

ENVIRONMENTAL LAW IN CUBA

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PROLOGUE

In the closing weeks of 1958, a column of the Cuban Revolutionary Army came up from the Sierra Maestra to attack government troops at Santa Clara. The leader of the column, Che Guevara, was from Argentina and knew nothing of the terrain. He was briefed by

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1. Many of the Cuban Laws (both original versions in Spanish and translations in English) referenced in this paper can be found at the Tulane Institute for Environmental Law and Policy <<http://www.law.tulane.edu/programs/environmental/envirolaw/institute/cubamain.htm>>.

a professor of geography at the University of Santa Clara, Antonio Nunez Jimenez, who had joined the revolution earlier that year. An ardent naturalist, Nunez had founded the Cuban Speleological Society at the age of 17 and earned a Doctorate in Arts and Philosophy at the University of Havana in 1951. He would go on with Guevara's column to Havana, manage the Agrarian Reform Program, found the Cuban Academy of Sciences, set aside nature preserves, direct research institutes, write environmental responsibilities into the Cuban Constitution, found a non-governmental organization on the proceeds from his publications, and end his career organizing protests for cleanup and environmental reform.²

Environmental law in Cuba rises from these roots: a long history of land abuse,³ successive waves of revolution,⁴ and a late-day awakening led by the scientific community, no less sudden in its appearance than the awakening of the United States a few decades before. After centuries of neglect, environmental policy is now on a fast track in Cuba. The instruments of this policy, in turn, are sowing seeds of law that could have major impacts on Cuban governance.

This article describes the evolution of Cuban environmental law. To begin, it hazards a summary of the machinery of government. It then moves to consider early environmental laws and policies, the emergence of a new environmental ministry in 1994, a new framework environmental law in 1997, subsequent programs for environmental impact assessment, coastal zone management, and biological diversity, and first steps towards their implementation. It ends with an assessment of special economic, political and legal challenges Cuba faces and their relationship to environmental policy. The questions are obvious. The answers are not, but their pursuit is very much in play.

2. See Interview with Armando Fernandez, Investigator, Foundation for Nature and Man, in Havana, Cuba (Mar. 22, 1999) (on file with author); "Antonio Jimenez," Foundation for Nature and Man, email: fonat@cubarte.cult.cu. Antonio Nunez Jimenez also served as Vice-Minister of Culture and as Ambassador to Peru, conducted scientific exploration in the high Andes from Peru to Venezuela, led an expedition by open canoe from the sources of the Amazon to the Atlantic Ocean, published his own research on China, Africa and the Galapagos, and produced a fifty-volume analysis of Cuban national history entitled "Cuba, Nature and Humanity."

3. See *infra* text accompanying note 13.

4. A series of coups, attempted coups, armed insurrections and foreign interventions in 1809, 1848, 1868-78, 1892-98, 1906, 1917, 1930-34, 1952 (coup d'etat of General Fulgencio Batista), 1956-59 (revolution of Fidel Castro), and 1961 (Bay of Pigs invasion) are described in CUBA: A SHORT HISTORY (Leslie Bethell ed., 1993).

I. A VIEW OF THE PROBLEM

All these islands are very beautiful, and distinguished by various qualities; they are accessible, and full of a great variety of trees stretching up to the stars; the leaves of which I believe are never shed, for I saw them as green and flourishing as they are usually in Spain in the month of May; some of them were blossoming; some were bearing fruit, some were in other conditions; each one was thriving in its own way. The nightingale and various other birds without number were singing, in the month of November, when I was exploring them. There are besides in the said island of Juana seven or eight kinds of palm trees, which far excel ours in height and beauty, just as all the other trees, herbs and fruits do.⁵

Letter of Christopher Columbus concerning
the islands recently discovered in the Indian sea, 1492

The trees were the first thing that Europeans saw when they came to America. Europe held barely a dozen tree species.⁶ The New World held more than one hundred, including the tallest, oldest, and most extensive stocks on any continent.⁷ For Christopher Columbus entering the Caribbean, the contrast with arid, war-torn Spain – beaten to the ground over centuries for firewood and cattle – must have been intense. In his accounts, Columbus would describe the trees he saw before describing the native peoples, the geography, or even the prospects for gold that drove his expedition, and those that followed, towards one of the most lucrative and brutal conquests in the history of the world. Of all the sites Columbus visited, the most impressive was the island of "Juana," which he called "the most beautiful land human eyes have ever seen."⁸ It was covered by trees. There were no snakes of any

5. Christopher Columbus, *The Letters Of Columbus On The Discovery Of America* 34 (photo. reprint 1842) (n.d.) (unpublished collection, on file with the Lennox Library).

6. See STEWART L. UDALL, *THE QUIET CRISIS* 55 (1963).

7. See *id.* Indeed, the trees were so numerous they became enemy number one to European settlers. See CONRAD RICHTER, *THE AWAKENING LAND* 7-12 (ALFRED A. KNOPF 1966) (describing the fear and subsequent destruction of the forests of the Ohio Territory). President Theodore Roosevelt observed some years later that "[t]he American had had one thought about a tree ... and that was to cut it down," quoted in T.H. Watkins, *Father of the Forests*, AM. HERITAGE, Feb.-Mar. 1991, at 86, 91.

8. Christopher Columbus, quoted in DAVID STANLEY, *CUBA*, LONELY PLANET 13 (1997).

kind, few reptiles, no large wild beasts, and perhaps 100,000 relatively peaceful native inhabitants.⁹ This was Cuba. Within fifty years the natives were all but exterminated. It would take longer for the trees.

Cuba was initially spared the conquest by the simple fact that it had little gold. When Spain hit the jackpot in Mexico, then in Peru, Cuba became a staging area for ships and, later, slaves to clear the trees and raise tobacco, indigo, and the crop that would transform its environment and determine its future: sugar.¹⁰ Some ninety-five percent of Cuba was under forest in 1492.¹¹ The woods were originally maintained, and indeed husbanded by decree, to supply the Spanish fleet.¹² With the arrival of British slavers in the 1760's however, and the rising appetite in their North American colonies for sugar and rum (John Adams would write: "I know not why we should blush to confess it, but molasses was an essential ingredient in American independence"),¹³ Cuba experienced the same slash-and-burn conversion to slave agriculture seen in the American South. By the late 1800's, it was producing one fourth of the world's sugar.¹⁴

The sugar and slave trades would dominate Cuba's relationship with Spain and then the United States. By 1956, the U.S. owned forty percent of Cuban sugar production, a quarter of all bank deposits, one half of the railroads, and ninety percent of all electric and telephone service.¹⁵ The City of Havana and a few Cuban beaches were American playgrounds but, beyond these enclaves, the country had been transformed. A landscape nearly totally forested at the time of Columbus — and dependent on that cover for its sustainability — was down to fifty percent cover by 1900, and by the 1950's to fourteen percent in fringes of mangroves and mountain

9. See *id.* at 13, 40-42.

10. See Bethell, *supra* note 4, at 5-15.

11. See Cuban Ministry of Science, Technology and the Environment (CITMA), *Taller Medio Ambiente y Desarrollo [Workshop: The Environment and Development]* 6 (1997) [hereinafter *Workshop*].

12. See Bethell, *supra* note 4, at 1.

13. *Id.* at 8.

14. See *id.* at 15.

15. See *id.* at 87. In 1959, the value of United States investments in Cuba exceeded those of the U.S. in any other country in Latin America but oil-rich Venezuela; the United States also bought two-thirds of all Cuban exports and supplied about three-quarters of Cuban imports. See *id.* at 97. To secure these investments, the United States operated a naval base on Cuban soil at Guantanamo, under a 1903 lease that would expire only if and when the United States agreed.

enclaves.¹⁶ The "most beautiful land human eyes have ever seen" was now well on its way to desertification, with some 76.8 percent of its soils ripped by erosion, salinity, acidity, and drainage; its surface waters not far behind.¹⁷

The Cuban environment today is affected of course by more than its pre-Revolutionary past. With infrastructures in transportation, drinking water, and sewage treatment in disrepair;¹⁸ rudimentary-at-best industrial treatment;¹⁹ urban housing literally falling down;²⁰ an economy crippled by the loss of subsidies and markets in the Eastern Bloc and harried by a United States embargo;²¹ a government still groping to reconcile state control with economic development;²² and only limited traditions of administrative process, public participation and judicial review,²³ environmental solutions in Cuba could appear to be all but unattainable, and certainly not a priority for the government or its people. Havana Harbor looks bad, smells bad, and has been identified by the United Nations as one of the ten most polluted bays in the world.²⁴ The Almendares River, flowing through Havana in the 1840's as "a bluish river that slides by like a sheet of glass," was described recently and more bluntly by a Cuban environmental leader as "a river full of shit."²⁵

And yet, Cuba is changing. Havana Harbor is coming back.²⁶ Polluting industry is being stepped back from the Almendares.²⁷ Reforestation has put tree cover back to twenty-one percent.²⁸ And,

16. See *Workshop*, *supra* note 11, at 6.

17. See CITMA, *Situacion Ambiental Cubana 1998* [*Cuban Environmental Situation 1998*] 10, 11 (1998) [hereinafter *Environmental Situation*].

18. See *id.* at 4-10.

19. See *id.*

20. See Dalia Acosta, *Havana Rises from the Ruins*, INTER PRESS SERVICE, Nov. 21, 1995, at 1, available in 1995 WL 10135938 ("In 1994, Havana witnesses 614 building collapses, 375 demolitions of unsafe buildings and thousands of emergency repairs. ...").

21. See *infra* text accompanying notes 395-401.

22. See *infra* text accompanying notes 405-445.

23. See *infra* text accompanying notes 47-63, 74-77.

24. See Rolando Napoles, *Havana Bay, The Island's Most Polluted Ecosystem*, INTER PRESS SERV., May 30, 1996, at 1, available in 1996 WL 10243084.

25. Dalia Acosta, *SOS for Cuba's Almendares River*, INTER PRESS SERVICE, Apr. 26, 1996, at 1, available in 1996 WL 9810253. The environmental leader quoted was Antonio Nunez Jimenez, see *supra* text accompanying note 2.

26. See Napoles, *supra* note 24; see also Dalia Acosta, *Fish Return But Problems Remain For Havana Bay*, INTER PRESS SERVICE, Nov. 20, 1996, at 1, available in 1996 WL 13589284 ("I sometimes see a shad jumping, or other fish attacking the sardines, something I haven't seen for a very long time," says 70-year-old Pablo Olivares, who has lived near the port of Havana for the past 40 years.).

27. See Interview with Fernandez, *supra* note 2.

28. See *Workshop*, *supra* note 11, at 6. Cuba's agricultural strategy calls for additional reforestation towards a goal of 27% of the national territory by the year 2015, largely in "forest

there are laws — new and potentially very powerful environmental laws. As unusual as it may seem, and as difficult as it might be to accept, Cuba has made environmental protection a priority goal and is taking large steps government-wide to bring it about. In this effort, and against all of the handicaps noted above and more, it has several assets of considerable value.

The first asset is the extraordinary nature of its biological resources. Scattered across the landscape in relic pockets, keys, caves, marshes, wet forests, and mountain ravines are nearly 7000 species of plants — half of all identified plant species of the Caribbean, more than a third of the number of plant species known to the United States and Canada combined.²⁹ The diversity of fauna is no less impressive, with twelve times as many mammal species per hectare as the United States and Canada, twenty-nine times the amphibians and reptiles, and thirty-nine times the number of bird species including several endangered species, the rare Bee Hummingbird, and the last known sighting of the Ivory-Billed Woodpecker, now extinct in the United States.³⁰ From the standpoint of biological diversity, research, and beneficial derivatives, Cuba is as important as any nation in the Northern hemisphere, facts of which Cubans are quite aware. Cuba's biotechnology industry has been producing biological pharmaceuticals and pest controls since the early 1980s.³¹

No less important are Cuba's coastal resources, with nearly 4,000 miles of shoreline on the main island and an additional 4,195 outlying, mostly uninhabited coastal islets and keys.³² Cuban beaches have the rare advantages of being both abundant and relatively unspoiled by Caribbean, or even Florida, standards. They have become a major draw for international tourism, on which much of the country's economic future now depends,³³ facts of which Cubans

plantations" managed for sustained-yield wood production. See CITMA, *Republic of Cuba Report to the VIII Session of the Commission on Sustainable Development*, Apr. 1, 2000, at 22 [hereinafter *Report*].

29. See CITMA, *Cuba: Perfil Jurídico e Institucional Sobre la Diversidad Biológica* [Cuba Legal and Institutional Profile of Biological Diversity], Unión Mundial para la Naturaleza [Int'l Union for the Cons. Of Nature], May 1997, at 5 [hereinafter *Profile*]; Dr. Michael L. Smith, *Cuban Biodiversity: An Opportunity for Cooperation and Complementarity*, in *The Environment in U.S.-Cuban Relations: Opportunities for Cooperation*, INTER-AMERICAN DIALOGUE CONFERENCE REPORT at 14 (Apr. 1995).

30. See Smith, *supra* note 29, at 14, 16.

31. See *infra* text accompanying notes 332-338.

32. See Stanley, *supra* note 8, at 37.

33. See *infra* text accompanying note 255.

are also quite aware. By 1996, tourism had replaced agriculture as Cuba's primary source of revenue.³⁴

A second asset is Cuba's depth in science and education. Cuba's science traditions extend back nearly two centuries to the German naturalist and geographer Alexander Von Humbolt, whose works of exploration and classification remain benchmarks in the field.³⁵ At the turn of the 1900's, Cuban and U.S. scientists began extensive surveys of Cuba's biological resources, forming the backbone of collections in the New York Botanical Garden, the City of Philadelphia and the Aggaziz Museum of Harvard University.³⁶ Harvard's Botanical Field Station at Cienfuegos contained the largest living collection of tropical plants in the western hemisphere, and was a leading educational center for U.S. students in tropical biology.³⁷ The University of Havana has trained natural scientists from Caribbean and Latin American countries for more than one hundred years,³⁸ and between 1980 to 1984 graduated more than 95,000 professionals in science and technology at the university level.³⁹ More than a dozen academies and institutes hold high rank in Cuban government and support nearly 30,000 employees and 214 research and field units across the country.⁴⁰ Cuban education stresses the sciences, and the education is extensive, with one of the highest literacy rates in the world.⁴¹ It was this science cadre that would lay the foundation for the environmental movement to come. Indeed, Cuban scientists would lead it, and go on to head the agencies responsible for carrying it forward.

The Cuban environmental movement's third asset – although without doubt its most controversial one – is the open support it has received from the highest level of Cuban government, President Fidel Castro. In any nation, the support of the Chief Executive is a *sine qua non* of environmental progress without which, as United States experience shows, even with the best of laws and most active

34. See Nicolás Crespo & Santos Negrón Díaz, *Cuban Tourism in 2007: Economic Impact*, in ASSOCIATION FOR THE STUDY OF THE CUBAN ECONOMY, *CUBA IN TRANSITION* 150, 152 (1997).

35. See generally ANN GAINES, *ALEXANDER VON HUMBOLT, COLOSSUS OF EXPLORATION* (1990).

36. See Smith, *supra* note 29, at 15-18.

37. See *id.*

38. See *id.*

39. See UNEP, *Estrategia Nacional para la Diversidad Biológica y Plan de Acción en la República de Cuba*, at 23 (1998)[hereinafter *Estrategia*].

40. See *Profile*, *supra* note 29, at 37.

41. See Stanley, *supra* note 8, at 51-52; Joy Gordon, *Cuba's Entrepreneurial Socialism*, *THE ATLANTIC MONTHLY*, Jan. 1997, at 4 (describing Cuban literacy rate at 98 percent).

of citizenry, the programs fall into stalemate.⁴² Nowhere, however, may this support be more critical than in a centrist regime such as that of Cuba. The fact is, therefore, that while Cuba retained important biological resources following the Spanish and Sugar holocausts, and while a strong cadre of scientists was on hand to promote their conservation, environmental protection in post-revolutionary Cuba was on the same road to nowhere seen in many countries until the 1990's.⁴³ Then, suddenly, environmental protection was catapulted forward by the Cuban President, largely in response to the Rio Conference on the Environment and Development of 1992. At issue is the extent to which it will become its own institution.

II. INSTITUTIONS AND THE LAW

[A] revolution consists in the first phase in the destruction of the unjust laws of the old society; there is no doubt that our revolution has been a destroyer of laws. More just laws, the new juridical order of the new society, that is what we are trying to create now.⁴⁴

Fidel Castro, 1963

Legislation is an essential element of any environmental strategy. To actually play such role, the environmental legislation has to be both efficient and effective. It comprises the Framework Law and the rest of the legal regulations geared at protecting the environment, including technical norms of environmental protection.⁴⁵

CITMA, 1997

42. See generally J. LASH ET AL., *A SEASON OF SPOILS* (1984) (critiquing the environmental record of the Reagan administration); see also Oliver A. Houck, *President X and the New (Approved) Decisionmaking*, 36 AM. U. L. REV. 535, 536-545 (1987) (describing White House opposition to Congressionally-enacted environmental programs).

