

Roger Williams University Law Review

Volume 14 | Issue 3

Article 7

Summer 2009

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Recommended Citation

Van Gorder, Louis (2009) "Beyond Borders: An Ecosystem Approach to Environmental Regulation," *Roger Williams University Law Review*: Vol. 14: Iss. 3, Article 7.

Available at: http://docs.rwu.edu/rwu_LR/vol14/iss3/7

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Beyond Borders: An Ecosystem Approach to Environmental Regulation

INTRODUCTION

The maxim “pollution knows no boundary” is nothing new. People have tried to manage the environment and its natural resources by the specific ecosystem in which those resources are found for the last hundred years.¹ In fact, this so-called “ecosystem approach” to environmental regulation can be found in Aldo Leopold’s writings on conservation biology and in even earlier works by transcendentalists like Henry David Thoreau.² Moreover, since the 1890’s scientists have moved away from traditional zoological approaches to studying natural resources.³ For example, during the late 19th century scientists began analyzing the habitats of fish species and the relationship of population dynamics to the physical environment.⁴ What is troubling about this long history of an “ecosystem approach” to environmental management is that it has not yet been incorporated into our legal system. A brief history of environmental law shows that prior to the 1970’s, limited state laws and common law nuisance actions handled most environmental protection.⁵ Ironically, handling environmental

1. Harry N. Scheiber, *From Science to Law to Politics: An Historical View of the Ecosystem Idea and Its Effect on Resource Management*, 24 *ECOLOGY L. Q.* 631, 634-35 (1997).

2. U.S. Fish & Wildlife Serv., *ECOSYSTEM APPROACH TO FISH AND WILDLIFE CONSERVATION* (April 19, 1996), <http://www.fws.gov/policy/052fw1.html> (last visited Feb. 17, 2009).

3. Scheiber, *supra* note 2, at 636.

4. *Id.*

5. Jonathan H. Alder, *When is Two A Crowd? The Impact of Federal Action on State Environmental Regulation*, 31 *HARV. ENVTL. L. REV.* 67, 67 (2007).

matters through common law nuisance actions may have been the closest thing to a legal “ecosystem approach” because at least with nuisance actions the problem is being addressed at the source. Nevertheless, the general perception that states were unable to address most environmental concerns led Congress to create an array of environmental statutes where the federal government assumed the dominant role in policy-making.⁶ However, since the enactment of these statutes, many scholars have called for reform of environmental laws, but few have considered the “ecosystem approach” or even paid attention to the organization of the agencies making the laws themselves.⁷

As a result of this inherent lack of consideration for ecosystem-based environmental management, it is necessary to discuss what alternatives are available. Let us consider the feasibility of a decentralization of federal environmental agencies through the adoption of an inter-jurisdictional, eco-regional approach to environmental policy-making. Because the term “environmental law” encompasses such a wide range of legal matters, this article will focus on only a few environmental areas, namely water and coast line regulation. More specifically, the focus is narrowed to how the current over-delegation of federal authority under the Clean Water Act leads not only to uncertainty as to what the regulations are, but also to inefficiency and frustration among the states. As a means of illustration, a hypothetical will be used where “State A” is proposing to build a liquefied natural gas receiving facility, which involves dredging of a marina and filling of a wetland; activities which require Clean Water Act permits. First however, this article will inform the unfamiliar reader about liquefied natural gas, and then set out the hypothetical of State A in more detail. Next, there will be a detailed, though by no means all-inclusive, explanation of the permitting process for building State A’s proposed facility. If anything, the lesson to take from these sections is that the current system in place is complicated and at best confusing. Finally, the “heart” of the article consists of a detailed discussion of

6. *Id.*

7. Paul S. Weiland & Robert O. Vos, *Reforming EPA’s Organizational Structure: Establishing an Adaptable Agency Through Eco-Regions*, 42 NAT. RESOURCES J. 91, 92 (2002).

alternatives to the current system of a federal-based regulation under the Clean Water Act.

Ultimately, the overarching goal is to demonstrate that the decentralization of federal-based environmental regulations is not only feasible but that the system currently in place could easily allow for the necessary transition. Now is the time to reunite law with science and the historical trend of ecosystem management that scientists have followed for over the past century.⁸

A BRIEF OVERVIEW ON LIQUEFIED NATURAL GAS

Liquefied natural gas (LNG), as the name suggests, is natural gas converted into a liquid by being cooled below its boiling point to approximately -259°F.⁹ Being cooled to this temperature causes the LNG to be about 1/600th the volume of natural gas, thus making it more cost-effective for long-distance transportation and storage.¹⁰ Given the fact that the largest natural gas reserves are now found in Russia and the Middle East, LNG also provides an efficient means of transporting this fuel to places where traditional pipelines cannot.¹¹ An additional benefit of LNG is that it produces fewer emissions and pollutants than coal or oil such that it is considered a “cleaner source of energy.”¹² Furthermore, the Energy Information Administration forecasts the demand for natural gas will grow by approximately 40 percent by the year 2025 and consumption of natural gas is expected to outpace domestic production.¹³ Thus, LNG imports can provide a means for making up for this shortfall.¹⁴

And now for the bad news. . . LNG transportation is not cheap because it requires a liquefaction facility, where the gas is cooled and converted to liquid, a “load-out” terminal for loading the LNG onto ships, special LNG ships for the long-distance transportation,

8. Scheiber, *supra* note 2, at 635.

9. David MacDuffee & Patricia Delgado, *Liquefied Natural Gas: A Primer on Needs, Regulations, Environmental Implications and Trends*, 27.3 THE COASTAL SOCIETY BULLETIN 1 (2005), available at <http://www.thecoastalsociety.org/bulletin.html>.

10. *Id.*

11. *Id.* at 4.

12. *Id.* at 1.

13. *Id.* at 4.

