three sturgeon species that occur in eastern North America. *Id.* Females may live up to sixty-seven years, while males seldom exceed thirty years of age. *Id.*

80. *Id.*

81. L.D. 140 (123d Legis. 2007). On the federal level, the sturgeon has already been listed as endangered under the Endangered Species Preservation Act of 1966 (a predecessor to the Endangered Species Act of 1973). NOAA, *supra* note 79. In 1974, the National Marine Fisheries Service (NMFS) assumed jurisdiction for shortnose sturgeon. *Id.*

82. NOAA, *supra* note 79.

83. L.D. 170 (123rd Legis. 2007). The Act has created controversy between Maine lobstermen and the groundfishing industry.

England to prohibit bycatch lobster landings. Other states comply with a federally mandated limit of 500 lobsters per fishing trip.”⁸⁴

Maine’s lobstermen make up a powerful political force in the state and they strongly oppose the bill⁸⁵ because they believe it will cut into their business and be a detriment to their efforts toward conservation.⁸⁶ The lobstermen contend that the key to the sustainability of the industry is to throw back the biggest, most fertile lobsters.⁸⁷

Bob Baines, president of the Maine Lobstermen’s Association, stated that the bill was ill conceived because it would harm the lobster industry while not helping the groundfishing industry.⁸⁸ He pointed out that the sustainable practice of the lobster industry is what sets them “apart from all the other fisheries in the world.”⁸⁹ Likewise, Joe Robinson, member of the North End Lobster Co-op, who worked in the groundfish industry and recognizes the difficulties the groundfish industry faces, also believes that the bill would have detrimental effects.⁹⁰

Proponents of the bill, including ground fishermen, believe that allowing lobster bycatch would not harm Maine’s lobster industry but would instead help contribute to the state’s seafood processing sector and the state’s economy.⁹¹ The industry argued that ground fishermen are taking catch to Massachusetts; thus, bypassing the Portland Fish Exchange, to gain profit from the lobster bycatch.⁹² As a result, Maine loses approximately \$20,000 of groundfish, along with jobs, for the sake of 500 lobsters.⁹³ In addition, under the proposed bill bycatch harvesting would continue to be prohibited within fifty miles of the Maine coast.⁹⁴ Bill proponents further assert that lobster abundance is at an all time high in Maine.⁹⁵

84. Portland Fish Exchange, About L.D. 170, available at <http://www.betterlobsterlaw.com/facts/background.pdf> (last visited Apr. 1, 2007).

85. Gregory D. Kesich, *Lobstermen Gear up to Fight Landing Bill*, PORTLAND PRESS HERALD, Feb. 21, 2007, at B1.

86. *Id.*

87. *Id.*

88. *Id.* at B1.

89. *Id.* at B8.

90. Interview with Joe Robinson, Director of North End Lobster Co-op, in Wiscasset, Me. (Feb. 9, 2007).

91. Portland Fish Exchange, *supra* note 84, at 2.

92. *Id.*

93. *Id.*

94. *Id.*

95. *Id.*

Lobstermen, however, counter that the lobster fishery is healthy because of the careful conservation efforts that have come through their hard work.⁹⁶ They stated that the Portland Fish Exchange is suffering because of high fuel taxes and regulations that drive fishermen south and not because of the current law.⁹⁷

It remains to be seen whether the strong force of Maine's lobster industry can bar L.D. 170's passage, maintaining Maine's unique prohibition on lobster bycatch.

An Act to Fund Marine Research

The enactment of An Act to Authorize a General Fund Bond Issue to Capitalize the Maine Marine Research Fund would provide a bond in an amount not exceeding \$30 million to fund the Maine Marine Research Fund, which is managed by the Maine Technology Institute (MTI).⁹⁸ The funds would be used to develop the marine research infrastructure by supporting collaboration between Maine's public, nonprofit, and for-profit marine research organizations.⁹⁹ Notably, the appropriation of funds will only become effective if the people of the state ratify the issuance of the bonds as set forth in the Act.¹⁰⁰

In an effort to help Maine become a nationally recognized center for marine research, MTI is now administering the Marine Research Fund, making awards from \$25,000 up to \$500,000 available to fund scientifically rigorous marine research programs.¹⁰¹ The additional funds would supplement the \$4 million dollar fund approved by Maine voters in 2005.¹⁰²

96. Kesich, *supra* note 85, at B1.

97. WCSH6 Portland: News Center, *Lobstermen Opposed to LD 170*, Feb. 21, 2007, <http://www.wsh6.com/news/article.aspx?storyid=53073>.

98. L.D. 376 (123d Legis. 2007).

99. *Id.*

100. *Id.*

101. Maine Technology Institute, *Maine Research Fund*, PERLINK"http://www.mainetechnology.com/?cat_id=269"http://www.mainetechnology.com/?cat_id=269 (last visited Apr. 1, 2007).

102. *Id.*

II. ADMINISTRATIVE LAW

Guam-Prohibition on Large Vessels

The United States Territory of Guam is the largest and most populous island in the Mariana Archipelago.¹⁰³ Its economy is primarily driven by U.S. military activities, tourism, and fish and handicrafts exports.¹⁰⁴

In the federal waters surrounding Guam, there is a bottomfish fishery that is managed under the Fishery Management Plan for the Bottomfish and Seamount Groundfish Fisheries of the Western Pacific Region.¹⁰⁵ In a proactive step, the National Marine Fisheries Service (NMFS) issued a final rule that both prohibits large vessels (those fifty feet or longer) “from fishing for bottomfish in Federal waters within 50nm (92.6km) around Guam”¹⁰⁶ and implements federal permitting, recordkeeping, and reporting requirements for these large vessels.¹⁰⁷

Until the passage of this rule, “the fishery [was] mostly unregulated.”¹⁰⁸ Although the rule became effective on December 4, 2006,¹⁰⁹ it is only likely to affect up to thirteen vessels and cost approximately sixty dollars annually for reporting.¹¹⁰ Moreover, the rule is peculiar because “[t]here is no evidence, to date, that the bottomfish stocks around Guam are currently subject to overfishing or are being overfished.”¹¹¹ Rather, NMFS took this step in an effort to avert the potential problem that large fishing vessels can bring to deepwater bottomfish habitat.¹¹²

Summer Flounder, Scup, and Black Sea Bass Fisheries

In October 2006, NMFS issued a proposed rule to set fishery specifications for summer flounder (*Paralichthys dentatus*), scup

103. GUAM DIVISION OF AQUATIC AND WILDLIFE RESOURCES AND THE WESTERN PACIFIC FISHERY INFORMATION NETWORK, GUAM 2003 FISHERY STATISTICS C.1 (May 2005).