43. For descriptions of pre-1990 environmental conditions in Cuba, see generally Mariá Dolores Espino, *Environmental Deterioration and Protection in Socialist Cuba*, ASSOCIATION FOR THE STUDENT OF THE CUBAN ECONOMY, *CUBA IN TRANSITION* 328 (1993); JOSÉ R. ORO, *THE POISONING OF PARADISE: THE ENVIRONMENTAL CRISES IN CUBA* (1992).

44. Fidel Castro, speech at Lomonosov University, Moscow (May 21, 1963), reprinted in DEBRA EVENSON, *REVOLUTION IN THE BALANCE: LAW AND SOCIETY IN CONTEMPORARY CUBA* 7 (1994). The Revolution's leader, Fidel Castro, graduated from the University of Havana with a law degree in 1950. See April White, *Meeting Castro*, THE LEGAL INTELLISNER, Mar. 17, 2000.

45. CITMA, *National Environmental Strategy*, June 1997, at 20 [hereinafter *Strategy*].

Cuba is having to reconcile itself with a system of public law, and environmental law, as in many countries, is pushing the envelope.

A primary purpose of the Cuban revolution was to dismantle both laws and systems viewed as anti-social and unjust. Among the first targets were private property and the practice of law, which were seen as working in concert to protect privilege and the old order. In moves that would warm the hearts of "tort reformers" and critics of the American legal system today, private lawyers were considered "parasites," law practice was nationalized, law school enrollments plummeted, and practitioners moved on to become agency legal advisors, to other fields,⁴⁶ or to Miami, Florida. At the same time, the government moved towards the redistribution of lands and the introduction of a planned economy, which required another kind of state.

By 1975, Cuba had jelled a new governmental structure.⁴⁷ An elected National Assembly of Popular Power would exercise legislative power, assisted by provincial and municipal assemblies.⁴⁸ In keeping with the theory of popular power, the National Assembly would be the ultimate decision-maker not only for full-bore laws (Leyes), but for determinations of their constitutionality.⁴⁹ Between meetings of the National Assembly, a Council of State elected from the Assembly would exercise legislative power, including interpretative power, with the authority to enact Decree Laws (Decreto-Leyes) — full laws in all respects, but subject to review and modification by the National Assembly.⁵⁰ The executive would consist of the Council of Ministers, the heads of more than twenty agencies, and within which the Executive Committee of the Council would direct and coordinate the operation of government.⁵¹ The Council had the authority to adopt Decrees (Decretos), with the authority to bind all executive agencies, but with an ill-defined reach short of law. The agencies themselves, or Ministries, were empowered to adopt Regulations (Resoluciones, Instrucciones) implementing their programs and governing their own affairs.⁵² Thus, each primary branch — legislative and executive — would

46. See D. EVENSON, *supra* note 44, at 8, 41.

47. See *id.* at 13, 22-23.

48. See *id.* at 23.

49. See *Profile*, *supra* note 29, at 9. See also Rajendra Ramlogan, *Protection of the Environment in Cuba: Piercing the Caribbean Iron Curtain*, 29 U. MIAMI INTER-AM. L. REV. 37, 44-46 (1998).

50. See *id.* at 10.

51. See *id.* at 10, 11.

52. See *id.* at 14.

have its plenary and executive organ with the latter exercising real power on a daily basis. The more important the decision, the farther up the chain its approval would go. The new environmental law of Cuba, for example, would go to the top, the National Assembly, for enactment as a full law.⁵³

Alongside these governmental structures are two remaining powers, the judicial system and the Communist Party, neither of whose full influence on an environmental policy is easy to assess.

In concept, both the judiciary and the Justice Department are subordinate to the assemblies of popular power.⁵⁴ The court system tracks the three levels of government: local; provincial; and national – with the Supreme Court having appellate review of all lower decisions.⁵⁵ Judges are elected by their respective assemblies for fixed terms, and in the exercise of "their function of imparting justice are independent and owe obedience only to the law."⁵⁶ As noted above, however, this independence – which apparently is independence in more than name⁵⁷ – does not extend to reviewing the constitutionality of laws or regulations. The extent to which it includes the review of the legality of government acts, such as environmental impact statements or permits, is a question with no tradition for an answer,⁵⁸ and one that, as discussed later in this article, will surely be pressed by the emerging environmental law.

In 1991, the Council of State established economic chambers of the Supreme Court and provincial courts with jurisdiction over investment and related environmental disputes.⁵⁹ During this same

53. The legislative process for environmental law is at least to some extent representative and participatory. See Bethell, *supra* note 4, at 134 ("The National Assembly featured freer and somewhat influential debates on issues other than macro-economic policy or foreign and military policy. On such matters as common crime, environmental protection and family legislation deputies had some influence over the content of bills.").

54. See D. EVENSON, *supra* note 44, at 75 (judiciary), 81 (fiscal). In 1997, the judiciary which had been subordinate to the Justice Department was made autonomous and independent in its supervision, administration and budget. See Ley 82, Ley Sobre los Tribunales Populares [Law of the Popular Courts], Gaceta Oficial de la Rep. de Cuba (July 14, 1997).

55. See Profile, *supra* note 29, at 15.

56. The Law of Popular Courts, art. 2 (1990), quoted in D. EVENSON, *supra* note 44, at 77.

57. See *id.* at 77-78.

58. See *id.* at 78-80.

59. See Profile, *supra* note 29, at 46, 47; see also D. EVENSON, *supra* note 44, at 210-11 (citing Decreto-Ley No. 129 (1991), De Extinción del Sistema de Arbitraje Estatal [Extinction of State Arbitration System], Gaceta Oficial Ext. (Aug. 19, 1991)). In the opinion of one Cuban jurist, these economic chambers have jurisdiction over economic and environmental disputes between economic entities (i.e., joint ventures and foreign corporations), but not over environmental disputes between citizens or corporations and the Cuban government. See e-mail from Lic. Vivian Hernandez, Cuban Ministry of Justice (Aug. 16, 2000) (on file with

decade, the regulation of private law practice relaxed at least to the point that it was administered by an autonomous, self-governing institution financed by attorney fees.⁶⁰ The argument for this autonomy was that government control would compromise the representation of private clients in disputes with the government itself,⁶¹ as would, of course, environmental disputes.

Parallel to the judiciary, and subordinate as well to the National Assembly, is the Ministry of Justice (Fiscal) which operates, like the judiciary, at the national, provincial and local levels.⁶² As in the United States, the Fiscal is responsible for the enforcement of law against both public and private actions; it is also responsible for proposing laws and regulations regarding criminal and administrative sanctions.⁶³ These responsibilities, too, would be newly activated by the arrival of complex, administrative environmental law.

The role and power of the Communist Party is, of course, the wild card in any discussion of Cuban institutions. Although its powers are not spelled out in the Constitution, the Party is described as the "superior leading force"⁶⁴ of the state and, while it does not have legislative authority, a leading commentator states it is "inconceivable" that legislation would be adopted without Party approval.⁶⁵ It is the only lawful political party, and it plays a dominant role in the selection of candidates for the assemblies.⁶⁶ Some ninety percent of assembly delegates are Party members,⁶⁷ as are all or nearly all high government officials.⁶⁸

While the power of the Party is therefore indisputable, the role it plays and will play in environmental decision-making is less certain, or at least less visible. On the one hand, the Party's open endorsement of environmental protection and sustainable growth provides significant legitimacy to environmental programs. On the

author). For a discussion of judicial review of environmental disputes, *see infra* text accompanying notes 470-95.

60. *See* D. EVENSON, *supra* note 44, at 45.

61. *See id.*

62. *See Profile*, *supra* note 29, at 15.

63. *See* D. EVENSON, *supra* note 44, at 80-81.

64. THE CONSTITUTION OF THE REPUBLIC OF CUBA, art. 5, *in* CONSTITUTIONS OF THE COUNTRIES OF THE WORLD, CUBA 1992 (Gisbert H. Flanz ed. & Pam Falk trans., release 2000-1, 2000).

65. *See* D. EVENSON, *supra* note 44, at 29.

66. *See id.* at 26-27.

67. *See id.* at 39, n.38 ("only 22 of the 589 delegates to the [national] assembly are not members of the Party or the UJC").

68. *See id.* at 39, n.37 ("The Council of State is composed almost exclusively of the highest level of party leadership").

other hand, environmental concerns often bump up against other interests at all levels of government, and the Party may play, and by report does play, an important role in their resolution. Each of Cuba's thirteen provinces and the special district of Havana are directed by a Governor, who is the official decision-maker, and a First Secretary of the Communist Party, who may be the boss-in-fact.⁶⁹ On at least some occasions, local differences — the expansion of a particular mining operation, for example — are said to be resolved in an informal, Godfather-like fashion by the Secretary, whose recourse on appeal runs directly to Fidel Castro.⁷⁰

Differences in environmental policy may follow this course as well. A hotly-disputed question of road and bridge access to outlying keys for the development of tourism — areas prized and defended by ecologists at oceanic and science institutes⁷¹ — was referred to the Cuban Vice President, the Secretary General of the Council of Ministers and a high Party official.⁷² The bridge dispute was resolved by requiring the use of "ecological bridges," structures that would allow for the free flow of water and aquatic organisms, but would obviously also facilitate the development of the keys.⁷³ In the end, the decision was political, as of course it would have been in the United States. In the case of Cuba, the political arbiter is the Party.

To this wild card must be added another uniquely Cuban dimension, the mass organizations of popular power. The Cuban Constitution recognizes, and thus blesses, institutionalized unions of laborers, small farmers, women, youth, and neighborhood Committees for the Defense of the Revolution.⁷⁴ These organizations have, *inter alia*, the power to nominate candidates for the assemblies⁷⁵ and to propose legislation.⁷⁶ By no means independent of government or the Party, these organizations nonetheless provide a forum for public opinion, proposals, opposition to proposals, and

69. See Interview with Dr. Pedro Monreal, Professor of Economics, Univ. of Havana (Mar. 22, 1999).

70. See *id.*

71. See generally, Dalia Acosta, *Stone Bridge Threatens Coastal Ecosystem*, INTER PRESS SERVICE, Oct. 3, 1995, available in 1995 WL10134676.

72. See Interview with Monreal, *supra* note 69.

73. See *id.* A few of the more vocal environmentalist opponents of this compromise are said to have been reassigned to other jobs, see *id.*

74. See Bethell, *supra* note 4, at 126-27; see also D. EVENSON, *supra* note 44, at 23, 25.

75. See D. EVENSON, *supra* note 44, at 25.

76. See *Profile*, *supra* note 29, at 16.

even embarrassment of public officials, within the uncertain confines of speech not considered to be inimical to the state.⁷⁷

Alongside these "governmental, non-governmental organizations" is a growing number of societies and foundations that are less governmental and more akin to the status of non-governmental organizations in the US and other countries. In the lead among these groups are organizations of scientists such as the National Zoological Society, and environmental organizations such as Pro Naturaleza and the Foundation for Man and Nature.⁷⁸ There are few established rules for these new entities;⁷⁹ they are out on the edge, part of something new.

How all of this institutional structure ... official, quasi-official and even more-quasi-official ... will respond to the imperatives of new law, new forms of economic enterprise, administrative process, citizen participation, and judicial review brought about by a changing economy and environmental law, is a question at the heart of Cuba's future.

III. THE ENVIRONMENTAL AWAKENING

To live on earth is no more than duty to make it well.⁸⁰

José Martí

Environmental protection, or "conservation" in the language of an earlier day, did not begin with the Castro Revolution. At the turn of the century, the Cuban revolutionary and poet José Martí was

77. See D. EVENSON, *supra* note 44, at 24-31. See also Bethell, *supra* note 4, at 135:

The stimulation of citizen complaints to correct local government errors, and the satisfaction of some demands, marked a fundamental difference between politics in the first fifteen years of revolutionary rule and those thereafter. Such protests had been limited, and at times repressed, in the earlier years when the only permissible mode of political participation was mass mobilization. In a more institutionalized authoritarian setting, the regime now relied on subtler policies. At the local level citizens were allowed — at times encouraged — individuals to voice criticisms of specific problems; for such purposes, Cuba now had considerable freedom of expression. The authoritarian constraints, however, limited freedom of association at all levels. Critics of the regime were not allowed to associate in protest or criticism of government policies. Moreover, even at the local level, more general or abstract criticism of the government was frowned upon.

78. See *infra* text accompanying notes 459-468.

79. For the rules that do exist, see *infra* notes 463-465.

80. Jose Martí, *ESPIRITU DE MARTÍ*, (La Habana, Cuba, 1946), *quoted in* Fredric Evenson, *A Deeper Shade of Green: The Evolution of Cuban Environmental Law and Policy*, 28 *GOLDEN GATE U. L. REV.* 489, 489 (1998).

writing in the vein of Henry David Thoreau, and his popularity reflects the extent to which those views resonated with the Cuban people. Cuba's first steps in conservation, as in the United States, were to set aside areas for parks and forests and then to address the abuse of the land.⁸¹ Roughly fifty years behind the timetable of the United States, Cuba declared its first national park in 1930, followed in succeeding years by the designation of other scattered refuges and natural areas.⁸² Designations for the most part only in name, they were strengthened by one of the early acts of the revolutionary government in 1959, the Law of Agrarian Reform. One chapter, entitled "On the Conservation of Forests and Soils," placed these newly created reserves under management regimes.⁸³ The well-known Zapata Swamp on Cuba's southern coast was one of the first new additions, and the beginning of a long and successful program to restore the Cuban Crocodile, at the time believed to be extinct.⁸⁴ Youth conservation brigades took to the field; projects of reforestation began.⁸⁵

The first Communist Party Congress in 1975 identified the need to create an agency to attend to environmental problems,⁸⁶ and in 1976 the first Constitution declared that:

To assure the well being of its citizens, the state and the society will protect nature. It is incumbent on the responsible agencies and on each citizen as well to see that the waters and air are maintained in a clean condition and that the soil, flora and fauna are protected.⁸⁷

Cuba then followed a familiar-looking bureaucratic path towards this goal. In 1976, it established a National Commission for the

81. The United States established its first national parks and forests in the late 1800's, and initiated soil and water conservation programs in the 1930's. See generally STEWART L. UDALL, *THE QUIET CRISIS* (1963) (describing rise of U.S. conservation programs).

82. See Amnerys González Rossell and Antonio Perera Puga, CITMA, *Experiencias Relacionadas con las Areas Protegidas Abordadas a Traves del Proyecto Decreto-Ley del Sistema Nacional de Areas Protegidas a Implementarse en Cuba* [Experiences Relating to Protected Areas Under the Law of Protected Areas in Cuba] (n.d.) (on file with author).

83. See *Profile*, supra note 29, at 24.

84. See Roberto Ramos Targarona, *Manejo en Cautiverio en el Zoológico de la Ciénaga de Zapata* [Management in Captivity on the Crocodile Farm in the Zapata Swamp], *FLORA Y FAUNA*, 1998, at 10; see also Interview with Roberto R. "Toby" Targarona (Oct. 1999).

85. See *Profile*, supra note 29, at 24.

86. See *id.*

87. CONSTITUCIÓN, art. 27 (1976).

Protection of the Environment and the Conservation of Natural Resources (COMARNA).⁸⁸ Essentially a conglomerate of all agencies with environmental responsibilities in Cuba⁸⁹ – ranging from public health, to water supply, to fisheries, to sugar – what COMARNA offered in inclusiveness it lacked in authority independent of its members, watering its activities down to the least common denominator, with little program result.⁹⁰

In 1981, Cuba followed the emerging mega-law models in Latin America and adopted Law 33, one of the more forward-looking environmental statutes of its day⁹¹ – perhaps, as a Cuban official has subsequently observed, too far ahead of its day.⁹² Ahead or not, without an implementation mechanism more effective than COMARNA, Law 33 did not travel very far. In 1990, Cuba made one more try at collective management in Decree-Law 118, allocating specific environmental responsibilities among more than eight separate Ministries and authorizing a ninth, a new Ministry of Science, Technology and the Environment (CITMA) to replace COMARNA.⁹³ In time, CITMA would take over the game.