14. *Id.*

and a “regasification” terminal to reheat the LNG and revert it to a gas.¹⁵ Furthermore, prior to building a LNG regasification terminal a federal license is required under the Natural Gas Act.¹⁶ Another inherent hurdle to overcome is that, as with any major federal project that has the potential of affecting the environment, the National Environmental Policy Act (NEPA)¹⁷ is triggered. Under NEPA all federal agencies are required to prepare an “Environmental Impact Statement” for every “recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment.”¹⁸ This “Environmental Impact Statement” (EIS) is not something trivial and will not survive judicial review unless the responsible agency proves that it has fully considered the detailed EIS “at every important stage in the decision making process.”¹⁹ However, by delving further into the process of building a LNG regasification facility, it quickly becomes apparent that NEPA may be the smallest hurdle to jump.

STATE A’S HYPOTHETICAL LNG DILEMMA

Putting NEPA aside for a moment, let us assume that State A wants to build a liquefied natural gas (LNG) regasification facility along the inland coast of a river connecting to the ocean. Because of the inherent need for ships to get in and out of the terminal, State A plans to dredge a channel up to the facility, a marina, and a turn-around area. Moreover, given the fact that coastline is such a commodity and the inherent NIMBY (Not In My Back Yard) attitude of residents towards such facilities, the only available land for the facility is comprised of wetlands, which were previously thought to be “unusable.” Thus, in order to build on this land, State A plans to fill the wetlands with the dredged material being taken out of the waterway when it constructs the channel, marina, and turn-around facility. To complicate matters further, now assume that the mouth of the river, which connects to the ocean, is in State B, such that the LNG ships will have to

15. *Id.* at 1.

16. 15 U.S.C. § 717 (2000).

17. 42 U.S.C. § 4331 (2000).

18. 42 U.S.C. § 4332(2)(C) (2000).

19. *Calvert Cliffs’ Coordinating Comm. v. U.S. Atomic Energy Comm’n*, 449 F.2d 1109, 1118 (D.C. Cir. 1971).

travel through the waters of State B to get to the LNG facility in State A. While studies show that no actual dredging is necessary in State B, the State is deeply concerned about the effects of constructing the facility. State B, known for its fishing industry and already under pressure by its residents for the dramatic decrease in winter flounder, fears the upstream dredging and the increase in ship traffic will have detrimental effects on the local fish populations. Accordingly, we are now faced with the issues of whether State A will be able to construct its LNG facility, what steps must State A take in order to do so, and finally whether State B has any rights in protecting its interests.

The best starting point in solving the issues of this hypothetical is to consider which agency regulates the necessary dredging and filling that State A must perform in order to construct its LNG facility. Although it may seem unusual to one unfamiliar with environmental law, the agency in charge of dredging and filling is in fact the Army Corps of Engineers (Army Corps). To understand why the Army Corps is the agency in charge, one must first note that the Congressional power to regulate commerce under Article I of the United States Constitution includes the power to regulate navigation and this includes navigable waters.²⁰ Congress gave this power to regulate navigable waters to the Secretary of the Army, who in turn delegated it to the Army Corps.²¹ More specifically, under the Rivers and Harbors Act of 1899, which the Army Corps is in charge of, it is unlawful to "excavate or fill, or in any manner to alter or modify the course, location, condition, or capacity" of the navigable waters of the United States without authorization from the Army Corps.²² Thus, it makes sense that State A should consult with the Army Corps if it is planning to build a channel, marina, and turn-around area.

However, the Army Corps' role in this permitting process does not stop here, as they also have obligations to deal with *discharges* of dredged materials under § 404 of the Clean Water Act.²³ Under

20. See *Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1 (1824).

21. Thomas Addison & Timothy Burns, Comment, *The Army Corps of Engineers and Nationwide Permit 26: Wetlands Protection or Swamp Reclamation*, 18 *ECOLOGY L.Q.* 619, 624 (1991).

22. 33 U.S.C. § 403 (2000).

23. 33 U.S.C. § 1344 (2000).

§ 404, the Secretary of the Army, acting through the Army Corps, “may issue permits, after notice and opportunity for public hearing for the discharge of dredged or fill material into the navigable waters at specific disposal sites.”²⁴ As an aside, it is critical to understand the difference between § 10 of the Rivers and Harbors Act of 1899 and § 404 of the Clean Water Act. Here, the main point is that § 10 of the Rivers and Harbors Act regulates the actual act of dredging or filling, while § 404 of the Clean Water Act regulates the discharges that result from these activities. Although it sounds confusing and even trivial, the difference between dredging or filling and the *discharge* of dredged or filled material is an important point to distinguish. For example, if one were to fill in a stream on one’s property with dirt so as to increase the amount of land, that would constitute a “filling.” On the other hand, the excess affluent that runs downstream and into a river as a result of that filling would constitute a “discharge.” Unfortunately, this point makes State A’s permitting process even more difficult because, if we recall, the state is not only dealing with dredging out the channel, marina, and turn-around area, but it also has to fill the wetlands on which it plans to build a marina. Ultimately, this creates a high likelihood that at least one of these activities will result in some form of “discharge,” requiring a permit under § 404 of the Clean Water Act.

Recall from the hypothetical that in order to construct the LNG facility, State A needs to fill an area of wetlands. This classification as a wetland only adds to the confusion because laws governing wetlands are complicated at best. To begin, the precedent in *Gibbons v. Ogden*²⁵ shows the Constitution’s Commerce Clause²⁶ gives the federal government jurisdiction over the “navigable waters of the United States.” However, defining these “navigable waters” has proven to be no easy task. Moreover, determining whether the definition of “navigable waters” applies to wetlands further complicates the already complicated. At first, in *United States v. Riverside Bayview*, the United States Supreme Court upheld the Army Corps’ definition of the term “navigable

24. 33 U.S.C. § 1344(a) (2000).