104. *Id.*

105. Western Pacific Fishery Management Council, *Bottomfish News*, <http://www.wpcouncil.org/bottomfish.htm> (last visited Apr. 1, 2007).

106. Guam Bottomfish Management Measures, 71 Fed. Reg. 64,474 (Nov. 2, 2006) [hereinafter Management Measures].

107. *Id.*

108. *Id.*

109. *Id.* Certain revisions did not become effective on December 4, 2006, because they required approval by the Office of Management and Budget. *Id.*

110. *Id.* at 64,475.

111. *Id.* at 64,474.

112. *Id.* at 64,474-75.

(*Stenotomus chrysops*), and black sea bass (*Centropristis striata*) in United States waters of the Atlantic Ocean from approximately the southern border of North Carolina to the United States-Canada border.¹¹³ The purposes for this proposed rule, and subsequently the final rule, are:

to establish harvest levels that assure that the target fishing mortality rates (F) or exploitation rates specified for these species in the [Summer Flounder, Scup, and Black Sea Bass Fishery Management Plan] are not exceeded and to allow for rebuilding of the stocks in accordance with the Magnuson-Stevens Fishery Conservation and Management Act.¹¹⁴

Additionally, “this action implements measures that ensure continued rebuilding of the overfished scup stock and end overfishing in the summer flounder fishery.”¹¹⁵

Underlying the fishery specifications is a goal to rebuild the summer flounder stock by 2010.¹¹⁶ As such, NMFS set the Total Allowable Landings (TAL) at 12.983 million pounds, based on the best available scientific information, to ensure that the target fishing mortality rate maximum will not be exceeded.¹¹⁷ This TAL is allocated sixty percent for the commercial sector and forty percent for the recreational sector.¹¹⁸

NMFS received eighty-three written comments concerning the proposed rule from a variety of groups and individuals ranging from United States Senators, commercial fishing associations, recreational fishing associations, and conservation groups.¹¹⁹ NMFS adopted the final rule for specifications on December 14, 2006; it is effective January 1, 2007, through December 31, 2007.¹²⁰

Interestingly, “[t]he majority of comments received urged NMFS to adopt the [Mid-Atlantic Fishery Management Council’s] preferred alternative TAL of 19.9 million lb” because the TAL adopted by NMFS

113. Summer Flounder, Scup, and Black Sea Bass Fisheries, 71 Fed. Reg. 62,972 (Oct. 27, 2006). Both the Mid-Atlantic Fishery Management Council and the Atlantic States Marine Fisheries Commission manage this fishery along with the New England and South Atlantic Fishery Management Councils. *Id.*

114. *Id.*

115. 2007 Summer Flounder, Scup, Black Sea Bass Specification, 71 Fed. Reg. 75,134, 75,135 (Dec. 14, 2006) [hereinafter 2007 Specifications].

116. *Id.* at 75,135.

117. *Id.* at 75,135, 75,138.

118. *Id.* at 75,135.

119. *Id.*

120. *Id.* at 75,134-35.

was considered too restrictive.¹²¹ NMFS, however, relied on the best scientific information available, along with the mandate by the Magnuson-Stevens Act, to set quotas that allow for rebuilding of the stock by 2010.¹²² It is also worth noting that the Mid-Atlantic Fishery Management Council estimates that these quotas could affect upwards of 2200 vessels, but “the more immediate impact” will be shouldered by approximately 906 vessels.¹²³

Southern Resident Killer Whale

The killer whale, *Orcinus orca*, is found in all oceans.¹²⁴ Three types of killer whales inhabit the northeastern Pacific Ocean: residents, transients, and offshores.¹²⁵ The resident killer whale category comprises four distinct communities: Southern, Northern, Southern Alaska, and Western Alaska.¹²⁶ Recently, the National Marine Fisheries Service (NMFS) adopted a final rule that designates critical habitat for the Southern Resident.¹²⁷ This rule became effective on December 29, 2006.¹²⁸

NMFS first listed the Southern Resident killer whale distinct population segment (DPS) as endangered under the Endangered Species Act (ESA) in November of 2005;¹²⁹ NMFS subsequently issued a proposed rule for the designation of critical habitat for Southern Resident killer

121. 2007 Specifications, *supra* note 115, at 75,138.

122. *Id.*

123. *Id.* at 75,142.

124. National Marine Fisheries Service-Northwest Regional Office, Killer Whales (*Orca*), <http://www.nwr.noaa.gov/Marine-Mammals/Whales-Dolphins-Porpoise/Killer-Whales/index.cfm> (last visited Apr. 1, 2007).

125. Designation of Critical Habitat for Southern Resident Killer Whale, 71 Fed. Reg. 69,054 (Nov. 29, 2006) [hereinafter Critical Habitat].

126. *Id.*

127. *Id.* “Critical habitat” is defined as:

(1) the specific areas within the geographical area currently occupied by a species, at the time it is listed in accordance with the [Endangered Species Act] on which are found those physical or biological features (i) essential to the conservation of the species and (ii) that may require special management considerations or protection, and (2) specific areas outside the geographical area occupied by a species at the time it is listed upon a determination by the Secretary that such areas are essential for the conservation of the species.