Events of the 1990's were precipitated by a number of factors, none the least of which was a recognition of the need for a single agency in charge. Environmental problems, particularly in Havana, were becoming more obvious and more acute. The crash of the Soviet Union and the ensuing economic crises in Cuba – as severe an economic shock as has been experienced by any modern country short of war⁹⁴ – led to several economic and political changes with potentially significant environmental consequences. The changes included new forms of farm ownership, new private enterprises, new foreign enterprises with joint-venture capital and property rights, and an upsurge of interest in mineral development and tourism.⁹⁵ None were addressed by existing law.⁹⁶ In light of these

88. See *Profile*, *supra* note 29, at 25; see also Ramlogan *supra* note 49, at 47-48.

89. See *id.* at 48.

90. See Orlando Rey Santos, *Reflections on the Legislative Process of the New Environmental Law*, in CUBAN ENVIRONMENTAL LAW 11, 12-13 (Jerry Speir ed., 1999).

91. See *id.* at 11.

92. See *id.* at 11, 12. On the other hand, the vagueness and rhetorical quality of Law 33 led some critics to dismiss it as "political 'garbage'." See B. Ralph Barba and Amparo E. Avella, *Cuba's Environmental Law*, in ASSOCIATION FOR THE STUDY OF THE CUBAN ECONOMY, CUBA IN TRANSITION 276 (1995).

93. See *Profile*, *supra* note 29, at 25.

94. See *infra* text accompanying notes 395-401.

95. See *infra* text accompanying notes 172, 432-39.

96. See Santos, *supra* note 90, at 11, 12.

exigencies, perhaps the most unpredictable development was Cuba's response to the 1992 World Summit at Rio de Janeiro.

Cuba had long been an active player in international environmental agreements,⁹⁷ engagement that could have been seen by skeptics as attempts to snatch the spotlight without risking serious economic consequences. Whatever the merits of this skepticism, Rio was different both for the level of commitment expressed by the Cuban President⁹⁸ and for the effect, in turn, that Rio appears to have had on him and on Cuba. In a speech to the Rio conference, Fidel Castro found his theme:

If we want to save humanity from destroying itself, we have to distribute more equitably the riches and the available technologies on this planet. Less luxury and pilfering from a few countries for less poverty and hunger for the rest of the earth. No more transfer to the Third World of lifestyles and habits of consumerism that ruin the environment. Make human living more rational. Apply international economic order that is just. Use all the science necessary for sustainable development, without pollution. Pay the environmental debt, not the foreign debt. Eliminate hunger, and not humankind.⁹⁹

Before the year was out, the Cuban Constitution was amended to read:

The State protects the environment and the natural resources of the country. It recognizes their close link with the sustainable economic and social development for making human life more sensible, and for ensuring the survival, welfare, and security of present and future generations. It corresponds to the competent organs to implement this policy.

It is the duty of the citizens to contribute to the protection of the water and the atmosphere, and to the

97. As of 1994, Cuba had ratified thirty international conventions on environmental protection; the United States had ratified nineteen. See *International Treaties on the Environment: Cuba and the United States*, in *The Environment in U.S.-Cuban Relations, Recommendations for Cooperation*, INTER-AMERICAN DIALOGUE, January 1997, at 69 (on file with author).

98. See *supra* text accompanying notes 42-43.

99. See *Workshop*, *supra* note 11, at 5.

conservation of the soil, flora, fauna, and all the rich potential of nature.¹⁰⁰

"Sustainable development" and "future generations" are, of course, the language of Rio,¹⁰¹ as is Rio's affirmation of state "responsibility" for environmental protection.¹⁰²

Given that words are cheap, and that the constitutions of many countries read far more grandiloquently than they perform in practice (an observation particularly true for the environmental provisions of many Latin American constitutions),¹⁰³ it is worth a pause to ask whether anything different happened here. One at least rhetorical difference, in the view of Cuban legal scholars, is the role of constitutional law in Cuban socialism.¹⁰⁴ Distinct from the conservative approach of classic civil law jurisdictions, the Cuban constitution is said to be proactive, striving to create a new citizen and now a new environmental citizen;¹⁰⁵ in theory, the words mean more. Of course, the same was said of the many guarantees, largely hollow, of the constitution of the Soviet Union.

On the other hand, post-revolutionary Cuban law promoted public and collective values from the start.¹⁰⁶ Environmental values fit easily into this framework,¹⁰⁷ as did Law 33 in 1981 stating as its goal a society, in contrast with capitalist regimes, "where the good of man is paramount, and where the social character of property facilitates environmental protection and the rational use of natural resources."¹⁰⁸ In fact, one of the more hyperbolic criticisms of

100. CUBAN CONSTITUTION, *supra* note 64, art. 27.

101. See *United Nations Conference on Environment and Development: Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests [Adopted at Rio de Janeiro, June 13, 1992]*, 31 I.L.M. 881 (1992); see also *supra* text accompanying notes 99-100.

102. See *id.*

103. See JOSÉ M. BORRERO NAVIA, *LOS DERECHOS AMBIENTALES: UNA VISION DESDE EL SUR [ENVIRONMENTAL RIGHTS: A VISION FROM THE SOUTH]* 94-128 (1994)(discussing weaknesses in the implementation of Latin American constitutional provisions for environmental protection).

104. See D. EVENSON, *supra* note 44, at 14-15.

105. See *id.*

106. See *id.* at 22.

107. As the Law of the Environment would state in 1997:

Whereas: Environmental actions in Cuba are sustained by the conceptions of Jose Marti regarding the relationship between human beings and nature and the rich traditions linking our history with a culture of nature.

Law No. 81, Prologue, 7 Official Gazette of the Republic of Cuba, Special Edition 47 (Jul. 11, 1997)[hereinafter Law 81].

108. Ley 33 (Ley De Protección Del Medio Ambiente y Del Uso Racional De Los Recursos Naturales), Gaceta Oficial (Feb. 12, 1981), *quoted in* F. Evenson, *supra* note 80, at n.119.

environmental protection in the United States is that it is tantamount to communism,¹⁰⁹ by which one supposes it is meant that public values are over-emphasized. When Fidel Castro went to Rio and mingled not only with the government delegations, but with the active volunteer grassroots and often oppositional environmental organizations as well, the revolutionary aspect of this movement was too obvious to ignore. It must have struck a chord. Castro embraced this environmental revolution, brought it home, and put it in the new constitution, unleashing a chain reaction that is still running its course.

IV. THE AGENCY, THE STRATEGY AND LAW 81

While the majority welcomed the Law with pleasure and goodwill, I must also necessarily mention a minority view, which argued, more or less openly, that the Law was not constructed to fit our particular situation. The conceptual core of this line of thought was that the Law might well obstruct development by establishing such demanding standards for a country beleaguered by so many difficulties. ... One proponent of this position commented that 'environmental protection is a game for the rich; our priority now is development, and later we will see.'¹¹⁰

Orlando Rey Santos, CITMA, 1999

Cuba is no democracy in the western sense of the word,¹¹¹ but neither is it a monolith, a point illustrated by the development of Cuba's environmental law and policies in the 1990's. The tug-of-war among resource agencies and their constituencies over environmental policies and the substantive provisions that would carry them out, mirrored those seen daily in Washington, D.C., Brussels, and other capitals. The arguments were virtually the same, of pro-development versus pro-environment, and who would hold what

109. The author keeps on a bulletin board in his office an aging bumper sticker from Kintzel Printing, Casper, Wyoming, which reads: "MINDLESS-MARXIST ECOLOGISTS, WORKING FOR RUSSIA. "

110. Santos, *supra* note 90, at 15.

111. Cuban legal scholars have shown little regard for capitalist democracy, which, in their view is a hypocritical system: a democracy for a minority of exploiters and a form of oppression of the majority. A former dean of the University of Havana's Law Faculty, Julio Fernandez Bulte, recently criticized representative democracy, which he asserted "was each day less representative, and it never was democratic". *SEE* D. EVENSON, *supra* note 44, at 24.

old turf and what new power within whatever compromises shook out. Ten years later, just where some ultimate powers bottom out has yet to be resolved. It is clear, however, that through the emergence of environmental law, the furniture of government has been rearranged.

A. CITMA

As one might expect with a planned state — and in significant contrast with the United States which responded to the need for environmental law on a largely ad hoc and piecemeal basis — Cuba came back from Rio and, with assistance from the United Nations and other international agencies, engaged in a comprehensive study to diagnose its problems, shortfalls, and "to-do's."¹¹² First among them was the creation of the long-awaited agency-in-charge.

In 1994, Cuba consolidated many of the functions of the defunct COMARNA and of more than a dozen separate environmental institutes and centers into one central authority, the Ministry of Science, Technology and the Environment (CITMA).¹¹³ The new kid on the block, CITMA would be put into a roomful — more than twenty¹¹⁴ — existing ministries. Many, such as the Ministry of Fisheries, had their own long-held turf; others, such as the Ministry of Sugar, had equally long-held power over specific activities that presented huge environmental problems. Add to this Tourism and Foreign Investment on whom Cuba's economic future would depend, the Ministry of Economy and Planning with nationwide zoning authority, and the inevitable OMB-like Ministry of Finance and Taxation, and it becomes clear that CITMA was playing with "big boys." While the environment was only one of CITMA's articulated missions, it was its dominant one and the one that would test its effectiveness.

CITMA was not left entirely to its own devices. The organic decree setting out its mandate and authority directed the agency to "steer and control the implementation" of environmental policy, the rational use of natural resources, and sustainable development — once again, code words from Rio.¹¹⁵ It further directed the agency to "draw up and control the implementation" of regulatory programs,

112. See *Workshop*, *supra* note 11, at 9-10.

113. See *id.* at 10; see also Santos, *supra* note 90, at 13.

114. See *Profile*, *supra* note 29, at 31 (listing 27 Cuban ministries and 5 separate institutes).

115. Agreement No. 2823 of the Executive Committee of the Council of Ministries of November 28, 1994 [hereinafter Agreement], cited in *Strategy*, *supra* note 45, at 6.

including the "adequate management of agricultural and industrial waste practices" and "clean production practices."¹¹⁶ These mandates would clearly impinge on the activities of a range of sister ministries, with those for Industry and Agriculture at the top of the list. Going one step further, in language of authority often exercised in the United States by the Department of Justice and the Office of Management and Budget, CITMA was authorized to "settle the disagreements" among agencies over environmental issues by "making the relevant decisions" or passing them on to higher authority, such as the Council of Ministers.¹¹⁷ On paper, this new agency looked as if it would be able to have its say.

Internally, CITMA organized its environmental responsibilities under a Deputy Minister for the Environment, and into two primary institutions.¹¹⁸ The first was an Environmental Agency similar to the U.S. Environmental Protection Agency, with several scientific institutes and a center for natural areas (which in the United States fall under the Departments of Interior, Commerce and other agencies). At the core was a Center for Environmental Regulation and Inspection where the regulatory and enforcement power would lie. At the same time, CITMA created an Environmental Policy Directorate to develop future initiatives, similar to the U.S. Council on Environmental Quality. This small cadre of people, no more than a dozen and only one of whom was an attorney, would have an enormous effect in drafting, negotiating, enacting, and implementing the program to come.

116. *Id.*

117. *See id.* This authority is also similar to that exercised by the U.S. President's Council on Environmental Quality. *See* 40 C.F.R. § 1504.1 (2000).

118. *See* Agreement, *supra* note 115, at 28-30. The descriptions of the Environmental Agency and Environmental Policy Directorate that follow were taken from this source.

B. The National Environmental Strategy

[T]here have been mistakes and shortcomings, due mainly to insufficient environmental awareness, knowledge and education, the lack of a higher management demand, limited introduction and generalization of scientific and technological achievements, the still insufficient incorporation of the environmental dimension in the policies, development plans and programs and the absence of a sufficiently integrative and coherent juridical system.¹¹⁹

CITMA, 1997

The next step was to articulate a set of environmental goals, to which the government through its various ministries would subscribe, and a process for carrying out its new "supervisory" responsibilities. The vehicle was a National Environmental Strategy, the development of which had been perking along with United Nations (U.N.) assistance since the early 1990's. CITMA's Policy Directorate personnel had taken a lead role in these initiatives; its attorney, through the U.N. and other institutions, had published several articles that contained the seeds of the Strategy and, ultimately, the new Law.¹²⁰ Formally adopted in 1997, the Strategy had gone through an elaborate process of inter-agency negotiation with other ministries and institutes.¹²¹ A consciously aspirational document, it did two important things: it made the case for environmental protection, and initiated a continuing process of review.

The case was compelling and statistical. Category by category, in a fashion reminiscent of the early United States Council of Environmental Quality reports,¹²² the data on soil degradation, water supply, waste treatment, deforestation, and so forth were presented with easy-to-assimilate graphs and charts.¹²³ The Strategy went on to propose a generalized list of solutions, as might be expected from

119. *Strategy*, *supra* note 45, at 1.

120. See Roberto Acosta Moreno & Orlando Rey Santos, *Frameworks for Cooperation: From the Realm of the Possible to Action*, in INTER-AMERICAN DIALOGUE, 23-29 (on file with author).

121. See *Strategy*, *supra* note 45, at 11.

122. See generally President's Council on Environmental Quality, ENVIRONMENTAL QUALITY (1997).

123. See *Strategy*, *supra* note 45, at 9-18.

a collaboration with so many different agencies.¹²⁴ Nonetheless, the factual case was now made and the recommendations contained kernels of specificity such as, "increase liquid solid waste recycling in sugar cane."¹²⁵ As any environmental lawyer knows, good facts and prescriptive remedies are the *sine qua non* of enforceability. CITMA had set the stage.

As important as its data and recommendations, the Strategy also initiated an ongoing process of implementing strategies in which CITMA continues to play a lead role. Following the adoption of the National Strategy, CITMA personnel met with other ministries to help draft, approve, and begin the execution of subsequent "daughter strategies" for all government agencies.¹²⁶ These latter strategies became game plans for achieving much more specific environmental goals, some even as specific as the adoption of particular control processes at a particular facility,¹²⁷ and with timetables to match. At the same time, CITMA began to work with provisional and local governments on their own environmental strategies, expected to play a larger role in an anticipated, less-centralized Cuban government.¹²⁸ Essentially jawboning – and it could be said that nearly all environmental law, however expressed, is based on jawboning – the process of developing and regularly reviewing these strategies gave CITMA access to, and at least a say in, every part of Cuban government.

Related to these strategies and of perhaps equal importance is the participation by CITMA personnel with other agencies in the development of the Cuban Annual Plan, a process and a document similar to the United States Budget, and with an equally explicit statement of government activities and goals.¹²⁹ If things usually come down to money, in cash-short Cuba the allocation of scarce resources is an even more pivotal issue. The combination of CITMA participation in the articulation of agency objectives (through the strategies) and in their funding (through the budget process) results in a continuing process of heel-nipping and persuasion towards environmental goals.

124. *See id.* at 27.

125. *Id.* at 13.

126. Interview with Dr. Terecita Borges, CITMA (Oct. 1998) (on file with author).

127. *See id.*

128. *See id.*

129. Interview with Dr. Raul Garnido Vazquez, CITMA (Oct. 1998) (on file with author).

This said, persuasion, even in a resource-rich country like the United States, only goes so far. CITMA would also need the authority of new law.

C. Law 81, the Law of the Environment

Whereas: It is necessary to update the legal principles, objectives and basic concepts of Cuba's environmental policy, institutional framework and the tools for their implementation, the powers, functions and duties of the state agencies and bodies and, in general, the rights and obligations of natural and legal persons.¹³⁰

Law 81

In July 1997, Cuba enacted Law 81, entitled *The Law of the Environment*. Although grounded in the several halting steps towards environmental law noted earlier, Law 81 was itself revolutionary in its sweep, and in at least the apparent powers it would confer on CITMA.

The provisions of Law 81 had been incubating for more than two years, during which CITMA personnel presented and defended their proposals through rounds of negotiations with the traditional ministries and provincial and local governments. The initiative was led by the Environmental Policy Directorate, whose attorney had been making the case and outlining the provisions for a new law for nearly a decade.¹³¹ Predictably, the law was criticized both as too strong ("environmental protection is a game for the rich; our priority now is development, and later we will see"),¹³² and too weak ("[t]hey wanted to see, specifically inscribed, the administrative rules and penalties that we had left for the respective bodies to develop. . .").¹³³

At bottom there were questions of turf. "Another important line of discussion, put forth primarily by representatives of the agencies of the central administration, particularly those that had administered resources" was the "scope of the attributions and functions of CITMA"; they would say, and one can imagine not at all complimentarily, that this was not the Law of the Environment, but

130. See Law 81, *supra* note 107.

131. See Moreno & Santos, *supra* note 120; see also Borges Interview, *supra* note 126.

132. Santos, *supra* note 90, at 15.

133. *Id.* at 15, 16.