25. See *Gibbons*, 22 U.S. at 10.

26. U.S. CONST. art. I, § 8, cl. 3.

waters” to include all wetlands adjacent to navigable waters, “even if not inundated or frequently flooded by navigable water.”²⁷ However, this sweepingly broad definition of navigable waters has since been limited by two important cases: *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*²⁸ (hereinafter “SWANCC”) and *Rapanos v. United States*.²⁹ In SWANCC, the United States Supreme Court held the extension of the definition of navigable waters to intrastate waters used as habitat by migratory birds exceeded the Army Corps’ authority under the Clean Water Act.³⁰ Here, the Army Corps asserted jurisdiction over abandoned sand and gravel pits through a so-called “Migratory Bird Rule,” which protected wetlands serving as seasonal ponds for migratory birds.³¹ In spite of this, the Court reasoned that the Migratory Bird Rule was inconsistent with the Army Corps’ definition of “navigable waters,” because those waters were not subject to the ebb and flow of the tides, nor were they used or susceptible for use in commerce.³²

Continuing with the trend of limiting the Federal Government’s jurisdiction over wetlands, *Rapanos* was the next Supreme Court case that tried to define the term “navigable waters.” In *Rapanos*, the plurality held “navigable waters” are only those waters that are “relatively permanent, standing or continuously flowing bodies of water forming geographic features that are described in ordinary parlance as steams, oceans, rivers, and lakes.”³³ As if that definition was not complicated enough, in his concurrence Justice Kennedy argued for a “significant nexus” test whereby the body of water should be looked at on a case-by-case basis to determine whether there is a hydrological connection to a body of water that is navigable-in-fact.³⁴ Thus, the present definition of “navigable waters” is murky. . . pun intended. Accordingly, for the time being, State A should, at a bare

27. *United States v. Riverside Bayview*, 474 U.S. 121, 139 (1985).

28. *See Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Eng’rs*, 531 U.S. 159 (2001) (hereinafter “SWANCC”).

29. *See Rapanos v. United States*, 547 U.S. 715 (2006).

30. SWANCC, 531 U.S. at 174.

31. *Id.* at 167.

32. *Id.* at 168.

33. *Rapanos*, 547 U.S. at 732-33.

34. *Id.* at 784-85.

minimum, determine whether the wetlands it wishes to fill have a "significant nexus" to navigable waters, which would subject them to federal regulation and thus require permits from the Army Corps.

A. Confusion over the *Tulloch* Rule

If one assumes that a "significant nexus" is found between the wetlands, which need to be filled and a navigable water, then State A must receive permits from the Army Corps under the Rivers and Harbors Act and *perhaps* under § 404 of the Clean Water Act. "Perhaps" is italicized in the last sentence because determining the scope of the § 404 permit is problematic. In particular, there is an issue with whether § 404 extends to the dredging activities required for building the channel. From 1986 until 1993 the Army Corps broadly defined the discharge of dredged material as "any addition of dredged material into the waters of the United States," but also expressly excluded "*de minimus*, incidental soil movement occurring during normal dredging operations."³⁵ This definition remained in effect until 1993, when the *Tulloch* rule was created through *North Carolina Wildlife Federation v. Tulloch*, in which a North Carolina Developer used sophisticated dredging techniques to prevent any discharge of dredged material in an attempt to develop 700 acres of wetlands without a § 404 permit.³⁶ As a result of such large-scale development of wetland areas, environmental groups sued the Army Corps, the EPA, and the landowners, alleging the activities were subject to a § 404 permit.³⁷ This case was eventually settled by the Army Corps and the EPA, who agreed to revise the term "discharge of dredged material" to include "any addition or redeposit of dredged materials, including the excavated materials removed during a dredging activity."³⁸ Accordingly, the new definition for "discharge of dredged material" became known as the *Tulloch* rule, which required § 404 permits

35. Nat'l Ass'n of Home Builders v. U.S. Army Corps of Eng'rs, No. 01-0274 (JR), 2007 WL 259944, at *1 (D. D.C. Jan. 30, 2007).

36. See *Am. Mining Cong. v. U.S. Army Corps of Eng'rs*, 951 F. Supp. 267, 269 (D.D.C. 1997) (citing *North Carolina Wildlife Fed'n v. Tulloch*, Civil No. C90-713-CIV-5-BO (E.D.N.C. 1993)).

37. *Id.*

38. *Id.*

for nearly all dredging activities, including those only involving the incidental fallback of dredged material coming off of a dredging device and falling back into the same place from which it was removed.³⁹

Given that this new regulation sought to control all dredging and filling activities, it did not take long before the *Tulloch* rule was challenged. In *American Mining Congress v. U.S. Army Corp of Engineers*, the court held the *Tulloch* rule exceeded the scope of the EPA and Army Corps' statutory authority.⁴⁰ While *American Mining Congress* was decided in 1997, it was not until 2001 that a new regulation was issued; commonly referred to as "*Tulloch II*."⁴¹ Under this new rule, the agencies regarded the use of mechanized earth-moving equipment for dredging purposes as a discharge of dredged material unless there was project-specific evidence showing the activity only resulted in incidental fallback.⁴² However, like its predecessor, "*Tulloch I*" has been challenged as exceeding the scope of the EPA and Army Corps' statutory authority.⁴³ Accordingly, the two agencies are still rewriting the § 404 regulations on how to handle dredging activities that only cause incidental fallback.

Unfortunately for State A, even if it does get approval from the Army Corps to dredge and fill, its Clean Water Act permitting process is far from over. For example, the LNG regasification facility may need to use an "open rack vaporization" (ORV) system to use heat from seawater to warm and regasify LNG.⁴⁴ The problem with ORV systems is they require a continuous supply of seawater, which gets discharged at a much colder temperature.⁴⁵ This discharge, in turn, can require a separate "National Pollutant Discharge Elimination System" (NPDES) permit under § 402 of the Clean Water Act.⁴⁶ NPDES permits are a technology-based

39. *Id.* at 270.

40. *Id.* at 271.