50 C.F.R. § 424.02(d) (2006).

128. Critical Habitat, *supra* note 125, at 69,054

129. *Id.* NMFS is authorized, pursuant to the ESA, to determine whether a certain species, subspecies, or distinct population segment are threatened or endangered. Endangered Species Act, 16 U.S.C. § 1533 (2000).

whales.¹³⁰ The proposed rule, and ultimately the final rule, designated approximately 2560 square miles of marine habitat as critical habitat.¹³¹ The critical habitat is broken into three areas. Area One is the Summer Core Area in Haro Strait and the waters around the San Juan Islands;¹³² this is the area where the Southern Residents forage, especially in the summer months.¹³³ Area Two is in the Puget Sound; this area is rich with salmon during the fall salmon runs.¹³⁴ Area Three is the Strait of Juan de Fuca, which is used by the whales for “passage from Areas 1 and 2 to outside waters in the Pacific Ocean.”¹³⁵

There are three major points of interest surrounding this bill. First, NMFS received comments urging the agency to include sound as a Primary Constituent Element (PCE) of critical habitat.¹³⁶ Although NMFS acknowledged that “[c]ontinuous sounds may interfere with the whales’ echolocation and communication,” it stated that it “lack[ed] sufficient information to include sound as a PCE.”¹³⁷

Second, from the start, NMFS proposed to “exclude 18 military sites, comprising approximately 112 square miles (291 sq km), because of national security impacts.”¹³⁸ Despite the urging of “many commenters,”¹³⁹ NMFS concluded “that the national security impacts outweighed the benefits to the species.”¹⁴⁰ Third, NMFS opted to move forward with the final rule despite pending litigation because the “ESA requires that [NMFS] designate critical habitat within one year of listing.”¹⁴¹

130. Designation of Critical Habitat for Southern Resident Killer Whale, 71 Fed. Reg. 34,571 (June 15, 2006).

131. Critical Habitat, *supra* note 125, at 69,054.

132. *Id.*

133. *Id.* at 69,062.

134. *Id.* at 69,062-63.

135. *Id.* at 69,063.

136. *Id.* at 69,054-55.

137. Critical Habitat, *supra* note 125, at 69,055.

138. Designation of Critical Habitat for Southern Resident Killer Whale, *supra* note 130, at 34,571.

139. Critical Habitat, *supra* note 125, at 69,059.

140. *Id.*

141. *Id.* at 69,060.

III. RECENT CASES

Case C-185/05—Commission of the European Communities v. Ireland, action filed July 23, 2005; final judgment delivered January 11, 2007

The Commission of the European Communities (Commission) brought an action alleging that Ireland had failed to fulfill its obligations under the directive entitled Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive).¹⁴² First, the Commission claimed that Ireland failed in several ways to correctly implement Article 12(1) of the Habitats Directive and second, that Ireland's national legislation contained provisions that were directly in conflict with this directive.

On September 21, 2006, the Advocate General Leger (Leger) of the Court of Justice of the European Communities (ECJ) issued an opinion finding for the Commission on both counts of its application against Ireland.¹⁴³ Leger stated that the ECJ previously has "held with regard to th[is] directive and, in particular, Article 12(1) thereof, that faithful transposition [and adoption of its measures] becomes particularly important in an instance such as the present one, where management of the common heritage is entrusted to the Member States in their respective territories."¹⁴⁴ Furthermore, he noted that after the implementation of the Habitats Directive, there should be preventive measures that are both coherent and coordinated because the purpose of the Habitats Directive is to "preserve biodiversity by maintaining or restoring, at favourable conservation status, natural habitats and species of wild flora and fauna of Community interest."¹⁴⁵

Thereafter, he individually addressed the Commission's seven arguments under its first claim. First, Leger found that Ireland had only

142. Council Directive 92/43, 1992 O.J. (L 206) 7 (EC). An overview of this directive is available at http://ec.europa.eu/environment/nature/nature_conservation/eu_nature_legislation/habitats_directive/index_en.htm.

A directive may be issued by either the Commission or the Council of the European Union. Treaty of Amsterdam Amending the Treaty on European Union, Oct. 11, 1997, 1997 O.J. (C 340) p. 278. A directive is binding on all EU member states as to its results, but each member state may choose its own means to implement a directive. *Id.*

143. Case C-183/05, *Comm'n v. Ir.*, 2007 E.C.R. C42/07, p. 4 (explaining the operative part of the Second Chamber's judgment); For an unedited version of the Chamber's opinion, see Case 183/05, *Comm'n v. Ir.*, 2007 Second Chamber's judgment at ¶ 51 (Jan. 11, 2007) [hereinafter Judgment], available at <http://curia.europa.eu/jurisp/cgi-bin/form.pl?lang=en> (Enter "C-183/05" for Case Number; then follow "Judgment" hyperlink).

144. *Id.* ¶ 22.

145. *Id.* ¶ 25.

completed species action plans (SAP) for the natterjack toad¹⁴⁶ and that Ireland's passive surveillance of other species was ineffective under the requirements of the directive.¹⁴⁷ Overall, Leger concluded that "specific information measures for the specific protection of the otter, the Kerry slug, and bat species had still not been adopted."¹⁴⁸

Furthermore, Leger criticized Ireland's failure to carry out species impact studies for projects such as the Corrib Gas project in Broadhaven Bay, "which would disturb the breeding sites and resting places of cetaceans in that area."¹⁴⁹ Leger found that the monitoring programs for cetaceans like blue whales were "ad hoc and confined to certain geographical areas."¹⁵⁰ Thus, he found that the Commission's first claim was well-founded.

Next, Leger found that portions of Ireland's national law directly conflicted with Articles Twelve and Sixteen of the Habitats Directive. He agreed with the Commission that "simultaneous existence of such a parallel derogation system gives rise to unacceptable confusion and doubt as to the law, contrary to the principle of legal certainty."¹⁵¹

On January 11, 2007, the Second Chamber for the ECJ issued a judgment that agreed with Leger's opinion.¹⁵² The ECJ relied on Leger's reasoning and added, with regard to the Corrib Gas and other such projects, that though some "assessments are undertaken, the Irish Authorities require property developers to provide information on protected species only after development consent has been granted for the project concerned."¹⁵³ It concluded that this sequence of procedures did not prevent development that might be harmful to the environment.¹⁵⁴ Moreover, in reference to the Commission's second preemption claim, ECJ stated that the Irish national legislation went beyond what was necessary according to the Habitats

146. *Id.* ¶ 37. SAPs are monitoring devices used to protect species in natural habitats because they "provide important information on species and their habitats, breeding sites and resting places, and set out specific recommendations aimed at ensuring the successful conservation of the species in question." *Id.* ¶ 39.

147. *Id.* ¶ 39.

148. *Id.* ¶ 75.

149. *Id.* ¶ 52.

150. *Id.* ¶ 84.

151. *Id.* ¶ 102.

152. Case 1-83/05, *Comm'n v. Ir.*, 2007 E.C.R., ¶ 51 (Jan. 11, 2007) [hereinafter *Judgment*], available at <http://curia.europa.eu/jurisp/cgi-bin/form.pl?lang=en> (Enter "C-183/05" for Case Number; then follow "Judgment" hyperlink).