"the Law of CITMA."¹³⁴ As CITMA's attorney would conclude with great tact a few years later, "the multi-faceted discussions, both the gentle ones and the not so gentle, contributed to the clarification" of the Law.¹³⁵

The spadework paid off. When Law 81 was finally presented to the National Assembly, it passed unanimously, a result that might seem surprising for a law with the potential to tread on so many toes. It was strongly supported by representatives from rural districts who had heard from people back home,¹³⁶ as well as, doubtless, the Party.

Law 81 is, in the tradition of several Latin American countries, a comprehensive framework law. Unlike the separate programs of the U.S. and Europe, Law 81 has 14 titles and 163 articles that embrace air, water, waste, noise, toxic substances, historic preservation, biological diversity, national parks, forests, wildlife refuges, coastal zone management, education, research and technology, environmental impact assessment and planning, inspection, enforcement, and penalty regimes. The Law progresses in a logical march from general principles (e.g., the right to a healthy environment, the precautionary principle, the right to information and of participation in decision making),¹³⁷ to the authorities of CITMA and other government bodies,¹³⁸ to instruments of administration (e.g., land use planning, the environmental impact statement, economic instruments),¹³⁹ and to treatment of specific environmental issues (e.g., biological diversity, protected areas, waters and aquatic ecosystems, mineral and energy resources).¹⁴⁰ In this distribution and redistribution of authority, CITMA emerged with two new and powerful tools for environmental management and control.

The first power was the elevation of an environmental impact review process to the status of law,¹⁴¹ managed by CITMA, that would apply both to individual projects and, in what has proven to be far more controversial in the United States and Europe, the plans and programs of other agencies.¹⁴² In this process CITMA would not only approve the procedures of other agencies in somewhat the same

134. *Id.* at 16.

135. *Id.*

136. Interview with Dr. Terecita Borges, CITMA (Oct. 1997) (on file with author).

137. See Law 81, *supra* note 107, at title I, ch. I.

138. See *id.* at title II.

139. See *id.* at title III.

140. See *id.* at title VI.

141. See *id.* at title III, ch. IV.

142. See *infra* text accompanying notes 154-65.

fashion as the United States Council of Environmental Quality, but the adequacy of the environmental analysis as well.¹⁴³

The second power, new to CITMA and unknown in the United States, was the environmental license required for the activities of all other agencies¹⁴⁴ – including tourist development, mining plans, and of apparently even greater potential impact, land use planning and licenses for foreign investment in Cuba.¹⁴⁵ With this authority, one begins to understand the accusation that Law 81 was the "Law of CITMA."

How these authorities and the rearrangement of power within Cuban government that they imply will be realized rests, for the moment, in a state of "creative ambiguity." As the Director of Environmental Policy has observed: "Let us say simply that this [the ultimate question of authority] is not a matter that is totally resolved."¹⁴⁶ What is clear is that Law 81, on paper, is a strong and comprehensive piece of legislation. It is also a framework law, which means that in order to take hold it would need to be implemented by further laws and regulations. Who held what cards would to some extent be revealed in this next step, in which the tensions among competing agencies and interests would surface once again. For the next three years, CITMA would move into a largely lawmaking mode – developing, proposing, and enacting three laws for the issues it considered most important and achievable: environmental impact assessment, coastal zone management, and biological diversity.

V. ENVIRONMENTAL IMPACT ANALYSIS

The National Environmental Policy Act of 1969 is the Sherman Act of environmental law, and the most famous statute of its kind on the planet.¹⁴⁷

Professor William Rodgers, Jr.

If Congress had appreciated what the law [The National Environmental Policy Act] would do, it

143. See Law 81, *supra* note 107, at title III, ch. IV, art. 27(c).

144. See *id.* at title III, ch. III, "Environmental License."

145. See *infra* text accompanying notes 170-78, 258-82.

146. Santos, *supra* note 90, at 16.

147. WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW 801 (2d ed. 1994).

would not have passed. They would have seen it as screwing public works¹⁴⁸

Richard Liroff

Environmental impact assessment is the seminal concept in modern environmental law. The United States started here in the 1970's;¹⁴⁹ Cuba started here in the 1990's.¹⁵⁰ Following the adoption of Law 81, which contained authorization for more than a dozen new programs, Cuba chose to make impact analysis its first order of business.

It was an obvious choice, if for no other reason than evaluating the effects of a proposal before acting on it is so obviously, unarguably sensible. These evaluations, due to their comprehensive nature, play a particularly important role in countries that do not have the resources to expend on separate, finely-calibrated pollution control and management programs. The thought of exporting, for example, the Clean Air Act/National Ambient Air Quality Standards/State Implementation Plan/Prevention of Significant Deterioration program to Cuba – or to any other country for that matter – is daunting.¹⁵¹ Even the United States, with resources to burn and the highest levels of science and technology in the world, can barely make rational regulatory decisions given the complexity of the tasks involved.¹⁵² Many developing countries rely on impact analysis to provide these controls on an ad-hoc, "best professional judgement" basis. Thus, while the presence of the Clean Water Act, Endangered Species Act, et. al. in the United States relegates NEPA

148. RICHARD A. LIROFF, *A NATIONAL POLICY FOR THE ENVIRONMENT* 35 (1976).

149. See The National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321, 4332, 4344, 4371 (1998) [NEPA]; see also William L. Andreen, *Environmental Law and International Assistance: The Challenge of Strengthening Environmental Law in the Developing World*, 25 COLUM. J. ENVTL. L. 17, 38 (discussing the evolution and importance of environmental impact analysis in the U.S. and abroad); FEDERICO IRIBARREN, *EVALUATION OF ENVIRONMENTAL IMPACT: ITS LEGAL FOCUS* (1997) (discussing the spread of environmental impact assessment programs to Latin America).

150. CITMA Resolution No. 168/95 provided the first guidance for environmental impact analysis in Cuba.

151. A former Administrator of the United States Environmental Protection Agency once quipped that only two people in his Agency understood the Clean Air Act, which was such valuable knowledge that he would not let them get on the elevator at the same time. Remarks of William Ruckleshaus to the Environmental Law Conference, American Bar Association/Environmental Law Institute (1972).

152. For the continuing controversy over United States environmental regulatory decisions of great complexity, see *American Trucking Ass'ns. v. EPA*, 175 F.3d 1027 (D.C. Cir. 1999) (ozone and particulate standards); *National Resources Defense Council v. EPA*, 824 F.2d 1146 (D.C. Cir. 1987) (hazardous air quality standards).

to an informational role,¹⁵³ in other countries the impact statements and their conditions become the environmental permits, enforceable – to the uncertain extent, of course, that anything may be enforceable in a developing country – as law.

In 1995, with only slim statutory support, the newly-created CITMA issued a regulation requiring impact analysis for major projects.¹⁵⁴ The regulation contained the bare-bones elements of impact review but fell short in several critical regards, such as the consideration of alternatives and of cumulative impacts. These shortfalls were shared by, *inter alia*, the European Union and other Western systems. The Regulation also failed for its want of authority over the actions of other agencies. Three years later, Law 81 provided the authority CITMA needed. CITMA now proceeded to develop new impact analysis regulations¹⁵⁵ and, in so doing, wrestled with many of the same questions that the United States, Europe, and other jurisdictions have faced with impact assessment. A few of these questions, and their resolution, merit particular attention.

A. *What and When*

Although the questions "what" and "when" produce distinctly different answers in common English usage, in the world of impact analysis they are closely related and together define the scope of the process. All will agree that mere ideas are too premature to trigger an impact analysis; all will agree as well that specific projects proposed for set locations should require one. The gray zone lies along the range of decision-making in between, and in particular those government policies, programs, and management plans that set the stage for individual actions such as timber harvests, highway projects, and power plants. Speaking generally, it is close to a truism that the earlier impact analysis is provided and the more broadly the proposal is perceived, the more effective the analysis will be.¹⁵⁶ Impacts can be avoided; improvements can be made. Conversely, the later in decision-making the analysis is conducted, the less

153. See *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332 (1989).

154. See Resolution No. 168/95 *supra* note 150; see also *Strategy*, *supra* note 45, at 6 (noting the agency's authority to draw up and implement regulations).

155. See Regulations of the Environmental Impact Evaluation Process, CITMA Resolution No. 77/99 (July 28, 1999), 48 Gaceta Oficial de la Republica De Cuba 778 (Aug. 6, 1999).

156. For these reasons, the U.S. President's Council on Environmental Quality regulations call for early analysis (see 40 C.F.R. § 1502.4 (2000)) on a broad scale of actions and proposals (see 40 C.F.R. §1502.5 (2000)).

effective it will be. The big picture is already set; the analysis treats only the details. For this reason, environmentalists support early and broad analysis. For the same reason, developers and development agencies oppose it.¹⁵⁷

CITMA's regulations begin by listing classes of projects that will in all cases require analysis.¹⁵⁸ This is, *inter alia*, the European approach¹⁵⁹ and it stands in contrast to the system in the United States, in which the need for a statement on a particular activity is decided on an ad hoc, case-by-case basis. The regulations also include, however, other projects that CITMA determines will have significant effects,¹⁶⁰ re-introducing the same case-by-case scrutiny for close cases seen in the United States.

The regulations explicitly require analysis of government policies and programs, either prospective or on-going,¹⁶¹ and further require the consideration of all phases of a particular proposal together, from the start.¹⁶² These "programmatic" and "cumulative" impact requirements arose from U.S. case law in the 1970's¹⁶³ and can be very big medicine.¹⁶⁴ Comprehensive reviews of transportation programs, for example, as opposed to reviewing the impacts of specific road projects, go to the heart of their impacts (e.g., congestion, pollution) and to more sustainable solutions (e.g., rapid transit systems).¹⁶⁵ The absence of these requirements in European Union impact assessment law has been identified as a severe shortcoming, and is the subject of regular hard-fought proposals to bring Europe on board with broader impact analysis earlier in the game.¹⁶⁶

157. For discussions of these issues of scope and timing, see Scientists' Inst. for Pub. Info. V. Atomic Energy Comm'n. 481 F.2d (D.C. Cir. 1973) and *Kleppe v. Sierra Club*, 427 U.S. 390 (1976).

158. See Resolution No. 77/99, *supra* note 155, at art. 5. So much high-impact activity in the United States is at least federally assisted or permitted — with the important exception of local land-use decisions — that, as a practical matter, most major private projects receive NEPA review. See generally 42 U.S.C. § 4332(2)(c) (2000) (noting that NEPA is restricted to major federal actions).

159. See E.U. Directive 85/337, O.J. (L175) 40, art. 4.

160. See Resolution No. 77/99, *supra* note 155, at art. 5z.

161. See *Strategy*, *supra* note 45, at 6.

162. See Resolution No. 77/99, *supra* note 155, at art. 15 (including a description of a prospect from start to closure and a description of impacts in the different steps of a project).

163. See RODGERS, *supra* note 147, at 801.

164. See CHARLES F. WILKERSON, *CROSSING THE NEXT MERIDIAN* 93 (1992) (discussing the effect of NEPA on federal grazing programs); see also CEQ, *ENVIRONMENTAL QUALITY TWENTIETH ANNUAL REPORT 27-30* (1991) (discussing NEPA's effects on forest programs).

165. The same can be said for reviews of all stages of, for example, energy and mineral development — from exploration to waste disposal and closure.

166. See William R. Sheate, *The Environmental Impact Assessment Amendment Directive 97/11/EC — A Small Step Forward?*, EUR. ENVTL. L. REV., Aug.-Sept. 1997, at 235, 238-39, 243

That Cuba would be willing to go farther than the European Union on this issue makes its own statement.

Cuban governance raises two additional problems with the scope and timing of impact review relating to land use planning and foreign investment.

1. *Planning and Micro-localization*

Starting in the 1970's, Cuba began a system of national planning that attempted to make decisions over its land base that were more rational than those that had previously committed over half of the island to sugar. This process is managed by the Ministry of Planning and, in theory, zoning plans exist for all provinces.¹⁶⁷ Many are only marginally current, however, and none were prepared with an eye to environmental impacts.¹⁶⁸ All projects in Cuba are subject to Planning Ministry review and approval per the contents of these zoning plans, a process called "micro-localization."¹⁶⁹

Resolution 77/99 requires applicants for environmental licenses to have already received micro-localization approvals.¹⁷⁰ Once these decisions are made, however, they have the practical effect of fixing the location of activities that can have considerable environmental impact, such as hotels, roads, and mining operations. Indeed, location is often the central issue in environmental review. The relative timing of environmental review and micro-localization decisions remains an open and important question.¹⁷¹

2. *Foreign Investment Licensing*

Foreign investment presents an even more preliminary and fundamental decision-point as the development with the most

(identifying the failure to require "strategic environmental assessment" as a major shortcoming in EU impact analysis).

167. See Interview with Orlando Rey Santos, CITMA (Oct. 1998) (on file with author).

168. See *id.*

169. See *id.*

170. Resolution No. 77/99, *supra* note 155, at art. 15.

171. Ideally, of course, Cuba's land use plans form the basis for more proactive and comprehensive decision-making than is possible under NEPA, which reacts to specific proposals. Several states in the United States take a similar, comprehensive approach. See THOMAS G. BELHAM, STATE LAND-USE PLANNING AND REGULATION 151 (1979); see generally HENRY L. DIAMOND & PATRICK F. NOONAN, LAND USE IN AMERICA (1996) (describing state land use programs of Vermont, Oregon and Florida). One way to integrate EIA in these systems, and an approach that has been adapted in Chile for example, is to require detailed environmental review of the plans themselves, following which compliance with the plan is deemed to satisfy environmental requirements. See Ricardo Katz, Presentation at the Workshop on Environmental Impact Evaluation, Havana, Cuba (Oct. 29, 1999).

potential to change the Cuban landscape. The major investments today, and for at least the short-term future, will relate to tourism and mineral development — activities well known for adverse impacts, and with their own histories of bad management throughout the Caribbean and Latin America.

The first step for foreign investment in Cuba is a license from the Ministry of Foreign Investment and Economic Cooperation, at which the basic contours of the deal — from property rights, to joint-ventures, to percentages, to special requirements for the use of Cuban labor and technology — are set.¹⁷² Applications are circulated to all ministries¹⁷³ including CITMA; final decisions are referred to the Council of Ministries.¹⁷⁴ It is obvious that this process, and the assumptions within it on appropriate locations and technologies for a proposed enterprise, could eclipse subsequent environmental review.

Anticipating this problem, Cuba's Law of Foreign Investment provides a substantive standard for environmental protection and a process driven by CITMA for carrying it out. The standard for foreign investment is that it be made "in the context of sustainable development" and executed with care for the "protection of the environment and the rational use of natural resources."¹⁷⁵ The process calls for CITMA to determine the need for an environmental impact analysis during the coordination stage, and the considerations necessary for an environmental license.¹⁷⁶ CITMA is further authorized to prescribe those measures it considers necessary for possible damages and environmental risks.¹⁷⁷

These authorities grant environmental impact review and CITMA a lead role in foreign investment decisions. Whether the agency has the political strength to play this role is another question, and one that cannot be answered on the record to date. Set as they are in law, however, these environmental standards and requirements have the potential to take on a life of their own.¹⁷⁸

172. Ley 77, Ley Para La Inversión Extranjera [Law 77, Foreign Investment Law], reprinted in LA Economic CUBANA: REFORMAS ESTRUCTURALES Y DESEMPEÑO EN LOS NOVENTA (Comisión Económica Para América Latina y el Caribe, Naciones Unidas 1997). Foreign investments may take three forms: (a) joint ventures, (b) contacts, and (c) enterprises fully supported by foreign capital. See *id.* at art. 12.

173. See *id.* at arts. 20-25.

174. See *id.*

175. *Id.* at art. 54.

176. See *id.* at art. 55.

177. See *id.* at art. 56.

178. See *supra* text accompanying notes 115-29, 130-36; see also Stichting Greenpeace Council (Greenpeace International) and Others v. EC Commission, 3 C.M.L.R. 1 (1998), available

B. Who

There is no good answer to the question, what entity should prepare the environmental impact analysis? In the end, one is forced to choose between insiders and outsiders, which can often mean tradeoffs among conflicting goals of (1) expertise, (2) impartiality, and (3) impact on the decision itself.

One option is to leave the process to the mission agencies, as does the United States, where the U.S. Army Corps of Engineers analyzes the impacts of its dams and navigation canals, the Department of Transportation and state highway agencies the impacts of their ongoing construction projects, and the Forest Service its timber harvests and management plans. The obvious problem with this system is that the agencies have long-standing biases in favor of programs which are their very reasons to exist.¹⁷⁹ Few agencies within memory have described the consequences of their proposals as anything but highly beneficial and with more than minor adverse environmental impacts. The impartiality factor is, to put the matter charitably, low. On the other hand, these agencies possess undeniable expertise in what they are doing, and are forced to acquire even more in order to exercise the requirements of NEPA. The Department of Transportation hires wetland biologists; the Forest Service hires ornithologists; there starts a process of greening from within.¹⁸⁰ Perhaps the strongest advantage of agency-driven impact assessments is the impact they may have on the decision. While on the one hand, agency environmental personnel are easier to stifle than those of other institutions; on the other hand, depending on the personnel and the institutional structure, they may have more access to and influence over the decision itself. If, as the United States regulations state, the purpose of environmental analysis is not

in 1998 WL 1043035 (challenging European Union funding for Spanish development on failures in environmental review.)