41. See *Nat'l Ass'n of Home Builders v. U.S. Army Corp of Eng'rs*, 440 F.3d 459, 462-63 (D.C. Cir. 2006).

42. *Id.*

43. *Nat'l Ass'n of Home Builders v. U.S. Army Corps of Eng'rs*, No. 01-0274 (JR), 2007 WL 259944, at *4 (D.D.C. Jan. 30, 2007).

44. MacDuffee, *supra* note 10, at 5-11.

45. See *id.*

46. 33 U.S.C. § 1342 (2000).

standard that requires a permit for an addition of a pollutant from a point source into navigable water.⁴⁷ In this case, the Clean Water Act defines “pollutant” to include heat,⁴⁸ so it is not a stretch to assume that the discharge of cold water would be seen as a “pollutant,” especially because it could be harmful to marine life around the facility.⁴⁹ Furthermore, State A’s facility meets the definition of “point source,” which the EPA defines as “as discernible, confined and discrete conveyance. . . from which pollutants are or may be discharged.”⁵⁰ Classifying the LNG facility as a “point source,” coupled with the fact that the cold water the facility discharges may constitute a “pollutant,” may trigger § 402 permit requirements for the LNG regasification facility. Accordingly, the possibility that State A will be required to obtain a NPDES permit from the EPA, in addition to the § 404 permit that it must obtain from the Army Corps, creates an additional hurdle standing in the way of constructing the LNG facility.

B. Don’t Forget about B. . .

Assuming that State A is somehow capable of meeting all of its permitting requirements under the Clean Water Act and the Rivers and Harbors Act,⁵¹ the next issue would be whether State B can do anything to protect its interests. As mentioned above, State B could argue the dredging and filling activities result in a discharge into its navigable waters and try to require State A to apply for a separate NPDES permit under § 402 of the Clean Water Act.⁵² This option is extremely attractive because § 402(b) of the Act allows a state to obtain the authority to issue its own NPDES permits.⁵³ Thus, if State B could argue the dredging and filling activities are “pollution” from a “point source,” it could

47. 33 U.S.C. § 1342(a) (2000).

48. 33 U.S.C. § 1362(6) (2000).

49. See MacDuffee *supra* note 10, at 5.

50. 33 U.S.C. § 1362(14) (2000).

51. Recall that this article is only dealing with a limited number of statutory regulations. Accordingly, State A’s permitting obligations are by no means limited to only the Clean Water Act and Rivers and Harbors Act. However, for brevity’s sake, the other necessary permits shall be excluded from this discussion.

52. See 33 U.S.C. § 1342 (2000).

53. See 33 U.S.C. § 1342(b) (2000).

obtain the authority under § 402(b) of the Clean Water Act to reject State A's permit to build the proposed LNG facility. However, this option is not very feasible because the courts have rejected attempts to define the "incidental fallback" that results from dredging and filling activities as pollution.⁵⁴ Moreover, if one recalls from above, §402 permits only apply to "point sources,"⁵⁵ and State B would find it difficult to argue that broad dredging and filling activities are a point source, as defined. Accordingly, any attempt to require State A to obtain a NPDES permit from State B for its dredging and filling activities would most likely be unsuccessful.

If one assumes that State B's voice was effectively silenced during the § 404 permitting process, the state, facing pressure to act from its own citizens, may try to take more drastic measures in order to stop the construction of State A's LNG facility. One such option may be to look for an endangered species living in the area that would be threatened by the facility's construction. Under § 9 of the Endangered Species Act it is unlawful for any "person," a term which includes federal governments and private parties, to "take" an endangered species of fish or wildlife.⁵⁶ Furthermore, the term "take" is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."⁵⁷ Thus, if State B could show there is an endangered species in the area which could possibly be injured by State A's conduct, it may be able to stop the construction of the LNG facility. This argument is not improbable, considering the Endangered Species Act has a history of stopping the construction of major projects; the presence of a small fish in a stream has stopped the construction of a dam,⁵⁸ and the presence of a fly has even stopped the construction of a

54. See *Nat'l Ass'n of Home Builders v. U.S. Army Corps of Eng'rs*, No. 01-0274 (JR), 2007 WL 259944, at *4 (D. D.C. Jan. 30, 2007).

55. 33 U.S.C. § 1342(a) (2000).

56. 16 U.S.C. § 1538(a)(1)(B) (2000).

57. 16 U.S.C. § 1532(19) (2000).

58. See *Tennessee Valley Auth. v. Hill*, 437 U.S. 153, 172 (1978) (an endangered species of fish, the snail darter, prevented the construction of the Tellico Dam on the Little Tennessee River after over eighty million dollars were already spent on the project).

hospital.⁵⁹ That being said, while discovery of an endangered species may be able to stop the construction of the facility, such an outcome would most likely be as probable as winning the lottery when one considers the difficulty in actually finding the species in the area and demonstrating that it is being harmed.

Nevertheless, there are still other problems that State A could face during its construction of the LNG facility. One such problem would be if the dredged material from the channel, marina and turn-around area turned out to contain toxic materials. In this hypothetical situation, State A would not only run into problems of not being able to use the dredged material as fill for its wetlands, but it would also have to comply with the expensive obligations of the Resource Conservation and Recovery Act (RCRA).⁶⁰ Yet another important issue is whether the Federal Energy Regulatory Commission (FERC), acting in conjunction with the U.S. Coast Guard (Coast Guard), would deny the proposed site because the increased ship traffic would negatively affect maritime safety or homeland security.⁶¹ To adequately handle each of the problems mentioned above would require a discussion as long as this article itself, but for the purposes of this paper it suffices just to mention them. Ultimately, it quickly becomes evident that there are numerous obstacles that State A must face in order to build its proposed LNG facility. However, instead of asking whether State A has met all of its necessary requirements, this article questions whether this whole process

59. See *Nat'l Ass'n of Home Builders v. Babbitt*, 130 F.3d 1041, 1057 (C.A.D.C. 1997) (The construction of a county hospital was prevented because the proposed building site was the only remaining habitat of the Delhi Sands Flower-Loving Fly. This species of fly was native to only a small area of dunes located in one county.)