153. *Id.* ¶ 34.

154. *Id.*

Directive.¹⁵⁵ The Court stated that the Habitats Directive “determines, in an exhaustive manner, the conditions under which derogations may be made from Article 12 of th[e] directive.”¹⁵⁶

This case illustrates the ongoing development of laws within the European Union; namely that inconsistent national provisions are automatically overruled by a Community provision and that any national legislation which is in fact incompatible with Community law should be repealed for the sake of good order, even though it is automatically superseded.¹⁵⁷ Hence, Ireland should have repealed its inconsistent national laws.

Moreover, this case confirms that directives do not have a direct effect on member states until after the expiration of time limit given for the implementation of the directive.¹⁵⁸ Thus, if Ireland had implemented many of its proposals for the protection of the species at issue, it would not have been found in violation of the Habitats Directive.

Hannum v. Maine Board of Environmental Protection

In *Hannum v. Maine Board of Environmental Protection*,¹⁵⁹ the Supreme Judicial Court of Maine vacated the Superior Court’s decision to reverse the Board of Environmental Protection’s (Board) denial of the plaintiff’s application to build a dock on her coastal wetland property.¹⁶⁰ The appellee, Hannum, was a beneficiary of the Anne Stroud Hannum trust, pursuant to which she inherited a parcel of land making up 62 acres, 1200 feet of which was coastal shoreline property.¹⁶¹ Hannum applied to build a pier and a float on the waterfront, extending ninety feet seaward, and a ramp extending forty feet.¹⁶² Although her plans were approved by many relevant entities,¹⁶³ twenty-three other interested parties¹⁶⁴ opposed the

155. *Id.*

156. *Id.* ¶ 48.

157. *See* Case 26/62, *Van Gend en Loos v. Nederlandse Administratie der Belastingen*, 1963 E.C.R. 1 (this E.C.R. reference is to the Report of Cases Before the Court of Justice of the European Communities).

158. *See* Case 148/78, *Pubblico Ministero v. Ratti*, 1979 E.C.R. 1629.

159. 2006 ME 51, 898 A.2d 392.

160. *Id.* ¶ 1, 898 A.2d at 394.

161. *Id.* ¶ 2, 898 A.2d at 394. The waterfront property sits adjacent to the Nature Conservancy’s Indian Point Preserve, as well as other conservation areas and privately owned property. One of the abutting parcels includes land over which the individual owner has granted a conservation easement to Acadia National Park. *Id.*

162. *Id.* ¶ 3, 898 A.2d at 394.

163. The entities include the Army Corps of Engineers, the U.S. Environmental Protection

construction and were granted intervenor status, allowing them to present testimonial evidence that the pier would adversely affect the local marine wildlife.¹⁶⁵ The Board subsequently denied the application, stating that it would unreasonably harm the wildlife and aquatic habitats, and would threaten the aquatic wildlife in the area.¹⁶⁶

Hannum appealed the Board's decision, the Superior Court affirmed the denial of the permit, and the Law Court subsequently vacated the decision.¹⁶⁷ The Court reasoned that, "although the Board could reasonably conclude that the Hannum dock itself would generate additional boat-traffic, there was no evidence that the granting of this permit could reasonably be anticipated to result in the building of *more docks*."¹⁶⁸ The case was remanded to the Board for further review.

On remand, the Board again denied the permit because of the threat to wildlife in the surrounding area posed by the construction and the Superior Court vacated the Board's decision because "there was simply not enough evidence in the record to support a finding that Hannum's use of her dock . . . [would] cause a detrimental impact on aquatic life or its viewing."¹⁶⁹

The Board appealed to the Law Court, where the Court vacated the Superior Court's decision and reinstated the Board's decision denying the permit.¹⁷⁰ The Court found that "[t]he Board properly performed its fact-finding function"¹⁷¹ because it had reopened the evidence of the case and thoroughly heard and reviewed the expert testimony of both parties. The court noted that the Board "weighed the evidence presented and determined that Hannum's dock, and the boating that would result from the dock's use," as described by the Board's experts, "would cause harm to the seals and terns in the cove."¹⁷² Reasoning that "[s]ufficient evidence exist[ed]

Agency, the U.S. Fish & Wildlife Service, the National Marine Fisheries Service, the Maine Historic Preservation Commission, and the Maine Dept. of Inland Fisheries & Wildlife. *Id.* ¶ 3.

164. Additional experts were allowed to participate in the hearing, in which they testified to the marine wildlife and environmental concerns associated with building the proposed dock. *Id.* ¶ 4.

165. *Id.* ¶ 4, 898 A.2d at 395.

166. The Board noted that while it was unlikely that the pier alone would cause significant harm to surrounding wildlife, the cumulative effect of the pier, boat traffic, and all related activity would cause such harm. *Id.* ¶ 5, 898 A.2d at 395.

167. *Hannum v. Bd. of Env'tl. Prot.*, 2003 ME 123, ¶ 17, 832 A.2d 765, 770.

168. *Id.*

169. *Hannum v. Bd. of Env'tl. Prot.*, 2006 ME 51, ¶ 8, 898 A.2d at 396.

170. *Id.* ¶ 1, 898 A.2d at 394.

171. *Id.* ¶ 26, 898 A.2d at 402.

172. *Id.*

in the record to support the Board's findings, the Court concluded there was no evidence that the Board acted unreasonably or unfairly."¹⁷³

*Friends of Mere Point and Robert Healing v. Maine Board of
Environmental Protection*

In *Friends of Mere Point and Robert Healing v. Maine Board of Environmental Protection*,¹⁷⁴ the petitioners (Friends) sought review of and challenged the Board of Environmental Protection's (Board) interpretation of the Maine Natural Resources Protection Act (NRPA).¹⁷⁵ In particular, the Friends challenged the narrow scope of the Board's interpretation of the NRPA.

In August 2005, the Board granted the Maine Department of Inland Fisheries and Wildlife (IF&W) application to build a public boat launch on Mere Point Bay in the town of Brunswick. The ramp was to be 110 feet long and 48 feet wide, with additional floats covering an approximately 200 foot area.¹⁷⁶ The Board approved the IF&W's application, over the petitioners' objections. The approved building permit encompassed the necessary bulldozing, filling, and construction of the ramp on a protected area of land.