179. See the statement of the Office of Mining Operations for the U.S. Geological Survey on the description of its mining activities in the NEPA process:

When the Geological Survey has the lead in preparing environmental statements, inflammatory words such as disturbed, devastated, defiled, ravaged, gouged, scarred and destroyed should not be used. These are the words used by the Sierra Club, Friends of the Earth, environmentalists, homosexuals, ecologists and other ideological eunuchs opposed to developing mineral resources.

Memorandum of Andrew V. Bailey, Chief, Branch of Mining Operations, U.S. Geological Survey, U.S. Department of the Interior, Oct. 8, 1976.

180. For a discussion of the "greening from within" effect of NEPA on federal agencies, see LYNTON K. CALDWELL, *SCIENCE AND THE NATIONAL ENVIRONMENTAL POLICY ACT: REDIRECTING POLICY THROUGH PROCEDURAL REFORM* 58-69 (1982).

better paperwork but better decisions,¹⁸¹ this factor cannot be ignored.

Another option is to have the impact statement prepared by an independent environmental agency, such as the EPA or CITMA. This approach maximizes objectivity, but it runs the risk of producing outside, largely ignored — and certainly resented — documents to the mission decision-making agency. It is also highly resource intensive, requiring a large environmental staff to, in effect, second-guess the expertise of the line agencies, without which capacity serious project changes cannot be proposed or defended. Many countries simply do not have the luxury of going this second route, and very few have.

Another option, exercised both in Europe and in many Latin American countries, is to leave the statement to the project applicant in those many cases where the activity, such as a new industry or a wetland marina, is essentially private.¹⁸² These systems bow more to the expediency of getting the job done in the least inconvenient manner than they do to any of the goals noted above.¹⁸³ Government personnel may not be impartial towards their projects, but they at least do not have their individual incomes at stake with the approval of each proposal.¹⁸⁴ There is, further, no inherent institutional expertise in the private sector which may not build these plants or marinas with sufficient frequency to know, or care about, their environmental effects. The perpetuation of applicant-driven systems, in spite of their obvious biases and defects, is testimony to the distance independent environmental analysis has yet to travel on the world stage.

A last option to which many nations are coming to resort, including the United States, is the use of outside consultants. Environmental engineering consultant firms abound in every major city in the United States. These firms conduct the actual preparation of impact statements for everything from new highway construction to new industrial facilities. Long on expertise (for this is what they do for a living), they are short on impact, and may be equally short on impartiality. In many cases, highway construction for example,

181. See Council on Environmental Quality Regulations, 40 C.F.R. 1500.1(c) (2000) ("Ultimately, of course, it is not better documents but better decisions that count.").

182. See generally EU Directive 85/175.

183. See Andreen, *supra* note 149, at 48 (criticizing the applicant driven processes as "flawed").

184. See generally Mark Squillace, *An American Perspective on Environmental Impact Assessment in Australia*, 20 COLUM. J. ENVTL. L. 43 (1995)(suggesting that conflicts facing the agency are far less significant than those facing private proponents).

the construction contracts worth tens of millions of dollars will go to these same consulting firms once the impact statement is approved.¹⁸⁵ United States regulations attempt to cure this influence by requiring a statement of all consultants disavowing financial interest in the project, as well as independent federal agency review of the statements prepared.¹⁸⁶ In practice, both safeguards prove to be more fig leaves than substance.¹⁸⁷ In fact, the United States system relies on other checks and balances, discussed below, to assure at least a measure of objectivity.

Cuba has sorted out this conflict of goals and options with a system of consultants-cum-safeguards, which may or may not work. The choice is rational, if not inevitable. Cuban mission agencies have little expertise in environmental issues, and even fewer resources to obtain it. They are going to have to look to the outside. On the other hand, Cuba has significant wealth in scientists and in scientific expertise, a ready pool for consultant work. The Cuban solution is to allow consultant preparation of the environmental analysis,¹⁸⁸ and require payment of the consultant by the applicant.¹⁸⁹ The consultants for any given project, however, are drawn ostensibly at random from a list of approved consultants, pre-screened for expertise by CITMA.¹⁹⁰ This qualification and selection process is designed to secure impartiality. Its flaws include the ineludible fact that, if the applicant is paying, it will want approval and it will have the leverage of employing a favorable consultant in many ways in the future. Working in Cuba for the Sol Melia hotel chain, for example, is worth its weight in gold.¹⁹¹ The Cuban system is also flawed at the moment by the paucity of approved consulting firms; one central firm has cornered the lion's share of the assessment work

185. See Vicki Ferstel, *Lawsuits feared over change in request for consultant bids*, THE ADVOCATE, Baton Rouge, LA, Mar. 17, 1993, at B-10. ("Last month, the airport authority had approved a request form stating the successful consultant would handle feasibility and site selection studies, environmental assessment, master planning, design and construction management, overall project administration, agency coordination and grant applications, and tenant coordination and development.")

186. See 40 C.F.R. §§ 1506.5(a), (c) (2000).

187. For a description of the abuses of the consultant process, see *Citizens Against Burlington v. Busey*, 938 F.2d 190 (D.C. Cir. 1991); see also *Sierra Club v. Sigler*, 695 F.2d 957 (5th Cir. 1983).

188. See Resolution No. 77/99, art. 38.

189. See *id.* at art. 26.

190. See *id.* at art. 39-51.

191. See Andreen, *supra* note 149, at 48, n.154 ("the consultant, after all, does not want to lose a client by failing to produce a favorable report on the proposal.").

to date.¹⁹² In a system as politicized as that in Cuba, such a sole-source firm has to be subject to the same pressures that are faced by an agency itself.

C. Alternatives

Alternatives are the heart of the environmental impact statement process.¹⁹³ Few actions in life are undertaken without the consideration of alternatives. Actions whose impacts might appear to be unacceptable (e.g., running in the rain), might appear quite acceptable given certain alternatives (e.g., either run or miss the bus). At the bottom of every major action affecting the environment, from the use of pesticides to the construction of a new pier for tourism, is the question: are the impacts acceptable ... compared to what? If Cuba, the United States, or any other country is going to put itself to the expense, delay, and difficulty of environmental impact analysis, this analysis will have to consider alternative locations, modes of access, technologies, sources of materials, disposal practices, and other options at play.

As central as they are to environmental decision-making, the consideration of alternatives is easily the most resisted feature of impact analysis by the development community.¹⁹⁴ To a project applicant or agency proponent, this is *its* project, not yours. If someone else wants to build on an upland, fine; *this* project is going right down by the sea. The inquiry into alternatives is intrusive; it challenges basic assumptions about feasibility and engineering; it threatens profit margins, investment loans and conditional commitments; it requires hassles and delays to accommodate new questions; it brings in the press, the neighbors, and no end of arm-chair quarterbacking; and, at bottom, it is downright insulting. Nobody on this earth enjoys being told that, whatever he or she is doing, there is a better way. Most NEPA litigation and environmental activism short of litigation in the United States revolves around, explicitly or implicitly, seeking an alternative way.

192. See F. Evenson, *supra* note 80, at n.232 (stating that one firm has prepared "95 percent of all EIA's").

193. See 40 C.F.R. § 1502.14 (2000) ("This section [Alternatives] is at the heart of the environmental impact statement.").

194. See the proposals to revise the Council on Environmental Quality Regulations by the Reagan Administration, in *EPA Criticizes NEPA Regulations, Seeks Changes in Several Provisions*, 0013-9211/82 Env't Rep. (BNA), at 524-25 ("the regulations err in stating that the presentation of alternatives is 'the heart' of NEPA Alternative analysis may be useful, but it is not the central feature of the Act.").

Many countries, indeed most, resolve this conflict in favor of development interests. Alternatives are made an optional consideration for the applicant or, if mandatory, a requirement only to the extent that the applicant state why certain alternatives it considered were not adopted.¹⁹⁵ This single concession cripples the effect of impact analysis. The strength of the opposition to alternatives is so pronounced, however, that the European Union only recently, after two decades of failure, changed its rules to require their fuller consideration.¹⁹⁶ It would have been easy to imagine that cash-short Cuba would have taken the path of less resistance here.

It didn't. Instead, Resolution No. 77/99 makes explicit that alternatives, including alternative locations, be identified by the consultant in its application for a CITMA license.¹⁹⁷ The statement itself, if then required, is to include the description of "distinct," "feasible" alternative projects and their relative-environmental impacts, including the alternative of not acting at all; from these, the identification of the alternative "most favorable to the environment" is also required.¹⁹⁸ CITMA's review of the adequacy of the statement is based, in turn, on the availability of less harmful alternatives, both to central project features and to provisions for mitigation.¹⁹⁹ In so doing, CITMA has allied itself with United States jurisprudence and practice, and given its system a chance for meaningful effect.

D. Review

Given the fact that impact assessment processes are inevitably tainted by the preconceptions of those who conduct the assessments, the final challenge is to offset these preconceptions in an institutional way.²⁰⁰ This challenge is often misunderstood by those who are developing and participating in EIA systems as an affront to their integrity. We are all in our own minds balanced, reasonable people, possessing considerable expertise in doing what we propose to do. It is no small trick to persuade individuals, private companies, and

195. See EU Directive 85/337, *supra* note 159.

196. See Sheate, *supra* note 166, at 239.

197. See Resolution No. 77/99, *supra* note 155, at art. 15.

198. See *id.* at art. 25.

199. See *id.* at art. 30, c, d.

200. See ALAN GILPIN, ENVIRONMENTAL IMPACT ASSESSMENT (EIA): CUTTING EDGE FOR THE TWENTY-FIRST CENTURY 22-23 (1995)(relying on procedural review to correct biases in statement preparation).

government agencies — all of whom have the public welfare in mind — of the need for checks and balances.

In the United States, a process driven by proponent agencies begs for independent review, and the integrity of the NEPA system indeed depends on several external mechanisms that act as an exoskeleton for a process that is inherently biased at the core.²⁰¹ The first of these is public participation, solicited from the start with notices of meetings to scope the parameters of a statement²⁰² and continuing through public comment on the draft statement,²⁰³ required responses to public comment,²⁰⁴ a final statement, and,²⁰⁵ ultimately, judicial review.²⁰⁶ A second supporting process is the review by expert agencies.²⁰⁷ Their views and opinions, while not dispositive, may carry considerable weight both within the federal family and, implicitly but very much present in the wings, in the evidence it provides for the media and citizen-suit litigation.²⁰⁸ This review is carried to the next level by the separate statutory requirement that the EPA review and rate both the adequacy of an environmental statement and the proposal itself.²⁰⁹ Projects found objectionable by EPA or other agencies may be referred to the President's Council on Environmental Quality which, although to the distress of some does not possess a veto power, has the authority to convene hearings, mediate, jawbone, and refer to the President for resolution projects with major unresolved environmental conflicts.²¹⁰

In all, the U.S. process works indirectly by its transparency and by the intervention of others to induce the selection of better alternatives, mitigating measures, and lessened adverse effects. Very few projects are stopped under NEPA;²¹¹ many however, are modified, — some right from the start in unseen ways, and some after long and open contest — in favor of environmental protection.

201. See Andreen, *supra* note 149, at 50-55.

202. See 40 C.F.R. § 1503.1(4) (2000).

203. See *id.* at § 1502.9(a).

204. See *id.* at § 1502.9(b).

205. See *id.* at § 1503.4(a).

206. "Judicial review, therefore, is more responsible than any other factor for improving the quality of the assessment process in the United States, and keeping mission-oriented agencies on their toes." See Andreen, *supra* note 182, at 54.

207. See 40 C.F.R. § 1502.19(a) (2000).

208. See *Fritiofson v. Alexander*, 592 F.Supp. 120 (S.D. Tex. 1984).

209. See 42 U.S.C. § 7609 (2000).

210. See Council on Environmental Quality Regulations, 40 C.F.R. § 1504.1(a) (2000).

211. See COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL QUALITY: THE WORLD WIDE WEB 355 (1997) (identifying 102 cases filed but only 2 injunctions under NEPA).

In Resolution 77/99, Cuba leaves itself the room to adopt several of the mechanisms that have reinforced impact analysis in the United States. It has not yet, on the other hand, committed itself to them in ways that assure either their perpetuation or effect. Resolution 77/99 charges CITMA with the adoption of necessary measures for considering the interests and concerns of the public in general, and, more specifically, those in the project area.²¹² The application for license must document the public information and consultation conducted by the applicant, in compliance with these measures;²¹³ the subsequent impact statement is to include the results of consultation with local authorities and the public.²¹⁴ Lastly, provision is made for the applicant to appeal environmental decisions within CITMA, much as within a United States agency.²¹⁵

Here the similarities end. There is no public participation in the all-important process of project scoping, which defines the review to follow.²¹⁶ There is no explicit provision for interagency comment, or for public comment, either on the statement or on a proposed licensing decision. There is no right of the general public to appeal within CITMA either the absence of an environmental analysis, defective analysis licensing conditions, or the licensing decision itself. CITMA may yet promulgate these rights. So far, Resolution 77/99 does not get there.²¹⁷ It could be argued that, in these regards, the Resolution fails to implement either Article 27 of the Constitution²¹⁸ or Article 4 of the Law of the Environment.²¹⁹

These criticisms noted, it should also be said that, apart from the United States, such public rights are far from the norm. They are not

212. See Resolution No. 77/99, *supra* note 155, at art. 9(d).

213. See *id.* at art. 15.

214. See *id.* at art. 25.

215. See *id.* at art. 33.

216. See *supra* text accompanying note 126.

217. The Director of CITMA's Environmental Policy Directorate has recognized these shortcomings:

[W]e must implement an effective System of Environmental Information, today in infancy, and guarantee the mechanisms for public access to that information. It is necessary also to establish mechanisms for citizen consultation, especially for the relevant processes of Environmental Impact Evaluation. The mechanisms of the Popular Power should be the base, but the connections between the two systems have not yet been developed.

Santos, *supra* note 90 at 18.

218. See *supra* text accompanying note 143.

219. See Law 81, *supra* note 107, at art. 4(l) ("every natural or juridical person, as authorized by law, must have adequate and sufficient access to administrative or judicial means to demand compliance with this Law and provisions complementary to this law"); see also *id.* at art. 4(m) ("the participation of the community, through effective participation in decision-making ... is essential to attain the goals of this Law").

found in European Union environmental impact assessment regulations or the laws of many Latin American countries.²²⁰ The U.S. provisions for public participation, further, were years in the making, in fits and starts; there is quite good reason to believe that they would be not nearly so strong were the U.S. to be starting, *de novo*, in the more conservative climate of today.²²¹ Cuba is clearly feeling its way here, and perhaps with good reason. Supplementary, implementing regulations on public participation will certainly be easier for the rest of Cuban government to swallow once the initial shocks of the system have been absorbed, and the process is under way. As with many Latin countries, and indeed many civil law jurisdictions, public involvement in government decisionmaking is a new phenomenon. The most sound observation that can be made about this aspect of Cuba's impact statement process is that CITMA is approaching the question with caution, and that it has not yet answered it fully.

VI. COASTAL ZONE MANAGEMENT

Formed by the islands of Cuba, Youth and another 1,600 small islands and cays, the Cuban archipelago features some 1,200 kilometers of white sand beaches and is rich in coral reefs and other natural resources that have become important tourist attractions.²²²

Dalia Acosta, 1995

220. See IRIBARREN, *supra* note 149 at 104-06. The European Union is just now coming to grips with these issues of public participation and review in the 1998 Aarhus Convention. See Press Release, "Europe has adopted Convention on Citizens Environmental Rights," June 25, 1998, <<http://www.memodk/aarhus-conference/press>>.

221. See Oliver A. Houck, *The Secret Opinions of the United States Supreme Court on Leading Cases in Environmental Law, Never Before Published!*, 65 U. COLO. L. REV. 459, 463-476 (1994) (projecting the Court's treatment of early NEPA jurisprudence were it to arise today).