60. 42 U.S.C. §§ 6901-6992 (2000) (The Resource Conservation and Recovery Act authorizes the EPA to establish stringent regulations controlling the generation, transport and disposal of hazardous and non-hazardous wastes).

61. See *Interagency Agreement Among the Fed. Energy Regulatory Comm'n, U.S. Coast Guard, and Research Programs Admin. for the Safety and Security Review of Waterfront Import/Export Liquefied Natural Gas Facilities*, Feb. 11, 2004. Pursuant to an interagency agreement among FERC, the Coast Guard, and the Research Programs Administration, the Coast Guard "is responsible for matters related to navigation safety, vessel engineering and safety standards, and all matters pertaining to the safety of facilities or equipment located in or adjacent to navigable waters up to the last valve immediately before the receiving tanks." *Id.*

could be handled in a more efficient manner.

C. Over-Delegation Debacle

By now, if one thing should be clear from this hypothetical, it is that the current process of regulating inter-jurisdictional water and coastal rights is difficult and perplexing. Both State A and State B arguably have valid interests, which they want to protect; State A, looking for a cheaper and cleaner source of energy, and State B, trying to protect its fisheries and water quality. However, somehow in the process of filling out and complying with the numerous federal permits, it seems as if these issues get skewed and the states are left entangled in an administrative mess. Although the focus of this article is not to argue about the shortcomings, if any, of administrative law, it appears as if the current over-delegation of authority to numerous federal agencies creates a major source of confusion in environmental law as well as a lack of agency accountability.⁶² This “over-delegation” problem is not new and has even been criticized by the agencies themselves, as one frustrated Army Corps official, speaking at a conference on § 404 of the Clean Water Act expressed the belief that § 404 was broken and could not be fixed until the authority under that section was delegated solely to either the EPA or the Corps, and not split between the two.⁶³ However, given the current confusion in both regulating dredging and filling activities,⁶⁴ and what areas even fall within the ambit of §4 04 jurisdiction,⁶⁵ it appears that delegation to one agency will not solve these problems. In fact, the trend of narrowing federal jurisdiction under the Clean Water Act in cases like *Rapanos*,⁶⁶ may be a sign that it is time to change. Perhaps it is time to consider the concept of using cooperative programs among several

62. For an argument about the lack of accountability created by delegation in administrative law See DAVID SCHOENBROD, *POWER WITHOUT RESPONSIBILITY* 9-10, 126-129 (Yale Univ. Press 1993).

63. See GAO REP., *WETLANDS: CORPS OF ENG'RS ADMIN. OF THE SECTION 404 PROGRAM* (July 1988), available at <http://archive.gao.gov/d16t6/136780.pdf>.

64. See Nat'l Ass'n of Home Builders v. U.S. Army Corps of Eng'rs, No. 01-0274 (JR), 2007 WL 259944, at *1, 4 (D. D.C. Jan. 30, 2007).

65. See *Rapanos v. U.S.*, 126 S.Ct. 2208 (2006).

66. *Id.* at 2212.

states or regional geographic initiatives to handle the difficult problems that arise when dealing with inter-jurisdictional environmental problems such as the ones that arose in State A's hypothetical about building a LNG facility.

IS IT THE STATES' TURN NOW?

What are the recent court decisions under the Clean Water Act trying to tell us? If anything, one could argue that they are expressing a need for states to take over complicated environmental matters. In terms of regulating what activities constitute a "discharge" of dredged material, the courts have as recent as January 2007, told the Corps to create new regulations, because their old ones exceeded their delegated authority.⁶⁷ Moreover, the Supreme Court in *Rapanos* left the states uncertain as to what wetlands, if any, are under federal jurisdiction, admitting, "it is unfortunate that no opinion commands a majority of the Court on precisely how to read Congress' limits on the reach of the Clean Water Act."⁶⁸ Are we to read these cases as saying that nothing can be done? Certainly, they have left the EPA and Army Corps in the dark as to what these agencies can and cannot regulate. But perhaps there is a silver lining to this current environmental debacle. For example, a number of states are dealing with the shortcomings of federal regulation by enacting new laws, which address the "narrowing scope" of the Clean Water Act and create state-level regulation for ecologically sensitive areas such as wetlands.⁶⁹ However, one should not be too quick to jump to the conclusion that this trend of increasing state regulation is the panacea to all environmental regulation.

As states regain the "right" to control pollution under the Clean Water Act, it is prudent to consider what are the alleged benefits? One alleged benefit is that by narrowing federal jurisdiction under the Clean Water Act, states are forced to implement their own policies, which in turn makes each state a "laboratory" in the federalist system of policy experimentation.⁷⁰

67. See Nat'l Ass'n of Home Builders, 2007 WL 259944, at *4.

68. *Rapanos*, 126 S.Ct. at 2236.

69. See Darren Springer, *How States Can Help to Resolve the Rapanos/Carabell Dilemma*, 21 TUL. ENVTL. L.J. 83, 85 (2007).

70. *Id.* at 84-85.

In other words, by having all fifty states trying to solve similar problems, more potential solutions will arise, and states will simultaneously be able to learn from one another's mistakes. Additionally, regulation on the State-level may allow each State to tackle its own specific problems thus overcoming the one-size-fits-all dilemma of regulation by a single entity.⁷¹ However, we also have to consider whether the burdens of state-by-state regulation may outweigh the benefits.