The Friends, who represented individual citizens and landowners in the area around the proposed construction, were primarily concerned with the Board's limited interpretation of the NRPA.¹⁷⁷ In approving the permit, the Board found that the NRPA required only that "the activity will not unreasonably interfere with existing scenic, aesthetic, recreational or navigational uses [of the protected area]."¹⁷⁸ The Friends stated that such an interpretation was too limited, claiming that § 480-D(1) "requires the BEP to find that the proposed activity will also not unreasonably interfere with existing scenic, aesthetic and recreational uses in areas . . . which surround the site but are not themselves protected natural resources."¹⁷⁹

The court denied the petitioners' appeal to construct the statute progressively and instead granted deference to the Board. The court found

173. *Id.*

174. 2006 Me. Super. LEXIS 62, AP-05-067 (Me. Super. Ct., Cumberland Cty., Mar. 11, 2005) (Crowley, J.).

175. National Resources Protection Act, 38 M.R.S.A. §§ 480-A through 480-D (2006).

176. *Friends v. Bd. of Env'tl. Prot.*, 2006 Me. Super. LEXIS 62, at 2-3.

177. The Board denied the Friends' objection to the construction, stating that "'only impacts to the existing uses of the protected natural resources' are relevant to NRPA requirements." *Id.*

178. 38 M.R.S.A. §§ 480-C and 480-D(1).

179. *Friends v. Bd. of Env'tl. Prot.*, 2006 Me. Super. LEXIS 62, at 4.

that the petitioners “did not meet the implicit prerequisite for the BEP’s consideration of such evidence, that the area they claim will be impacted is a critical natural resource that the NRPA is designed to protect.”¹⁸⁰

Maine’s People Alliance and Natural Resources Defense Council v. Mallinckrodt, Inc.

Environmental organizations brought suit against the operator of a former chemical manufacturing plant, seeking an injunction to force the chemical plant to undertake scientific studies of mercury contamination downriver of the plant, and if necessary, to remediate that area.¹⁸¹ The court found: (1) that the members of the environmental organizations met the injury in fact test to establish Article III standing;¹⁸² (2) the citizen suit provision in the Resource Conservation and Recovery Act (RCRA) allows citizens to sue persons or firms whose handling of solid or hazardous waste may present an imminent and substantial endangerment to health or the environment; (3) expanding the interpretation of the citizen suit provision of RCRA did not infringe upon the Environmental Protection Agency’s authority in this case;¹⁸³ and (4) the District Court did not abuse its discretion by ordering the operator to fund this downriver study without first performing “more cost-benefit balancing.”¹⁸⁴

The parties stipulated that the chemical plant, owned by Mallinckrodt, had been discharging mercury directly into the Penobscot River,¹⁸⁵ and releasing mercury tainted air emissions.¹⁸⁶ The plaintiffs’ expert, Dr.

180. *Id.* at 7.

181. *Maine People’s Alliance and Natural Resources Defense Council v. Mallinckrodt, Inc.*, 471 F.3d 277 (1st Cir. 2006).

182. *Id.* at 286.

183. *Id.* at 292-93.

184. *Id.*

185. The Penobscot River basin is the largest river basin within the state of Maine. Its drainage area is “8592 square miles at the mouth.” It begins in Millinocket at the West Branch, flowing for ten miles until it joins with the East Branch, flows an additional seventy-two miles, then flows over an additional twenty-one miles of tidal waters to Bucksport. BUREAU OF LAND AND WATER QUALITY, DEPARTMENT OF ENVIRONMENTAL PROTECTION, PENOBSCOT RIVER DATA REPORT (2002), available at <http://www.maine.gov/dep/blwq/docmonitoring/reppenobrep.pdf>.

186. *Maine People’s Alliance v. Holtrachem Mfg. Co. & Mallinckrodt Inc.*, 211 F. Supp. 2d 237 (D. Me. 2002). Mercury, over time, deposits into the sediments of oceans, rivers, and lakes. *Id.* at 244.

“The EPA has set the Reference Dose (“RfD”) for consumption of methylmercury at 0.1 µg/kg body weight/day.” The RfD is the EPA’s estimate of the maximum dose allowable without producing side effects. The State of Maine bases fish consumption

Grandjean, studied the effects of methylmercury on women and children living in the Faroes Islands,¹⁸⁷ concluding that although exposure to methylmercury is more pronounced in small children and fetuses, it is permanent in all populations.¹⁸⁸

In 1976, Congress enacted RCRA to close the “last remaining loophole in environmental law, namely that of unregulated land disposal of discarded materials and hazardous waste.”¹⁸⁹ Under the RCRA citizen suit provision, citizens are able to sue operators of disposal facilities “who ha[ve] contributed or who [are] contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment.”¹⁹⁰ In suits brought under this provision, “federal district courts were granted broad remedial authority to restrain polluters and take such other action as may be necessary.”¹⁹¹ The finding of imminent and substantial endangerment need not be actual harm, but injunctive relief is available when there may be a risk of harm.¹⁹² A danger is imminent if the factors that would give rise to the danger are present, even though the harm may not be realized for quite some time.¹⁹³ The plaintiff need not quantify the harm since it is difficult to do so when dealing with scientific data and uncertainty.

Mallinckrodt argued that interpretations of RCRA have been “blinded by the glare of the word may” in the statute and have lost sight of the words “imminent and substantial.”¹⁹⁴ In essence, Mallinckrodt argued that the terms “imminent” and “substantial” mean that the citizen suit provision of RCRA is to be used in emergency situations where there is actual harm, not

advisories on the EPA RfD and Dr. Grandjean’s Faroes Island study. *Id.* at 245. “The health risks depend on the total consumption of methylmercury from all sources, including freshwater and ocean fish.” Eels sampled near the plant site in 1995 showed that the methylmercury exposure, if the fish were consumed, would be above the EPA’s RfD. *Id.*

187. The study concluded that even at low levels, methylmercury “effects the development of the central nervous system,” including: (1) motor function deficits; (2) neuropsychological impairment to attention, language, visuospatial performance, and verbal and visuospatial memory; and (3) developmental delays corresponding to one to two months in development for each doubling of exposure. *Maine People’s Alliance v. Holtrachem Mfg. Co.*, 211 F. Supp. 2d at 245.