222. Acosta, *supra* note 71.

In 1995, a total of 34 Cuban environmental non-governmental organizations stressed their concern over possible damage to be expected from the development of tourism, in the belief that the flow of foreign capital into this sector could be dangerous to the coastal ecosystems.²²³

Dalia Acosta, 1997

The coastal zone is likely to be Cuba's major test of environmental responsibility. It is a major test for any country and one that many countries do not bother to sit for, much less pass. The world's coastal zones are some of the most biologically rich eco-regions on earth, harboring seabed grasses, kelp forests, oyster beds, coral reefs, shellfish flats, tidal pools, sea caves and ledges, beaches, dune grasses, sea oats, cheniers, mangroves, salt marshes, intermediate and freshwater marshes, bays, keys, estuaries, river mouths, hardwood swamps and similar universes which support more than a quarter of the world's primary plant production,²²⁴ ninety percent of its seafood,²²⁵ nearly all of its migratory waterfowl,²²⁶ and provide enormous, additional services in pollution control, flood control and the buffering of coastal storms at virtually no cost. The case can be made that these resources are the greatest bargain on earth.²²⁷

The case can also be made that, at current odds, they do not stand a chance of survival. Fully half of the world's population lives within 50 miles of saltwater, and the numbers are growing.²²⁸ By the year 2020, the coastal zones alone will hold the same number of people as on the entire planet only thirty years before.²²⁹ China's coastal population is increasing by ten percent or more per year, although the national growth rate is only 1.2 %.²³⁰ The population of

223. Dalia Acosta, *The Polluter Will Pay*, INTER PRESS SERVICE, 1997, available in 1997 WL 7076169.

224. Peter Weber, *It Comes Down to the Coasts*, WORLD WATCH, March/April 1994, at 22.

225. *See id.* at 21.

226. *See* ENVIRONMENTAL HEALTH CENTER, COASTAL CHALLENGES: A GUIDE TO COASTAL AND MARINE ISSUES (1998), at 15 ("Gulf of Mexico coastal wetlands serve as essential habitat for 75 percent of U.S. migrating waterfowl.").

227. For a calculation estimating the economic value of the Louisiana coastal zone in pollution control, flood control, and fish and wildlife production at \$10.45 billion in annual value and a capitalized value of \$210 billion, see Oliver A. Houck, *Land Loss in Coastal Louisiana: Causes, Consequences and Remedies*, 58 TUL. L. REV. 3, 74-92 (1983).

228. *See* Weber, *supra* note 224, at 21.

229. *See id.*

230. *See id.* at 23.

countries bordering the Mediterranean Sea is projected to rise from 212 million, fifty years ago, to 547 million in the next twenty years.²³¹ Within two decades, the percentage of Americans living near the sea will rise from fifty-plus percent to seventy-five percent.²³² To these permanent residents must be added the coastal tourist boom, the major propellant of \$1.9 trillion spent on tourism worldwide, one-tenth of the global economic output and one of its fastest growing industries.²³³ The small island of Malta will host nearly a million residents during tourist season.²³⁴ Nags Head, North Carolina, Fort Lauderdale, Florida, Biloxi, Mississippi and a hundred coastal resorts like them make a similar leap every spring.

This is the pace of lemmings. It is almost the definition of unsustainable growth. It would be difficult to accommodate even with an abundance of capital expenditure, zoning controls and political will, not found even in the United States where, despite a variety of management programs, coastal resources are in decline,²³⁵ entire land masses are disappearing,²³⁶ and contamination has created "dead zones" of 8,000 square miles and more at the mouths of major rivers.²³⁷

Without adequate law or political will, most coastal cities of the world build right down to the beach, bulldoze the vegetation, drain and fill the wetlands, and dump raw sewage into the sea where it mixes with eroded sediments, algae, oil spills, bilge water, and untreated industrial wastes.²³⁸ The natural systems die.²³⁹ There is no

231. See *Cleaning up the Mediterranean: The Coveted Coast*, THE ECONOMIST, Dec. 21, 1991, available in 1991 WL 4964030 [hereinafter *Cleaning Up*].

232. See S. JEFFRESS WILLIAMS, ET AL., U.S. GEOLOGICAL SURVEY, COASTS IN CRISES 2 (Circular 1075, 1990) (reporting that coastal areas bordering the United States, as of 1990, had population densities five times the national average).

233. See Weber, *supra* note 224, at 21.

234. See *Cleaning Up*, *supra* note 231, at 2.

235. See James R. Chambers, *Coastal Degradation and Fish Population Losses*, in NATIONAL SYMPOSIUM ON FISH HABITAT CONSERVATION, Baltimore, MD (1991) (describing declines in fisheries productivity and habitat).

236. Between 1930 and 1990, the Mississippi Deltaic plain lost over 680,000 acres of land. See SHEA PENLAND ET AL., COASTAL STUDIES INSTITUTE, LA. ST. U., NATURAL AND HUMAN CAUSES OF COASTAL LAND LOSS IN LOUISIANA (1996). This loss rate rose to 47 square miles per year during the 1980's. See Houck, *supra* note 225, at 11.

237. See Mark Schlefstein, *Dead Zone in Gulf Biggest in Decade*, TIMES PICAYUNE, July 28, 1995, at B1 (describing a "dead zone" of anaerobic water of 7,032 square miles at the mouth of the Mississippi River).

238. See *50 Tons of Dead Fish Wash Upon Rio Beaches*, REUTERS, Apr. 6, 2000:

Fifty tons of dead fish washed onto the picturesque beaches of Rio de Janeiro this week, the latest in a series of environmental mishaps that are spoiling the city's natural beauty, officials said on Wednesday. Thousands of smelly sardines coated beaches in the northern part of the city, which hosted the environmental Earth Summit in 1992.... The Earth Summit's

life because there is no oxygen, at the mouth of the Mississippi River.²⁴⁰ The Rhine River, with ten times the population density of the Mississippi dumps ten times the volume of oxygen-depleting nutrients into the sea.²⁴¹ Global fisheries have collapsed and are not recovering.²⁴² Coral reefs are plundered, smothered and going fast.²⁴³ Species endangerment rises.²⁴⁴ Hurricane damages rise.²⁴⁵ This is not only the *pace* of lemmings; it is the *fate* of lemmings. However, few countries of the world have met the challenge of coastal management with any commitment or success.

Which brings us to Cuba, whose primary advantage is that late 20th century population booms, industrial-strength tourism, and high-grade industrial contamination passed it by. To be sure, its major coastal cities discharge directly into the ocean, and only seventeen percent of sewage nationwide currently receives even primary treatment.²⁴⁶ Indeed, lumping all 2,355 Cuban agricultural, industrial and domestic waste sources together, some fifty percent have malfunctioning treatment systems and forty percent have no treatment systems at all.²⁴⁷ Adding serious agricultural erosion²⁴⁸ to these loads presents a picture that is both depressing and typical of virtually every country of the Caribbean and Central America, indeed the world. This situation, however, is remediable with sufficient resources, and because of the relatively low levels of development in Cuba and the large extent of its coastal zone, relatively isolated in its impact. What remains is a huge and highly

host city has been home to ecological disaster so far in 2000. In January Brazilian oil giant Petrobras accidentally dumped 338,000 gallons of fuel oil in Rio's landmark Guanabara Bay, a spill that will take at least 10 years to recover from, according to specialists. Raw sewage pumped daily into the ocean off of Copacabana and Ipanema beaches has already forced officials to ban bathing in most of the world-famous waters, leading cartoonists to compare the bay to a toilet.

239. *See id.*

240. *See Weber, supra* note 224, at 23.

241. *See id.*

242. *See Peter Weber, Net Loss: Fish, Jobs and the Marine Environment, WORLD WATCH (1994)* (documenting worldwide collapse of fisheries, fishery jobs and income).

243. *See Weber, supra* note 224, at 23. ("5 to 10% of the planet's coral reefs have essentially been ruined by pollution and direct destruction, and another 30% could be lost in the next 10 to 20 years").

244. *See NATURAL WILDLIFE FEDERATION, ENDANGERED SPECIES, ENDANGERED WETLANDS: A DIZZYING DEATH SENTENCE (April 1993)* (documenting relationship between species endangerment and wetlands loss).

245. *See Williams et al., supra* note 232, at 18-19 (describing hurricane losses).

246. *See Env. Situation, supra* note 17, at 7.

247. *See id.* at 8.

248. *See Env. Situation, supra* note 17.

variable coastal seascape studded with thousands of additional small islands and keys. For Cuba's biological diversity on the one hand, and its economic development on the other, these are "The Prize."

The question is what Cuba will do with, and how much it will sacrifice for, coastal tourism. It has already had some sad experiences, particularly with a Miami Beach-cum-Cancun like resort hotel complex at Varadero on the north coast.²⁴⁹ The mangroves were cut, the dunes were leveled, the buildings sit cheek-by-jowl on the beach itself and their wastes are funneled away, not far, to sewage lagoons.²⁵⁰ Beach erosion has inevitably set in, and Cuba has begun Florida-style, offshore sand dredging to slow it down, trying to sustain the unsustainable.²⁵¹ Varadero draws tourists and will certainly draw more, but at least within CITMA, it is recognized as a problem and an object lesson in what not to do.²⁵² Of course, the same object lessons are also arising in Haiti and Puerto Rico.²⁵³ With Cuba's authorization of independent and joint ventures for foreign investors,²⁵⁴ the road to big time tourism is now open.

As of 1998, there were 21 joint ventures in tourism led by the Spanish-owned Sol Melia, with eight hotels operating and three more planned for construction that same year. Of the new hotels, one would be in Havana, one would be on the coast in the province of Holguin, and one on Coco Key, all of which are in the coastal zone.²⁵⁵ Independent analysts project Cuba to receive \$18.5 billion in economic impact from tourism by the year 2007; that number rises to \$27.7 if free market capitalism has its way.²⁵⁶ As Cuba's Vice-President of the Counsel of State stated in 1998, "I would not say that tourism is one of the sectors most important, tourism is the *heart* of the economy."²⁵⁷ The implications of this growth on the coasts are obvious, but are dependant on where and how the growth occurs.

Enter coastal zone management. It is something of a race to get there first. As described by CITMA, "[t]he intensity with which

249. Personal observation of the author, Varadero, Cuba, May 26, 1999.

250. *See id.*

251. *See id.* Interview with Teresita Borges Hernandez, CITMA, May 26, 1999.

252. Personal observation, *supra* note 249.

253. *See* Acosta, *supra* note 71, at 2 ("[L]ocal ecologists fear the kind of overdevelopment which has occurred in nearby Acapulco and Copacabana.").

254. *See Env. Situation, supra* note 17.

255. *See* Felix Blanco Godinez, *Cuba's Tourism Industry: Sol Melia As A Case Study*, in CUBA IN TRANSITION, ASCE 1998, at 53-5.

256. *See* Nicolas Crespo, *Back to the Future: Cuban Tourism in the Year 2007*, in CUBA IN TRANSITION, ASCE 1998, at 42.

257. Iraida Calzadilla Rodriguez, *Tourism is the Heart of the Economy*, GRANMA, Feb. 28, 1998 at 3 (emphasis added).

investments in the coastal zone are increasing and the diversity of interests that are found there require the rapid development of a legal tool to guarantee its protection and the health of marine ecosystems."²⁵⁸ Thus, immediately following its over-arching, environmental impact analysis law, CITMA went to work on the coastal zone.

Decree Law 212 was hammered out within the agency and with other Ministry personnel during 1998, and finally approved in 2000.²⁵⁹ The Law prescribes two zones: a "coastal zone" extending seaward to the continental shelf (between 100 and 200 meters depth) and from twenty to forty meters landward from a base;²⁶⁰ and a second, "protection zone" extending another twenty to forty meters inland.²⁶¹ The coastal zone is declared to be open, public and free for public use;²⁶² all coastal development, including causeways and roads, is required to provide pedestrian and public access.²⁶³ Articles 15 through 18 hold the keys to the gut issue: development control.

Article 15 begins with a general rule that "the coastal zone will remain presumptively unoccupied" by permanent structures.²⁶⁴ In language that echoes United States law and that of several coastal states, activities and development will only be allowed as an exception to the general rule "where their purpose does not allow location outside the coastal zone," such as ports, piers, drilling platforms, navigation signals and national defense works.²⁶⁵ In areas of the zone currently unoccupied by permanent structures, no new permanent installations will be permitted "except where justified for political or social reasons."²⁶⁶ Several uses are specifically prohibited in the zone, including: sand extraction, land vehicles, new residences and hotels or enlargements of existing ones, and the disposal of

258. *Env. Situation, supra* note 17, at 21.

259. *See* Decree-Law 212, Management of the Coastal Zone, Coazeta Oficial, Aug. 8, 2000 (Cuba) [hereinafter Decree-Law 212].

260. *See id.* at art. 4 (the distance inland varies with the type of coast, for example, twenty meters inland from cliffs, art. 4(b), forty meters inland from beach vegetation, art. 4(c)).

261. *See id.* at art. 5.

262. *Id.* at art. 12.

263. *See id.* at art. 13.1.

264. *Id.* at art. 15.1.

265. *Id.* These "coastal dependency" requirements are familiar features of state coastal management laws under the federal Coastal Zone Management Act, 16 USC §§ 1451 et seq. (1999). *See* *Pardue v. Stephens*, 558 So. 2d 1149 (1989) (the non-wetland presumption for activities in the Louisiana coastal zone).

266. *Id.*

wastes.²⁶⁷ These same presumptions, exceptions and prohibitions apply equally to the interior protection zone, with the exception of light structures such as concession stands, that can be easily removed and that have adequate waste treatment systems.²⁶⁸

In effect, Cuba has created a narrow, but well-defined zone of highly limited development. Under this law, new tourist hotels, roadways and the like will be stepped back from at least 40 to 80 meters from the vegetation line, which is to say from the dunes and beach. When one considers seaside development along Tampa, Florida, for example, or Cape Hatteras, North Carolina, these become significant requirements.

The agency review process is a bit more delicate. The Decree Law, in effect, creates a third zone of protection, through planning, under the joint custody of CITMA and the Ministry of Economy and Planning. As described earlier in this article, the Ministry of Economy and Planning is Cuba's lead land use agency; under Law 212 it remains in charge of "directing, formulating and controlling" coastal development,²⁶⁹ including the master land use plans and site-specific "microlocalizacion" decisions.²⁷⁰ These plans and decisions, however, are to conform to the requirements of the new coastal law. CITMA will "participate" in the "discussion, evaluation and approval" of the zoning plans and decisions, "seeking to introduce modifications that are deemed appropriate."²⁷¹ CITMA also reviews all impact assessments for these plans and projects, and grants the earlier-described environmental licenses.²⁷² Finally, CITMA is directed to "approve, direct and control" the development of "integrated coastal zone management strategies"²⁷³ and "their implementation,"²⁷⁴ to reconcile differences among agencies and other entities over coastal uses, and to issue the Law.²⁷⁵

Given these at least parallel, if not conflicting, authorities, it will not be clear for some time how their exercise will play out and which agency will emerge with the final say. At this moment, however, it is

267. *See id.* at art. 16. An exception is provided for sand dredging if there are no other feasible sources of sand and if the dredging will not interfere with natural processes. *See id.*

268. *See id.* at art. 18.

269. *See id.* at art. 9.

270. *See Environmental Situation, supra* note 17.

271. Decree-Law 212 art. 8. CITMA is also to assure public participation in coastal decision-making. *See id.* at art. 8(j).

272. *See id.* at art. 8(b).

273. *Id.* at arts. 7, 8(e).

274. *Id.* at art. 8(1).

275. *See* Decree-Law 212, Final Dispositions, Three.

clear that Law 212 grants CITMA the maximum amount of decision-making power short of repealing the long-standing functions of the Ministry of Planning and starting anew. While conflicts between the Ministries may be inevitable, the combination of the two carries the upside potential of greater resources and administrative capacity for coastal management, somewhat similar to the concurrently-operated state coastal management and Environmental Protection Agency and Corps of Engineers wetlands protection programs in the United States.²⁷⁶

Law 212 accords a final set of protections for development of the Cuban keys, which, from the point of view of tourist development, are the prize within The Prize. Cuban projection for new housing on the coasts is relatively limited;²⁷⁷ housing on the keys is identified by the Ministry of Economy and Planning as only nine percent of its projected capacity.²⁷⁸ Obviously, the tug-of-war will be over the keys. Under Law 200, all permanent structures development or activities on the keys will run the gauntlet of a full environmental impact analysis and a CITMA license.²⁷⁹ All construction is to be on solid ground, and in compliance with the aforementioned setback requirements.²⁸⁰ Construction is prohibited outright on keys smaller in size than the diameter of the coastal zone, and on those identified by CITMA as being particularly fragile, in the process of beach accretion, or covered by mangrove vegetation.²⁸¹ No wastes will be treated on keys except in systems proven in advance to be effective.²⁸²

To be sure, these are hardly prohibitions. They are, however, clearly legal handles. They are also incentives to develop tourism on the keys in a different, low-impact manner. There is no need to put hotels on the keys in order to view their wildlife or snorkel their reefs, and these alternative possibilities are now producing proposals for ecotourism that, in the long run, could be both profitable and environmentally sustainable. As one Cuban researcher is quoted as

276. For a discussion of the value of "redundancy" and "overlap" in these U.S. environmental programs, see Oliver A. Houck & Michael Rolland, *Federalism in Wetland Regulation: A Consideration of Delegation of Clean Water Act Section 404 and Related Programs to the States*, 54 MD. L. REV. 1242 (1995).