While individual State regulation of areas typically controlled under the Clean Water Act would have the ability to bring in numerous methods of environmental protection, is this necessarily a wise idea? One inherent problem with individual state-based regulation is that environmental problems "cross human boundaries," which in legal terms, means that there will be jurisdictional problems.⁷² These jurisdictional problems will come to a head both in terms of health and in economic terms, as "externalities."⁷³ In the case of economics, states would worry about "negative externalities," which occur when a party does not bear all of the costs associated with that party's action.⁷⁴ For example, in the LNG facility hypo, State A, during the construction of the facility, may stir up sediment that flows downstream, negatively interfering with State B's water quality. Thus, while this action may have no negative consequences for State A, it could adversely affect State B. Another issue with individual state regulation deals with the so-called "race to the bottom" theory.⁷⁵ Under this theory, the desire of each State to encourage economic investment leads to a "race" where each state lowers its existing environmental standards as a means of encouraging economic development and attracting investment.⁷⁶ While such a theory may seem callous, people forget that environmental issues are only one of the many issues troubling

71. It has been argued that in some states the aggregate level of environmental protection is lowered due to the existence of federal regulations that discourage state environmental protection measures. See Alder, *supra* note 6, at 81.

72. See Weiland, *supra* note 8.

73. *Id.* at 97.

74. *Id.*

75. Alder, *supra* note 6, at 79.

76. *Id.*

state representatives; especially in times of financial depression. Just as you can't have your cake and eat it too, environmental issues are known to take a back seat to allegedly more pressing issues. Accordingly, individual, state-based protection, with nothing more, may be an inadequate means of accomplishing necessary environmental protection.

Assuming that environmental protection fails on a jurisdictional basis, it almost seems commonsensical that an inter-jurisdictional approach to environmental regulation is the better solution. The logical conclusion being that to overcome the problems associated with human boundaries, it is necessary for states to cooperate.⁷⁷ In fact, this conclusion has been made both on the national level, with the U.S. Fish and Wildlife Service dividing the United States into 53 "eco-regions,"⁷⁸ as well as on the local level by governmental and non-governmental organizations developing such programs as the Great Lakes Information Network.⁷⁹ The key benefit of these programs is that a system organized by eco-regions would diminish the problems created by manmade jurisdictions.⁸⁰ Furthermore, such programs may also create greater public participation, as some theorists posit that "a reduced scale of decision-making enhances the participation of citizens."⁸¹ However, if it is so seemingly obvious that eco-regional programs are beneficial, then why are they not already in place?

Arguably, one reason why inter-jurisdictional regulation of eco-regions has yet to become the prominent means of environmental protection is scientific uncertainty.⁸² Scientific uncertainty poses at least three key problems that relate to environmental regulation: (1) human knowledge of biotic nature is incomplete; (2) human knowledge of natural processes is incomplete; and (3) human knowledge of the implications of our own technologies is incomplete.⁸³ For example, if States A and B propose to form a single eco-region, scientific uncertainty may still

77. Weiland, *supra* note 8, at 98.

78. *Id.* at 116-17.

79. *Id.* at 119.

80. *Id.* at 121-22.

81. *Id.*

82. *Id.* at 98.

83. *Id.* at 98-99.

prevent the states from entering into an agreement. Arguably, the construction of the LNG facility creates a faction between scientists who disagree about the effects on the local fish pollution, the ecosystem as a whole, and the environmental harms associated with LNG energy production and, dare I say, global climate change.

Even assuming that states can agree on all scientific aspects of environmental regulation, there is still the question of who funds the eco-regional program. Moreover, what happens when one State accuses the other of enjoying all of the benefits of a clean environment without paying for its share? The issue being hinted at here is better known as “the tragedy of the commons,” which was famously set out in 1968 by Garret Hardin.⁸⁴ For the purposes of this article however, instead of using a “commons” let us consider the river in our hypothetical that leads to the ocean. If State A agrees to spend extra amounts of money, insuring that its dredging and filling activities do not result in any discharge downstream to State B’s waters, what guarantee does State A have that State B will contribute to the cause? Better yet, if State A and State B both agree to enter into an eco-regional program to protect the environment, what happens when State A suspects that State B is not paying its share? It is possible that the issue of “who pays” is enough to bring any eco-regional program crashing to a halt.

To rebut this “tragedy of the commons” idea, perhaps we can look at an eco-regional program that has been met with some success, the Regional Greenhouse Gas Initiative (RGGI). RGGI was created in 2003 when New York Governor George Pataki sent letters to other states, inviting them to join in a cap-and-trade program to regulate carbon dioxide emissions from power plants.⁸⁵ By September 2003, nine of the states agreed to participate in the plan, which was then put into full effect by October 2003.⁸⁶ Thus,

84. Garrett Hardin, *The Tragedy of the Commons*, 162 *SCI.* 1243, 1244 (1968).

85. DALLAS BURTRAW, ET AL., ALLOCATION OF CO₂ EMISSION ALLOWANCES IN THE REGIONAL GREENHOUSE GAS CAP-AND-TRADE PROGRAM 1 (Resources for the Future 2005), available at http://www.rggi.org/docs/rff_study_4_6_05.pdf; see also, generally, <http://www.rggi.org/about.htm> (last visited Feb. 17, 2009).

86. BURTRAW, *supra* note 88, at 1; Regional Greenhouse Gas Initiative, Frequently Asked Questions 1 (December 20, 2005), available at

this brief example shows that even though not all eleven states agreed to participate in the program, the potential for “free riders,” which is an obvious and inherent risk when regulating green house gases, is not a death knell to an inter-jurisdictional environmental enforcement action.