188. *Id.*

189. *Maine People’s Alliance v. Mallinckrodt, Inc.*, 471 F.3d at 287.

190. Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6972(a)(1)(B) (2000).

191. *Maine People’s Alliance v. Mallinckrodt, Inc.*, 471 F.3d at 287.

192. *Id.*

193. *Maine People’s Alliance v. Holtrachem Mfg. Co.*, 211 F. Supp. 2d at 247.

194. *Maine People’s Alliance v. Mallinckrodt, Inc.*, 471 F.3d at 289.

harm that is possible future harm.¹⁹⁵ Mallinckrodt used the dictionary to define endangerment as “the state of being placed in danger.”¹⁹⁶ In addition, Mallinckrodt sought to define the word “may” based on a sixty-year old Supreme Court decision defining “may” as “probably.”¹⁹⁷

The district court defined each of the terms in RCRA in line with the breadth of the authority given in the statute.¹⁹⁸ The district court read “imminent and substantial” language as meaning that such suits could be brought to alleviate reasonable medical or scientific concerns.¹⁹⁹

The court of appeals found that Mallinckrodt’s argument about the terms “imminent” and “substantial” made sense, to a point, in light of older circuit court decisions.²⁰⁰ The court, however, concluded that though the older decisions shed some light on the interpretations of the words “imminent” and “substantial,” the words’ meanings should be determined by examining Congress’ interpretation of the words when they enacted section 7002(a)(1)(B) in 1984.²⁰¹ Indeed, the word “may” did not even appear in either of the statutes dealt with in the earlier *Ethyl* or *Reserve Mining* cases. Furthermore, the court noted that the meaning could not be resolved solely on the basis of plain meaning because the interpretations of the words “substantial” and “imminent” carried different meanings at different times in history. The court of appeals also concluded “that a reasonable prospect of future harm is adequate to engage the gears of RCRA § 7002(a)(1)(B) so long as the threat is near-term and involves potentially serious harm.”²⁰²

As a matter of first impression, the court of appeals broadly interpreted the RCRA to include citizen suits on the basis of reasonable prospect of future harm. It remains to be seen how other circuits will deal with this broad interpretation, and whether other circuits will allow citizen suits based on reasonable future harm.

195. *Id.*

196. *Id.*

197. *Id.*

198. *Id.* at 288.

199. *Maine People’s Alliance v. Holtrachem Mfg. Co.*, 211 F. Supp. 2d at 252.

200. *Maine People’s Alliance v. Mallinckrodt, Inc.*, 471 F.3d at 289 (citing *Ethyl Corp. v. EPA*, 541 F.2d 1, 20 n.36 (D.C. Cir. 1976) (en banc); *Reserve Mining Co. v. EPA*, 514 F.2d 492, 528 (8th Cir. 1975)).

201. *Id.*

202. *Maine People’s Alliance v. Mallinckrodt, Inc.*, 471 F.3d at 296.

Nulankeyutmonen Nkihtaqmikon v. Impson

The Passamaquoddy tribe is “federally-recognized and consists of two distinct reservation areas: Indian Township and Sipayik, or Pleasant Point.”²⁰³ Each reservation has its own government and is enabled by a Joint Tribal Council resolution to lease land within its reservation.²⁰⁴ In 2005, the Tribe executed a ground lease agreement with Quoddy Bay, LLC (Quoddy Bay) to facilitate the construction of a liquefied natural gas terminal (LNG).²⁰⁵

Plaintiffs, members of the tribe opposing the Bureau of Indian Affairs’ (BIA) approval of the Indian tribe’s decision to lease land for construction of a liquefied natural gas terminal, brought suit. They argued that the approval violated the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), and the Endangered Species Act (ESA).²⁰⁶ The court found that the issues presented were not ripe for adjudication. In addition, the court held that: (1) delayed judicial review would not cause hardship to the plaintiffs since the lease approval process was not complete at this time; (2) judicial review would hinder the ongoing administrative process; and (3) the court would likely benefit from further factual development.²⁰⁷

The court found that members of the Indian tribe lacked standing to challenge the tribe’s decision to lease land for several reasons. First, the approval of the lease was for site investigation only, and not for actual LNG construction.²⁰⁸ Second, the approval and permit issuance were expressly contingent upon the environmental impact statements completed by the Federal Energy Regulatory Commission (FERC) before permit issuance.²⁰⁹ Still, there was no guarantee that even after the environmental impact statements, FERC would issue the permit.²¹⁰ Thus, Plaintiffs’ alleged harm would not be a result of the lease, but would be a result of FERC’s ultimate permitting decision.

The court also noted that members of the Indian tribe lacked standing under the ESA.²¹¹ Plaintiffs argued that, under *Lujan v. Defenders of*

203. *Nulankeyutmonen Nkihtaqmikon v. Impson*, 462 F. Supp. 2d 86, 91 (D. Me. 2006).

204. *Id.*

205. *Id.*

206. *Id.* at 89.

207. *Id.* at 97-98.

208. *Nulankeyutmonen Nkihtaqmikon v. Impson*, 462 F. Supp. 2d at 105.

209. *Id.* at 93.

210. *Id.*

211. *Id.* at 108. Section 7(a)(2) of the ESA provides:

Each Federal Agency shall, in consultation with and with the assistance of the

Wildlife,²¹² they had standing because they had a “concrete, cognizable interest in endangered whales.”²¹³ Plaintiffs contended that their interest in endangered whales was directly violated by “BIA’s approval of the Split Rock site for the LNG terminal and the resultant ship traffic.”²¹⁴

However, Defendants argued that Plaintiffs’ “alleged harm” would not necessarily occur as a result of BIA’s approval of the lease.²¹⁵ In other words, BIA’s approval of the lease did not inevitably mean that FERC would approve the permit for the actual LNG construction. Thus, Plaintiffs’ harms were too speculative to establish standing.²¹⁶ Moreover, the FERC permitting process requires a finding by the National Marine Fisheries Service (NMFS) that “the project will not jeopardize the continued existence of listed whales.”²¹⁷

On December 15, 2006, Quoddy Bay submitted applications, reports, and other information to FERC.²¹⁸ That same day, the President of Quoddy Bay stated that “the Quoddy Bay LNG Project has reached an important milestone and is significantly closer to providing the Northeast with environmentally clean natural gas.”²¹⁹ According to FERC, the agency expects to make a decision on this application within ten to eighteen months.