277. See *Workshop on Coastal Zone Legislation*, Presented by CITMA in Havana, Cuba, May 24, 1999.

278. See *id.*

279. See Decree-Law 212 art. 26.

280. See *id.* at art. 28.

281. See *id.* at art. 27.1. CITMA is further authorized to designate keys with these characteristics, in effect, a development ban. See *id.* at art. 27.2.

282. See *id.* at Art. 29.

saying, "[t]he commercial success of the cays as a tourist attraction essentially depends on the state of preservation of the natural surroundings."²⁸³

With these provisions on the books, particularly those for the coastal keys, one can see the battle lines forming over which activities are "coastal dependent", and thereby permissible, and which keys are sufficiently "fragile" as to bar any type of development at all. Into the fray will come the Ministries of Economy and Planning, Tourism, Foreign Investment, Mining, Forestry, Fisheries, and Agriculture, as well as foreign investment and private interests with their own axes to grind. No one can say how these battles will be resolved, although there is preliminary evidence that they lead to the same kind of incomplete compromises that are found in most coastal states and nations, or at least in those jurisdictions that pay any attention to the subject at all. Hotels will be stepped back from the mangroves, but will go forward.²⁸⁴ Causeways will run to big keys, but with elevations to preserve hydrology and aquatic life.²⁸⁵ Decisions like this, and far worse, are made in Louisiana, Mississippi and other Gulf Coast states every day.²⁸⁶

For the moment, it is enough to observe that Cuba, in the face of an economic imperative to develop its coasts for tourism greater than that driving any state of the United States or any nation of the Caribbean or Central America, has enacted a program which must be rated favorably for its specificity and its potential for protection. How protective the actions will turn out to be is beyond rational prediction, as it is for the similar individual coastal management programs of coastal states in the United States. The protections may

283. Acosta, *supra* note 71, at 2 (quoting Rosa Jiminez, "a researcher studying the state of marine contamination by land polluters").

284. See *Workshop on Environmental Impact Analysis Legislation*, Presented by CITMA in Havana, Cuba, Oct. 1998 (describing permit controversy with hotel development on a coastal key, resulting in relocation to avoid mangrove impacts).

285. See *supra* text accompanying note 73.

286. For a discussion of the lackluster records of Gulf states in coastal zone management, see Houck and Rolland, *supra* note 276.

Alabama has been able to facilitate condominium development on Perdido Key in contravention of its approved plan. Mississippi has permitted a sudden industry of gambling casinos in its coastal waters, to the exclusion of other uses identified as "priorities" in its coastal plan, drawing only the suggestion from NOAA for a "comprehensive review." Louisiana's coastal use permitting program, covering activities across 3.5 million acres, denies fewer than one application per year. As an administrator of the Louisiana program has explained, the act is "a resource management statute which practically precludes the Secretary from stopping any activity in the coastal zone."

Id. at 1298 (citations omitted).

vary from year to year, and will depend on the strength of the agencies involved, their leadership, their data, their popular support, and the support of the legal system itself. Presently in Cuba, the data look sound, the lead agency looks committed, the popular and political support are wild cards, and, as later discussed, the legal system is by no means up to its supporting role.²⁸⁷

VII. BIOLOGICAL DIVERSITY

On a worldwide basis, biodiversity tends to be concentrated in the southern countries, while the institutions and resources for studying it tend to be located in the northern countries ... Cuba provides an extreme case. With respect to biodiversity, it is the single most important country in the Caribbean islands, and this is true to an overwhelming degree.²⁸⁸

Dr. Michael Smith

As the Castro government loses its tight control over the population, the mountain land will again be open to development. Additional pressures on the rain forest will arise because this is also a mineral rich area with proven deposits of manganese, copper, silver and gold. It is necessary to plan to protect the rain forests now. If plans are not in place, there will be little time to make them when Castro's fall triggers a rush to repopulate the area and clear the rain forests for agriculture.²⁸⁹

Bioprospective, in a Post-Castro Cuba

The idea of protecting biological diversity originated in the 1990's, relatively out of nowhere, and took center stage in international environmental law. Propelled by academic research, agency scientists and pharmaceutical companies, biodiversity became a swing issue for federal land management in the United

287. See *infra* text accompanying notes 471 to 479.

288. Smith, *supra* note 29, at 13.

289. Larry Daley, *Bioprospecting in a Post Castro Cuba*, in *CUBA IN TRANSITION*, ASCE 1997, at 382, 388.

States,²⁹⁰ a battleground at the World Summit in Rio de Janeiro,²⁹¹ and a generator for national conservation programs around the world. And in Cuba.

As a concept, biological diversity means two related but different things. The first is the conservation of biological resources, which most countries including the United States, have been approaching in a halting, piecemeal fashion for many years. Indeed, the history of conservation in the United States began with the setting aside of parks and forest reserves in the 1800's,²⁹² adding protections for certain wildlife species²⁹³ and, then, endangered species in the 1900's,²⁹⁴ without any particular effort, even by the year 2000, to identify the diversity of domestic species or to provide for their long-term perpetuation. The second face of biodiversity concerns access to and use of biological resources, basically genetic materials, for medicines, crop improvements and the exploding field of biotechnology. On this theme, the United States finds itself even more in arrears, with virtually no program to determine either access or uses beyond that found in traditional food and drug laws.²⁹⁵

In Cuba, both issues of biodiversity would become critical at the close of the century. Its biodiversity was extraordinary and largely unprotected, and the economic value of these resources in biotechnology became an element critical to Cuba's economic survival.

It is hard to overstate the biological importance of Cuba. A basic principle of conservation biology holds that the diversity of species increases on two axes, one being the size of the land mass under study, and the other being its isolation from other land masses and their species.²⁹⁶ Large islands meet both criteria, hence the rich diversity of flora and fauna in Madagascar, Australia, Hawaii, and Cuba.²⁹⁷ The Caribbean Islands host about 15,000 identified plant species, nearly the same number found in all of the United States and Canada combined.²⁹⁸ Cuba, with 6,500 known plant species,²⁹⁹ holds

290. See Oliver A. Houck, *On the Law of Biodiversity and Ecosystem Management*, 81 MINN.L. REV. 869 (1997).

291. See *supra* text accompanying note 101.

292. See UDALL, *supra* note 6 (describing evolution of federal land and resource management programs).

293. See Migratory Bird Treaty Act, 16 U.S.C. § 703 (1999).

294. See Endangered Species Act, 16 U.S.C. §§ 1531 *et seq.* (1999).

295. See *Edmonds Institute v. Babbitt*, 93 F. Supp. 2d 63 (D.D.C. 2000) (ruling that a National Park Service bioprospecting agreement with a private company is a "dramatic change in national policy" requiring an environmental impact statement).

296. See EDWARD O. WILSON, *THE DIVERSITY OF LIFE* (1992).

297. See *id.* at 94-130.

298. See Smith *supra* note 29, at 14.

the lion's share of Caribbean plant kingdom, more than half of which are endemic, found only in particular locations and habitats.³⁰⁰ An estimated 900 Cuban plant species are endangered.³⁰¹

Moving up the food chain, Cuba hosts 2,947 species of mollusks, 1,300 species of spiders, and another 7,493 identified insect species, which may be only the tip of the iceberg.³⁰² According to Cuban scientists, forty percent of the fauna encountered in recent biological surveys are new to science,³⁰³ more than ninety percent of the principal groups of terrestrial invertebrates,³⁰⁴ and thirty percent of the vertebrates, are endemic species.³⁰⁵ The potential limitations and peril faced by these species are obvious. The West Indies have lost over ninety percent of their land mammals since the 1500's.³⁰⁶ Since that time, twenty-five to thirty percent of worldwide mammalian extinction has occurred on these islands.³⁰⁷ That Cuba would hold such a rich, remaining inventory of flora and fauna is largely an accident of its history and relic pockets of its geography, which bought time for conservation to come into play.

Cuba's growing attention to biodiversity protection may be chronicled as pre-revolution, post-revolution, and post-Rio, 1992. As described earlier in this article, Cuba's expertise in the natural sciences dates back nearly two centuries.³⁰⁸ Starting in 1930, Cuba began designating natural areas, but without legal protections or management, these declarations remained largely exercises on paper.³⁰⁹ One of the first acts of the revolution was the Law of Agrarian Reform, which charged the state with protecting its natural areas, promoted programs of reforestation, and excluded forest reserves from distribution to agricultural collectives.³¹⁰ In the 1980's, additional natural areas were designated as biosphere reserves and

299. See *Estrategia*, *supra* note 39, at 29.

300. See Smith, *supra* note 29, at 16 ("Endemism in Cuba ranges from 51 percent in vascular plants to more than 90% in major groups of terrestrial invertebrates.").

301. See William Robert Irvin, *Biodiversity Protection in Cuba* 26 (unpublished manuscript on file with Center for Marine Conservation).

302. See *Estrategia*, *supra* note 39.

303. See Smith, *supra* note 29, at 15.

304. See *id.* at 16.

305. See *Estrategia*, *supra* note 39, at 33.

306. See Irvin, *supra* note 301, at 26.

307. See *id.*

308. See *supra* text accompanying note 35.

309. See *supra* text accompanying note 82.

310. See *id.*

initial efforts were directed towards creating a national system of protected areas.³¹¹

The centerpiece of the 1992 World Summit in Rio was the Convention on Biological Diversity.³¹² The Convention not only declared "conservation of biological diversity," the "sustainable use" of its components, and the "equitable sharing" of the benefits of genetic resources to be goals of the Convention, but also further required signatory countries to develop "national strategies, plans, or programs" for the sustainable use of biodiversity.³¹³ More specifically, it required its member nations to establish systems of protected areas, to maintain viable populations of species in natural surroundings, to restore degraded ecosystems and promote the recovery of endangered species.³¹⁴ One hundred and seventy-two nations have since signed on to the treaty. Cuba, in 1993, was one of the first and CITMA took the exercise to heart.

For those who like detailed planning, the next steps will fulfill their every wish. In 1996 the International Union for the Conservation of Nature funded a detailed profile of the institutional and legal framework for the management of biological resources in Cuba.³¹⁵ The resulting document, authored by the current chief of CITMA's Environmental Policy Directorate, was both a summary of the hydra-headed nature of Cuban resource management, and a compelling case for change. Presaging Law 81 and many of its provisions,³¹⁶ the profile identified gaps in public and private law generally,³¹⁷ and with specific regard to species protection and to control of genetic resources.³¹⁸ In effect, the profile stated that with regard to the Convention it had ratified a few years earlier, Cuba was way behind the eight ball.

The next step called for in the Convention, and neatly congruent with Cuba's penchant for strategies, was the development of a National Strategy and Plan of Action for Biological Diversity.³¹⁹ Funded again by the United Nations and published in 1998, the plan had gone through an elaborate, two-year process of initial drafting, national and regional workshops, second drafting, more workshops,

311. See Rossel and Puga, *supra* note 82, at 2.

312. See Houck, *supra* note 290.

313. *Convention on Biological Diversity*, reprinted in 31 I.L.M. 822, art. 6(a) (1992).

314. See *id.*, at art. 8(f).

315. See *Profile*, *supra* note 29, at 26.

316. See *id.* at 26-28.

317. See *id.* at 44-49.

318. See *id.* at 70-89.

319. See *Estrategia*, *supra* note 39.

and final approval with participation by virtually every related ministry, research institute and professional organization in the country.³²⁰ The strategy provided an all-in-one-binder summary of Cuba's geography and its human, scientific and biological resources. It identified forty-two separate ecosystems,³²¹ seventeen of which were characterized as ecologically sensitive. Based on factors of rarity and value, the strategy ranked six ecosystems of highest importance, including wet forest, high mountain, and littoral areas.³²²

The strategy was also an action document stating that diversity conservation must be the "fundamental pillar" for sustainable development in Cuba,³²³ and providing no fewer than 142 separate action items, each delegated to an identified lead agency, including participating agencies and time frame for completion (e.g. short, medium or long range).³²⁴ Fourteen of these actions related to the development of law.³²⁵ Among these were legal systems for diversity protection³²⁶ and access to biological resources.³²⁷

Meanwhile, Cuba's scientific and technological investments in biological resources were beginning to bear fruit. Unlike many countries in Latin America seeking to control foreign access to the genetic heritage of their natural areas, or more realistically, to obtain at least modest revenue from foreign corporations developing it, Cuban science was very much in the game of product development. One of the early natural areas established by the government in 1959 was the Zapata Swamp, set aside as a reserve for the Cuban Crocodile, which at that time was thought to be gravely endangered if not extinct.³²⁸ The recovery program included captive breeding, which has been so successful that plans are currently in the works for the sale of crocodile parts and products.³²⁹ This success has in turn prompted efforts in aquaculture and other forms of commercial captive breeding.³³⁰

Cuba began working on biotechnology as early as 1965 with the establishment of a National Center for Scientific Research, whose

320. *See id.* at List of Participants and Process of Development.

321. *See id.* at 29.

322. *See id.*

323. *See id.* at 51.

324. *See id.* at 55-75.

325. *See id.* at 60-62, items 44-56.

326. *See id.* at 60, item 45 (biodiversity protection legislation).

327. *See id.* at 44 (access to genetic resources).

328. *See supra* text accompanying note 84.

329. *See* Interview with Targarona, *supra* note 84.

330. *See Estrategia*, *supra* note 39, at 20.

mission was to solve biomedical and scientific problems important to Cuban economic and social life and to develop products for the international market. Since that time, Center scientists have developed the use of ozone to fight germs, speed the healing of wounds, and improve blood circulation; the use of new therapies for speech and hearing impaired children; and vaccines for cholera and other diseases.³³¹

In 1981, Cuba started a Center for Genetic Engineering and Biotechnology that was the beginning of a \$1 billion investment over the past twelve years.³³² The Center was producing the drug interferon within three years of its discovery in Finland,³³³ and is now marketing *inter alia*, a recombinant hepatitis vaccine, a cattle tick vaccine, and industrial enzymes.³³⁴ Reportedly in the works are a possible AIDS vaccine and disease-resistant strains of coffee, papaya and pineapple plants.³³⁵ A new Center for Pharmaceutical Chemistry expands this work on products from both expired patents and native sources.³³⁶ With funding from the United Nations Food and Agriculture Organization in 1997, Cuba developed biological controls for an insect plague affecting a dozen domestic crops.³³⁷ Through a network of more than 200 laboratories and three production factories, it is creating other biological agents to control infestations of tomatoes, tobacco, cabbage, cucumbers, plantain, yucca, maize and coffee.³³⁸ The limiting factor for biotechnology in Cuba is apparently not technology, but marketing.³³⁹ In 1998, the United Nations Development Program announced new marketing support for Cuba, with a prediction that biotechnology will be "one of the life rafts for the Cuban economy."³⁴⁰

Compelled forward by the Rio Convention's conservation mandates and by its own need to manage a growing biotechnology

331. *See id.*

332. *See id.* at 10.

333. *See UNDP Breaching New Markets for Cuban Biotechnology*, INTER PRESS SERVICE, July 20, 1998, available in 1998 WL 5988358 [hereinafter UNDP].

334. *See* William G. Schulz, *Cuba at a Crossroads*, CHEMICAL, Jan. 11, 1999, at 10.

335. *See id.*

336. *See id.*

337. *See* Dalia Acosta, *FAO Backs Bio-Pesticide Production*, INTER PRESS SERVICE, March 2, 2000.

338. *See id.* at 2.

339. *See UNDP, supra* note 333, at 2 ("[T]he international market 'has stripped the Cuban and the development of the industry dead.") (quoting Ariel Terreno, economic journalist). Even so, biotech products contributed more than \$200 million to national revenue in 1990-2. *See id.*

340. *Id.*

industry, Cuba is in the process of approving a new law on biological diversity.³⁴¹ While not final at the time of this writing, the outlines of the proposed law demonstrate a continued emphasis on the authority of CITMA and strong environmental controls. The law is divided in equal measure between conservation and biotechnology management.