On the other hand, even if the eco-regional compact between states A and B works flawlessly, there is still an issue of the states curtailing the flow of pollutants so much that it implicates the “dormant commerce clause.”⁸⁷ For example, the dormant commerce clause has been used to invalidate a statute prohibiting the importation of waste from out-of-state.⁸⁸ It has also been used to invalidate a statute designed to channel solid waste through a designated waste transfer station that would separate recyclable items from non-recyclable items.⁸⁹ Thus, acting without any federal oversight, the dormant commerce clause may preclude states from completely controlling the movement of not only wastes, but also pollutants and natural resources across their eco-region.⁹⁰

However, dormant commerce clause issues are not as easily solved as simply instating “federal oversight.” This is especially true when we take into account the difficulties in getting all states to agree on a remedy, as well as the Tenth Amendment’s limitations on congressional power.⁹¹ In other words, with federal oversight in eco-regional environmental regulation, there is the risk that a state might bring a coercion action against the federal government. Perhaps looking at an example taken from *New York v. United States* better illustrates this point.⁹² In *New York*, the Governors of several states agreed to take responsibility for the disposal of their own low-level radioactive waste based on the belief that it could be disposed of “most safely and efficiently. . . on a regional basis.”⁹³ Nevertheless, the United States Supreme Court held that while the Federal Government could hold out

http://www.rggi.org/docs/mou_faqs_12_20_05.pdf.

87. Weiland, *supra* note 8, at 127.

88. See *City of Philadelphia v. New Jersey*, 437 U.S. 617, 629 (1978).

89. See *C&A Carbone, Inc. v. Clarkstown*, 511 U.S. 383, 386 (1994).

90. Weiland, *supra* note 8, at 127.

91. U.S. CONST. amend. X.

92. 505 U.S. 144 (1992).

93. *Id.* at 150-51.

incentives to encourage states to adopt the regulatory scheme, it could not direct states to provide for the disposal of radioactive waste within their borders.⁹⁴ What is of particular interest here is Justice White's dissenting commentary that the Act resulted from interstate compromises by "*state* leaders to achieve a *state*-based set of remedies" for radioactive waste problems, yet it was held unconstitutional as *federal* coercion.⁹⁵ Thus, Justice White was troubled by the majority's decision because the Act was the product of "cooperative federalism, in which the States bargained among themselves to achieve compromises for Congress to sanction."⁹⁶ Seemingly, what the states sought to achieve in *New York* through the state-by-state regulation of its own radioactive waste is very similar to the state-based approach, discussed above. So, what lesson can environmentalists and lawmakers take from *New York*?

As one has seen so far, many issues stem from regulation of environmental problems both on a state and federal level. These problems are only further complicated when one looks at the opinion in *New York*, where the Supreme Court overruled a seemingly valid compromise between various state governments attempting to regulate the environmental problems associated with nuclear waste.⁹⁷ However, read closely, the Supreme Court in *New York* appears to provide some great advice for eco-regional management systems. If one revisits the majority opinion, the Court stated that the Federal Government could "hold out incentives to the States as a means of encouraging them to adopt suggested regulatory scheme."⁹⁸ Thus, "incentives" may be the solution to problems inherent in state-based regulation. In other words, what would happen if the federal government provided "incentives," perhaps better known as "funding," to states that enter into eco-regional protection agreements?

REGIONAL GEOGRAPHIC INITIATIVES

The provision of federal funding to states that agree to enter

94. *Id.* at 188.

95. *Id.* at 189-90 (emphasis added).

96. *Id.* at 194.

97. *Id.* (White, J., dissenting).

98. *Id.* at 188.

into multi-jurisdictional, eco-regional protection programs seems like a new and exciting idea. However, the old adage that “there are no original ideas,” proves true in this situation because the EPA already implemented a program to provide financial support through a “Regional Geographic Initiative” (RGI) fund.⁹⁹ According to the EPA’s website the RGI fund is designed to “fund unique, geographically-based projects that fill critical gaps in the Agency’s ability to protect human health and the environment.”¹⁰⁰ In fact, the EPA’s website reveals that the RGI program was successful in funding 107 projects in the year 1998 alone.¹⁰¹ However, further research into the RGI fund becomes somewhat puzzling; it appears as if no projects have been funded since 1998. An inquiry into this matter through a series of e-mail correspondence with a regional EPA director was met with no avail. Only through another author’s confidential telephone interview with an EPA Official was it revealed that the RGI effort lasted only one year, with a total investment of just \$2 million being split among the ten regional offices of the EPA.¹⁰² Apparently, the national program offices declined to participate beyond the first year because of a “desire to hold the purse strings more closely at headquarters.”¹⁰³ Although this explanation seems reasonable, maybe there is a different theory why this program failed; the states never bought into it!

Speaking from a point of pure conjecture, it appears as if the RGI program *would* fail because explicit in the program’s description is that “project[s] may receive funding for one or more years but generally *will not receive RGI funds for more than four years*.”¹⁰⁴ While the RGI program may have lofty goals of inciting greater local public participation in environmental matters through this initial influx of federal government funding, the lack of *continued* government funding is extremely problematic. Like

99. EPA, REGIONAL GEOGRAPHIC INITIATIVE PROGRAM, <http://www.epa.gov/regional/rgi.htm> (last visited Feb. 17, 2009).

100. *Id.*

101. EPA, REGIONAL GEOGRAPHIC INITIATIVE STORIES, <http://www.epa.gov/regional/highlightsfin.htm> (last visited Feb. 17, 2009).

102. Weiland, *supra* note 8, at 124 n.114.

103. *Id.*

104. EPA, REGIONAL GEOGRAPHIC INITIATIVES, <http://www.epa.gov/regional/rgi.htm> (last visited Feb 17, 2009) (emphasis added).

the analogy of riding in a donkey cart, if the driver stops holding the carrot in front of the donkey, the cart will eventually stop moving and the driver will be left with one angry ass. In this case, the federal government made it explicit that any "carrot" used to get the states moving would be removed in four years or less. Accordingly, states and even more importantly, local regions, lacked any incentives to engage in regional programs when they knew that the federal government would leave them to fund expensive environmental programs on their own. With this in mind it is important to question whether it is possible to salvage an "RGI-like" program by providing a *continued* incentive for states to engage in eco-regional protection of environmental resources.