Currently, there are nine pending or proposed LNG terminals in New England alone.²²⁰ Whether FERC approves the permit for the Quoddy Bay

Secretary [of the Interior], insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical

Endangered Species Act of 1973, 16 U.S.C. §1536(a)(2) (2000).

212. *Lujan v. Defenders of Wildlife*, 504 U.S. 555 (1992). Under the standing test in *Lujan*, the “irreducible constitutional minimum of standing contains three elements:” (1) an injury in fact; (2) a causal connection between the injury and the conduct complained of; and, (3) likelihood that the injury will be redressed by a favorable decision. *Id.* at 560-61.

213. *Nulankeyutmonen Nkihtaqmikon v. Impson*, 462 F. Supp. 2d at 107.

214. *Id.* at 107-08.

215. *Id.* at 106-07.

216. *Id.* at 107.

217. *Id.*

218. Associated Press, *Quoddy Bay Files Maine’s First Application for LNG Terminal*, Dec. 16, 2006.

219. *Id.*

220. Federal Energy Regulatory Commission, <http://www.ferc.gov/industries/lng.asp> (last visited Apr. 1, 2007). The United States has 5 existing LNG terminals and approximately 60 additional LNG terminals have been proposed. *Id.* Despite these numbers, FERC has estimated that only 10 are needed (6 in the United States) to meet short-term demand in North America. More than 10 LNG terminals have already been approved. *Id.* Citizens and

LNG terminal, and in what context FERC considers the environmental impacts and the effects of the project on whales, particularly endangered whales, remains to be seen.

2007 RECOMMENDED WEBSITES FOR ECOSYSTEM BASED MANAGEMENT

I. INTRODUCTION

We have barely begun to understand the complexities of the world's ocean ecosystems. Throughout our history of attempted management of these important resources, we have come to realize that control of specific activities, or protection of specific aquatic species, in isolation, is ineffective. Without knowledge of all the factors that contribute to a balanced ecosystem, an isolated approach to protection of ocean resources can create imbalances elsewhere and cause more harm than good to the oceans as a whole. A few years ago the Pew Oceans Commission and the United States Commission on Ocean Policy both came out with reports concluding that human activity is having devastating impacts on marine ecosystems and current methods of protection are doing little to prevent the destruction.²²¹ Both reports advocate for a new approach to ocean resource management, one that incorporates the needs and functions of the ecosystem as a whole.²²² This ecosystem based management (EBM) approach has been embraced by researchers and decision makers worldwide. The following websites discuss the importance of EBM and how it is beginning to be incorporated into the world's regulation of ocean resources.

- Joint Nature Conservation Committee—United Kingdom and European Union Fisheries // URL <http://www.jncc.gov.uk/page-1531> (last visited Mar. 30, 2007).

leaders of Maine are concerned about mercury emissions and the effect on wildlife, especially yellow perch and loons. See John Richardson, *Maine Leaders Call for Tougher Mercury Limits*, PORTLAND PRESS HERALD, Jan. 10, 2007, at B1. Some experts in the energy field believe that the only way to reduce mercury emissions is to switch from coal fired power plants to more LNG terminals, which are more expensive. *Id.*

221. See PEW OCEAN COMMISSION, AMERICA'S LIVING OCEANS: CHARTING A COURSE FOR SEA CHANGE (2003) [hereinafter PEW OCEAN COMMISSION REPORT]; UNITED STATES COMMISSION ON OCEAN POLICY, AN OCEAN BLUEPRINT FOR THE 21ST CENTURY: FINAL REPORT (2004) [hereinafter U.S. COMMISSION ON OCEAN POLICY REPORT].

222. PEW OCEAN COMMISSION REPORT, *supra* note 221, at 46; U.S. COMMISSION ON OCEAN POLICY REPORT, *supra* note 221, at 63.

This website discusses the current state of fisheries around the EU and proposed methods for improved management. One of the major management techniques this website references is the ecosystem approach. The “Current Fisheries Management” link discusses the ecosystem approach that was incorporated into the Common Fishery Policy (CFP) adopted by the EU in 2003. The “Wider Environmental Objectives” link provides an explanation of the ecosystem approach and how it has been implemented in the CFP. Additional information about the ecosystem based approach of the CFP can be found under the “Reports” link.

- Coast Information Team—British Columbia // URL <http://www.citbc.org/abo.html> (last visited Mar. 30, 2007).

The Coast Information Team (CIT) is an independent group that was created to assist in the implementation of British Columbia’s Central Coast Land and Coastal Resource Management Planning (CCLCRMP). Specifically, CIT was established to provide independent information about how to develop and implement an EBM approach to the management of British Columbia’s coast. This website has a link to the CCLCRMP Framework Agreement under the “About CIT” link, and the “CIT Area” link discusses the areas included in the various regional management plans. The “Ecosystem Based Management” link on this website gives an extensive explanation of what EBM is, its scientific basis, and how it is applied to British Columbia’s coastal management plans.

- Ecosystem Based Management (EBM) Tools Network // URL <http://www.ebmtools.org> (last visited Mar. 30, 2007).

The EBM Tools Network is an alliance of environmental organizations and governmental agencies interested in providing guidance and support for use of EBM tools in the management of coastal areas. The “About EBM Tools” link lists the various EBM tools available in the field and how they are used. The “Find Training” link provides information on opportunities to take training courses to gain proficiency in and develop these EBM tools. The “Meetings and Conferences” link lists the upcoming training sessions and presentations on coastal and marine EBM issues around the world.

- New England Fisheries Management Council (NEFMC) Ecosystem Pilot Projects // URL <http://www.nefmc.org/ecosystems/index.html> (last visited Mar. 20, 2007).

The NEFMC is one of eight regional fishery councils established by the Magnuson Stevens Act. This website discusses the initiative the NEFMC has undertaken to incorporate EBM into its management approach. The opening page has links to a number of summary reports from local

workshops, which were developed to encourage community participation in the integration of EBM into management strategies. Each summary discusses: (1) the objectives established by the participants; (2) the possible changes that would result in the fisheries from incorporating an EBM approach; (3) suggestions of indicators that would help to monitor the health of fisheries; and (4) helpful management tools that could be implemented under an ecosystem approach. This website also has information on recent EBM presentations conducted by the NEFMC.

- North Pacific Fishery Management Council // URL http://www.fakr.noaa.gov/npfmc/current_issues/ecosystem/Ecosystem.htm (last visited Mar. 30, 2007).

This regional fishery council has dedicated an entire committee to the discussion of EBM in fisheries management. The “Ecosystem Committee” link provides background information and additional links to previous meeting minutes and agendas. The “AI Fishery Ecosystem Plan” link discusses a current EBM project for fishery management actions around the Aleutian Islands. Additionally, the website provides a link to “Alaska Marine Ecosystem Forum,” which is a council dedicated to improving cooperation and understanding in management of Alaska’s marine ecosystems. There is a link to Alaska Marine Ecosystem Forum meeting summaries, as well as links to the websites of participating organizations.

- National Center for Ecological Analysis and Synthesis (NCEAS) Ecosystem Based Management of Coastal Marine Systems // URL <http://nceas.ucsb.edu/fmt/doc/?nceas-web/aboutnceas/EBMindex.html> (last visited Mar. 30, 2007).

NCEAS provides financial and technical support for ecological research. Follow the “Who We Are” link to obtain additional information on the organization and various projects and publications it has supported. This particular web page provides information specific to EBM projects and working groups. Additionally, this website has a link to an EBM registry. The registry serves as a basis of communication for interested individuals to distribute and obtain information about various EBM projects.

- Potomac Watershed Partnership // URL <http://www.potomacwatershed.net> (last visited Mar. 30, 2007).

The Potomac Watershed Partnership (PWP) is a restoration project dedicated to enhancing the water quality of the Potomac River Basin and the Chesapeake Bay. The project is a collaborative effort between government agencies and organizations from Washington, D.C., Maryland,

Virginia, West Virginia, and Pennsylvania. The focus of PWP is on overall watershed health rather than isolated river health, and is an example of EBM in action. The “Background” link outlines the goals of PWP and the steps that are being taken to achieve these goals. The “Interactive Journey” and “Resource Issues” links provide more detailed information about the specific research and restoration projects occurring in various parts of the watershed. Additionally, the “Community Center” link allows community members to participate in the effort by learning about volunteer and monitoring opportunities.

2007 RECOMMENDED WEBSITES FOR GLOBAL WARMING

I. INTRODUCTION

Global warming, or climate change, is not a recent concern in the scientific community. However, it is a topic now receiving widespread attention by politicians and legal advocates. Through the development of science and technologies, alternative sources of energy have not only become possible and necessary, but also politically attractive. Yet, with a change of the resources on which so many industries rely comes inherent opposition. Disputes are inevitable in situations where drastic measures must be taken in order to implement such a phenomenal transition. Legislatures and agencies have the burden of attempting to mitigate and prevent disputes through fair, well-drafted, and research-based laws; the courts must decide how those laws are applied.

Below is a collection of websites containing information about the ongoing discussion regarding how to slow climate change. Examples are included from international, United States government, and state sources.

- State Based Opposition to Global Warming Activities // URL <http://www.calepa.ca.gov> (last visited Mar. 30, 2007).

This website contains information about California’s emissions laws as well as California’s Environmental Protection Agency in general. Many states have taken some initiative and filed lawsuits when federal governmental bodies have not. For instance, “twelve states, three cities, an American territory, and numerous environmental organizations” sued the United States Environmental Protection Agency²²³ (EPA) for not regulating

223. *Massachusetts v. EPA*, 415 F.3d 50, 50 (D.C. Cir. 2005).

greenhouse emissions from automobiles under § 202(a)(1) of the Clean Air Act.²²⁴ Although the suit was unsuccessful, it represents a potential future trend of state-driven lawsuits to come. The state of California has filed a lawsuit against the six major automobile companies in the United States for the automakers' contributions to global warming, seeking millions of dollars in damages. If successful, the implications of such a suit seem boundless. The complaint, dated September 20, 2006, can be found at: http://ag.ca.gov/newsalerts/cms06/06-082_0a.pdf (last visited Mar. 30, 2007).

- Federal Efforts to Combat Global Warming // URL <http://www.epa.gov> (last visited Mar. 30, 2007).

The Energy Policy Act of 2005²²⁵ (EPAct) was enacted partially as a response to concerns over global warming. The EPA, for instance, is responsible for setting the minimum amount of renewable fuel that must be in gasoline sold in the United States. The Internal Revenue Service offers tax credits for individuals using such renewable fuels. These credits, however, are very small, and may not provide the incentive necessary to make a significant change. The following sites may help familiarize the reader with its goals:

EPA Renewable Fuel Standard Program

<http://www.epa.gov/otaq/renewablefuels/> (last visited Mar. 30, 2007).

Tax credits associated with the EPAct

<http://www.energy.gov/taxbreaks.htm> (last visited Mar. 30, 2007).

<http://www.irs.gov/newsroom/article/0,,id=153397,00.html> (last visited Mar. 30, 2007).

Sections pertaining to the BLM

<http://www.blm.gov/nhp/spotlight/epa2005/> (last visited Mar. 30, 2007).

- International Efforts to Reduce Global Warming

Nearly every country in the world has recognized the reality of global warming, and has been working collectively to reduce the effects of this phenomenon. The Intergovernmental Panel on Climate Change (IPCC) was established in 1988 to monitor and report on the state of climate change in the world. The first report, published in 1990, led to the establishment of

224. 42 U.S.C. § 7521(a)(1) (2000).

225. Pub. L. No. 109-58, § 313(b), 119 Stat. 594, 689-90 (2005).

the United Nations Framework Convention on Climate Change (UNFCCC) in 1992, a treaty addressing the global concern for the problem. In 1997, a more powerful and legally binding agreement was reached, which has become known as the Kyoto Protocol. The countries that ratify the agreement are legally bound to adhere to its standards of greenhouse gas emissions, and must participate in programs such as emissions trading to reduce greenhouse gases on a global scale. The United States has not yet ratified the agreement, but 135 other countries have.

The IPCC homepage

<http://www.ipcc.ch/> (last visited Mar. 30, 2007).

The UNFCCC homepage

<http://unfccc.int/> (last visited Mar. 30, 2007).

The Kyoto Protocol

http://unfccc.int/kyoto_protocol/items/2830.php (last visited Mar. 30, 2007).