THE REBIRTH OF THE EPA & REGION GEOGRAPHIC INITIATIVES

While we know from *New York* that the federal government cannot outright *coerce* State governments to act a certain way, they can provide federal funding as an *incentive*.¹⁰⁵ So conceivably the answer lies in providing funding to those states that delegate some part, if not all, of their environmental regulatory authority to eco-regional organizations. Consequently, the federal government would, in essence, adopt a "permanent" RGI program simply by providing continued funding. In fact, this idea does not seem so far-fetched when one considers the structure already in place under the Coastal Zone Management Act (CZMA).¹⁰⁶ To be brief, under the CZMA, the federal government provides funding to states that develop and administer coastal programs according to federal guidelines set out under the Act.¹⁰⁷ In other words, if the state wants to receive federal funding for coastal zone management, it must first adopt regulations that are in accordance with those approved by the federal government. Thus, if one revisits the idea of RGI funding and compliments it with the principles behind the CZMA, a new "hybridized" agency can be created out of the EPA to enforce environmental matters on an eco-regional basis.

As one continues to review this newfound balance between

105. *New York*, 505 U.S. at 188.

106. 16 U.S.C. §§ 1451-1466 (2000).

107. *See* 16 U.S.C. § 1455 (2000).

federal and state environmental regulation, the idea of a decentralized EPA appears to have numerous benefits. One theoretical positive is that the decentralization of leadership, inevitable with the reorganization of the EPA by eco-regions, would open up new management positions, thus creating more opportunity of agency recruitment and advancement; in other words, more jobs.¹⁰⁸ A second benefit to deregulation is the potential that regulation by eco-region might foster greater participation by the local citizens in policy decisions,¹⁰⁹ which in turn could raise overall environmental awareness. And yet another benefit would be that eco-regions might eventually make greenhouse gas emissions trading programs more feasible by clearly delineating specific trading regions.¹¹⁰ While all of these benefits seem well and good, one must also consider the importance of maintaining some centrality.

It cannot be stressed enough that with decentralization, it is still necessary to retain some form of a national office. One of the most important rationales for retaining a national office is that the office would play a critical role in gathering information from across eco-regions, assess it, and then disseminate it back to the regions.¹¹¹ Furthermore, some authors have reason to believe that eco-regional based environmental protection could lead to efforts by wealthy communities to keep out “locally unacceptable land uses.”¹¹² Potentially, wealthier eco-regions, if left unchecked, may promulgate regulations that force an unfair amount of pollution-causing and environmentally deleterious activities to occur in poorer areas. Thus, there is also a demand for a national office as a means to prevent the “not in my back yard” (NIMBY) problem.¹¹³ Finally, there is some merit in maintaining a national office to address difficult environmental problems that require an across-the-board, “programmatic response,” such as setting

108. Weiland, *supra* note 8, at 121.

109. *Id.* at 122-23.

110. *Id.* at 121-22.

111. *Id.* at 127.

112. Steven M. Meyer & David M. Konisky, *The Origins of Community-Based Environmental Protection: Evidence from the Massachusetts Wetlands Protection Act*, MASS. INST. OF TECH. DEPT. POL. SCI. 3 (Aug. 2005), available at http://web.mit.edu/polisci/research/meyer/Impulse_August05.pdf.

113. Weiland, *supra* note 8, at 127.

standards for acceptable levels of toxins in drinking water.¹¹⁴ Whatever the case may be, the complete decentralization of the EPA is not the most prudent alternative, as a national office will retain many important functions that simply cannot be taken over on a regional basis.

CONCLUSION

If one returns to State A's LNG plant for a final time, what would happen if the state had to apply to an eco-region for its permit instead of numerous centralized national agencies? Would the process be any easier? Arguably, regulation by eco-region would allow for a broader and more detailed analysis of what the regulations actually are and what rights states possess. The recent trend of the courts to narrow the authority of the federal agencies under the Clean Water Act in both *Rapanos*¹¹⁵ and *National Ass'n of Home Builders*,¹¹⁶ demonstrates the current level of confusion. Moreover, states are already undertaking initiatives on a number of environmental challenges.¹¹⁷ These facts can realistically be seen as suggesting that it is feasible to blend together state-based initiatives with federally managed regimes to form inter-jurisdictional eco-regions. Such a demand for this eco-regional regulatory approach is further illustrated by looking at the LNG hypothetical and considering the interests of State B. An eco-region approach would give State B much more authority over the application for a permit to build the LNG facility as well as the subsequent regulation of it. Instead of being told that the state lacks jurisdiction because "the dredging and filling occur outside of its borders and the Army Corps regulates such activities," regulation by a single eco-region compels the regulating authority to consider the interests of State B. Thus, because the eco-regional regulatory authority has jurisdictions over an entire ecosystem opposed to merely a state border, the concerned parties of State B are able to voice their opinions, add to the overall amount of information taken into consideration, and

114. *Id.* at 128.

115. *Rapanos v. U.S.*, 126 S.Ct. 2208 (2006).

116. *Nat'l Ass'n of Home Builders v. U.S. Army Corps of Eng'rs*, No. 01-0274 (JR), 2007 WL 259944 (D. D.C. Jan. 30, 2007).

117. Springer, *supra* note 72, at 83-4.

ensure that the most environmentally conscious outcome is reached.

Hopefully this LNG hypothetical has demonstrated that switching to an eco-regional based approach to environmental regulation would not only provide the states with a greater voice in important environmental issues, but would also create a more efficient regulatory process. Furthermore, there is evidence supporting the feasibility of such a system already present in today's society. Signs of this transition may be seen as state governments accept more environmental regulatory authority each time the courts limit the scope of important federal statutes like the Clean Water Act. However, it is not a matter of states merely accepting responsibility for environmental matters but rather it is what they do with their newfound power that is of the greatest importance to the environment. Will the states finally reconnect law with science by creating a system that embraces the eco-system approach to environmental protection? Given the inherent benefits of environmental regulation by eco-region, one can only hope.

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