The law's general conservation provisions declare the Biodiversity Strategy and Action Plan to be the operative instruments for biodiversity planning.³⁴² The Strategy-cum-Plan is to, *inter alia*, establish criteria and indicators for sustainable use, and the basis for an endangered species program.³⁴³ All national and foreign entities working with Cuban biological resources are to include in their budgets sufficient moneys to carry out the actions of the Strategy/Plan.³⁴⁴

The law then proceeds to make special provisions for sensitive species and sensitive ecosystems. It recognizes five categories of protected species: rare, vulnerable, endangered, critical, and extinct.³⁴⁵ CITMA is to develop a National Red Book, similar to that of the IUCN, classifying all eligible species.³⁴⁶ Any citizen or institution may petition the agency for the addition of threatened or endangered species.³⁴⁷ Candidate species, about which insufficient information exists, are to be subject to special protections and used only for scientific investigation relating to their classification.³⁴⁸ CITMA is prohibited from granting an environmental license for an activity that would cause a species to be listed in any of the aforementioned categories, or that would cause it to be placed in a category of higher risk.³⁴⁹ CITMA is furthermore required to establish protective measures appropriate for each category of species,³⁵⁰ and to approve management plans of other Ministries to implement these protections.³⁵¹

The protections for sensitive ecosystems are equally explicit. CITMA is to identify such ecosystems according to Rio Convention

341. See Decreto-Ley No. _____, De la Diversidad Biológica, April 2000 (draft, unpublished, on file with author).

342. See *id.* at art. 11.

343. See *id.* at art. 12.

344. See *id.* at art. 13.

345. See *id.* at art. 15.1.

346. See *id.* at art. 20.

347. See *id.* at art. 16.

348. See *id.* at art. 17.

349. See *id.* at art. 8.

350. See *id.* at art. 15.2

351. See *id.* at art. 18.

criteria, and to rank them in the same order of endangerment used for species classification.³⁵² All agencies are to ensure that, under their management, viable populations of species reflecting the health of these systems ("indicator species") are maintained.³⁵³ Furthermore, any plan, program or activity that could produce adverse effects on the natural functioning of these ecosystems is prohibited.³⁵⁴ In exceptional cases and for an overriding social purpose, CITMA is authorized to approve an activity just described, but only when it has been demonstrated that no alternative exists to avoid the impacts in question.³⁵⁵

These provisions are worth a pause and a comparison to US law. For endangered species, the law is similar to the Endangered Species Act in its fundamental structure, with provisions for listing, protections, and recovery planning.³⁵⁶ As in the United States,³⁵⁷ outside parties in Cuba may petition for new listings and, given the knowledge and activity of the Cuban scientific community, this process may turn out to drive the listings forward. The listing categories are more ample than those found in the ESA, which includes only endangered and threatened species.³⁵⁸ The standards of protection, prohibiting impacts that would elevate a species' classification, are also more protective than that of the ESA, which prohibits only activities that would "jeopardize the continued existence" of a species.³⁵⁹ Recovery planning is, likewise, potentially more powerful, through the requirement that these plans be incorporated in the plans and activities of other agencies. In the United States, recovery plans are not so incorporated, and are often ignored.³⁶⁰ On the endangered species' side, this is stronger law than that in the United States.

352. See *id.* at art. 32. These provisions apply to all ecosystems. Similar and more detailed provisions apply to areas already protected by national law. See, e.g., *id.* at arts. 22-25.

353. See *id.* at art. 33.1

354. See *id.*

355. See *id.* at art. 33.2.

356. For an overview of the functioning of the Endangered Species Act, see Houck, *supra* note 290.

357. See 16 U.S.C § 1533(b)(3)(A) (1999).

358. See *id.* § 1533(a).

359. See *id.* § 1536(a)(2); see also § 1539(a)(2)(B)(iv) (allowing "take" of a listed species if it will not "appreciably reduce the likelihood of the survival and recovery of the species in the wild."). This is the same standard needed to determine "jeopardy." See 50 C.F.R. § 402 (1992).

360. For a discussion of the weaknesses in U.S. recovery planning, see Timothy H. Tear et al., *Status and Prospects for Success of the Endangered Species Act: A Look at Recovery Plans*, 262 SCIENCE 976, Nov. 12, 1993 ("According to these measures, even if population [recovery] goals were achieved, 60% of the ESA's threatened or endangered vertebrate species would remain in

There is no parallel in the United States for the ecosystem provisions proposed. In recent years, the United States Congress has avoided even the idea of identifying biological diversity or endangered ecosystems,³⁶¹ much less protecting them.³⁶² In the Strategy, Cuba has already done the work of identifying its sensitive ecosystems and placing them in rank order of importance and endangerment.³⁶³ The first method it has chosen to secure their conservation is the indicator species approach, referenced in the Rio Convention.³⁶⁴ The United States has adopted this same approach in the management of its National Forests³⁶⁵ and on the occasions where it has been conscientiously applied, has realized considerable success.³⁶⁶ Highly controversial in the United States, in large part because of the protections it affords, this approach has not been adopted by any other U.S. agency. The proposed law's second layer of protection, based on ecosystem functions, is *terra incognita* for the United States and most countries.³⁶⁷ The exception to this protection which the Cuban law provides, based on findings of an overriding national purpose and the demonstration of no alternative courses of action, is the same escape valve found in United States laws protecting public parks, wetlands and endangered species.³⁶⁸

peril, with roughly a 20% probability of extinction within 20 years or 10 generations, whichever is longer.").

361. See Warren E. Leary, *Battle Over the Budget, the Researchers: Work Stops at Labs and Waste Sites*, N.Y. TIMES, Jan. 5, 1996 (describing congressional attack on the U.S. Biological Survey).

362. Proposed legislation for the protection of biological diversity has languished in the U.S. Congress for more than a decade without even a faint hope of passage. See National Biological Diversity Conservation and Environmental Research Act, H.R. 585, 102d Cong. (1991).

363. See *supra* text accompanying note 352.

364. See *id.*

365. See 36 C.F.R. § 219.19 (discussing that National Forest planning regulations require management to ensure viable populations of indicator species).

366. For a discussion of the logic of forest management plans in the Pacific Northwest and in the Tongass National Forest of Alaska, in response to the application of indicator species requirements, see Houck, *supra* note 290, at 892, 899.

367. The U.S. Forest Service has proposed new, ecosystem-based first management planning regulations, 64 Fed. Reg. 54074 *et seq.* (1999), which have, in turn, prompted a firestorm of opposition from commodity users and "property rights" organizations. See AMERICAN LAND RIGHTS ASSOCIATION, FOREST SERVICE LAND USE PLANNING REGULATIONS: URGENT ACTION REQUIRED, Feb. 3, 2000.

368. For a discussion of the "no feasible alternative" standards of protection under section 4(f) of the Department of Transportation Act, 23 U.S.C. § 138, that protects public parks and recreation areas, and section 404 of the Clean Water Act, 33 U.S.C. § 1344, that protects wetlands, and section 7 of the Endangered Species Act, 16 U.S.C. § 1531, see Oliver A. Houck, *Of Birds, Bats and B-A-T: The Convergent Evolution of Environmental Law*, 63 MISS. L. J. 403, 439-42 (1994).

The access and biotechnology provisions are remarkable in granting CITMA the power to negotiate and sign all contracts for access to biological resources, including genetic resources³⁶⁹ and the related knowledge and culture of local communities.³⁷⁰ This authority is not surprising, given the large web of scientific institutes and research stations already under the CITMA umbrella. Access to resources under the management of another agency, such as the Ministry of Forestry, requires both permission from that agency, in the form of a permit, and a contract with CITMA.³⁷¹ Access is to be limited where, *inter alia*, it could affect listed species, sensitive ecosystems, public health or biological security.³⁷² These limits noted, the terms and conditions are in CITMA's hands.³⁷³

In sum, in its proposed law for biodiversity, CITMA has taken advantage of the Rio Biodiversity Convention to move forward several large steps towards ecosystem management and the management of genetic materials. Its conservation provisions, on their face, exceed those that are found in United States law, and indeed address the issue more comprehensively than the United States has yet dared to do. Its biotechnology provisions impose management also unknown to the United States, although similar to those in several Latin American countries with significant biological resources.³⁷⁴

Whether the law finally emerges in this or a modified form, the remaining questions of implementation and enforcement remain, as is the case with environmental impact analysis and coastal management, discussed below. Implementation begins, however, with substantive law, and Cuba has begun to create law on these issues that is both action-forcing and open to observe. To be sure, these laws could simply prove to be a higher level of lip service. If so, however, Cuba has invested seven years and considerable resources creating an entire new Ministry in order to fool the world. A more likely conclusion is that the Cuban government wants this process to go forward, but that large obstacles stand in the way.

369. See Decreto-Ley *supra* note 341, art. 62.1.

370. See *id.* at art. 64.

371. See *id.* at art. 62.

372. See *id.* at art. 71.

373. CITMA may also propose to the Ministry of Finance and Prices that contracting parties receive tax breaks and outright exemptions in cases where they agree to dedicate portions of their revenue to endangered species protection, environmental quality or improvements in local communities. See *id.* at arts. 81-2.

374. See Ley No. 26821, Ley Organica Para el Aprovechamiento Sostenible de los Recursos Naturales (June 25, 1997) (Peru).

VIII. IMPLEMENTATION

After proposing the Biodiversity law, CITMA put its substantive law-making machine on hold to concentrate on implementation of the current laws. Within the Agency, this is the province of the Office of Environmental Management and Inspection,³⁷⁵ with technical support from more than two-dozen CITMA institutes and other agencies.³⁷⁶ It is also somewhat *terra nova* both in its process and the standards that will be applied.

Law 81 required CITMA to develop a system of environmental inspections and enforcement,³⁷⁷ and a schedule of penalties for environmental violations.³⁷⁸ In its inspection system, CITMA may enlist other resources, including non-governmental organizations to assist in these inspections,³⁷⁹ and all facilities are required to provide both information as requested and access to project sites.³⁸⁰ Upon discovery of irregularities, CITMA may issue compliance orders, set deadlines for their performance, suspend project licenses either temporarily or permanently, order the removal of wastes, require full restoration,³⁸¹ and refer violations for criminal prosecution.³⁸² In December 1999, the Cuban Council of State approved a schedule of administrative fines for environmental violations,³⁸³ and CITMA concurrently adopted a process delegating certain sanctions to local and provincial inspectors and authorities.³⁸⁴ The authority and process are now in place.

The standards for inspections and enforcement will serve in the near future as the conditions for the environmental license. As

375. See *Profile*, *supra* note 29.

376. See CITMA, *Normas de Gestion Ambiental [Standards of Environmental Management]*, July 1999, at 7 [hereinafter *Standards*].

377. See Law 81 art. 39. In fact, CITMA had promulgated a regulation for environmental inspection in 1995, setting out its enforcement goals, and had established an Environmental Inspection Directorate. See CITMA, *Profile*, *supra* note 29, at 75-76.

378. See Law 81, Second Interim Provision.

379. See *id.* at art. 45.

380. See *id.* at art. 41.

381. See *id.* at art. 43. Parties affected by these decisions may appeal through "all remedies established by law." *Id.* To date, this means the same, informal appeal process within the Ministry seen in the environmental impact assessment provisions. See *supra* note 215. This process is followed by appeal to the economic chambers of the court system. See *supra* text accompanying note 59.

382. See *id.* at art. 42.

383. See Decree-Law 200. The amount of these fines is rather modest at a maximum of \$5,000 per violation, and it is obvious that CITMA will need to resort to other sanctions and incentives to ensure compliance from multi-national corporations and other major actors. See *id.*

384. See Resolution 19/2000 de la Ministerio de Ciencia Tecnologia y Medio Ambiente (Cuba), Dec. 1999.

described earlier, in conjunction with Cuba's emerging environmental impact analysis program, these analyses will provide the basis for both resource use (e.g., set-back requirements, access roads, waste management) and pollution control (e.g., discharge volume, timing, monitoring) requirements. The new coastal and biodiversity laws will provide additional standards for conditions of resource management, as will at least one pre-existing standard for streamside vegetation in watershed protection.³⁸⁵ For pollution control management, however, Cuba remains wedded to regulation by ambient standards, never an easy trick in even the best circumstances.

As of July 1999, Cuba had adopted ambient standards for air quality, water quality and noise pollution. Ambient regulation requires at least four steps: the prescription of safe limits for pollutants in the environment; monitoring efforts to determine when these limits are exceeded; identification of the causes of violations of these limits; and remediation of these particular causes.³⁸⁶ This process was the original approach to pollution control in the United States and other countries, and it largely failed.³⁸⁷ The science, money, manpower, and political will necessary to make ambient controls work have been found lacking in virtually every program that has depended on them, including air and water quality, and hazardous waste cleanup.³⁸⁸ For these reasons, United States law, and subsequently, that of the European Union, turned to standards based on best available technology. As a result, for the sources covered by these new, technology-based standards, pollution loadings plummeted.³⁸⁹ On this record, ambient standards are not a good place for Cuba to begin its pollution control.

On the other hand, Cuba does not have an extensive, industrial point-source base to which technology standards most easily apply. Its agriculture and mining industries, which have the greatest environmental impact, present diffuse sources of pollution that are both difficult to measure and more easily controlled by management

385. See *Standards*, *supra* note 376, at *Franjas Forestales de las Zonas de Proteccion a Embalses y Cauces Fluviales* [*Forest Edge for Watershed Protection*].

386. See *Rodgers*, *supra* note 147.

387. See Oliver A. Houck, *THE CLEAN WATER ACT TOTAL MAXIMUM DAILY LOAD PROGRAMS: LAW, POLICY AND IMPLEMENTATION*, ENVTL. LAW INST. (1999) (discussing the failure of ambient standards in U.S. water quality programs).

388. See *id.* at 165.

389. See *Houck*, *supra* note 368, at 417-428.

practices (e.g., streamside vegetation, containment ponds).³⁹⁰ Nor does Cuba have sufficient resources on hand to provide treatment for municipal and domestic wastes. Best technology means little without the money to apply it.

For these reasons, Cuba's choice of a case-by-case approach to implementation of its pollution control standards is defensible. It can be seriously doubted whether Cuba will, in practice, attempt the complex correlations required to apply ambient standards to particular facility discharges. Rather, the ambient standards will in all likelihood be used as indicators of "hot spots," on which CITMA needs to focus inspection and compliance. That focus will involve the same type of "best professional judgment" seen in the early implementation of environmental law in the United States,³⁹¹ a structure for jawboning towards the best controls that a particular facility can achieve one year, and then the next, and the next. Uniform and higher-level performance standards, such as best available technology, will likely be reserved for new investments,³⁹² again as in United States law.³⁹³

In short, Cuba will be approaching the implementation of its laws with a mix of standards and jawboning familiar to observers of environmental law in any country. Guidelines for inspection and enforcement are next on the drawing board.³⁹⁴ How well they work will depend in large part, as they do everywhere, on good faith, political will and, over time, mechanisms to encourage "beyond compliance" environmental performance from the development sector. It will also depend on other aspects of Cuban governance that could either swallow them or be greatly influenced by the advance of environmental law. These circumstances include the state

390. These factors have led to the exclusion of non-point sources from the U.S. Clean Water Act permitting programs, and to the burgeoning non-point source problem now facing the United States today. See Houck, *supra* note 387, at 60-63, 85-86. The difficulty in controlling non-point sources in the United States is not the unavailability of remedies but, rather, the absence in United States law of legal mechanisms to enforce them. See *id.* at 87, 88.

391. See RODGERS, ENVIRONMENTAL LAW, Air and Water, Vol. 2, pp. 416-7, n.60 (1986) ("The terms 'best practicable judgment' or 'best professional judgment' by the Administrator are now replaced by 'best engineering judgment.'").

392. Interview with Orlando Rey Santos, CITMA (Oct. 1999) (on file with the author).

393. The Clean Air Act and Clean Water Act impose higher performance standards on new than on existing discharge sources in the United States. Compare 42 U.S.C.A. § 7411 (setting new source standards under the Clean Air Act), and 33 U.S.C. § 1316 (setting new source standards under the Clean Water Act), with 42 U.S.C. § 7401, and 33 U.S.C. § 1311 (setting existing source standards under the acts).

394. Environmental standards, monitoring, inspections and enforcement are all new to Cuba, which until the initiatives described above, had been proceeding on a largely *ad hoc* and ineffective basis. See Santos, *supra* note 90, at 18.

of the Cuban economy, its dependence on state-owned enterprises, and the rule of law.

IX. THE ECONOMY

[The special period] is a period of readjustment ... requiring maximum economizing and austerity in economic and social policies, along with many creative initiatives, a large number of which have come directly from the people. Many of the steps taken as a result of the special period fit in with the strategic lines prepared by the Revolution. Some of them have helped accelerate the policies put into effect by the country in defense of the environment.³⁹⁵

Fidel Castro, 1992

The dominant event of Cuban life in the 1990's was the crash of its economy. In 1989, the former Soviet Union and its socialist allies purchased roughly eighty-five percent of Cuba's exports, and provided a like share of imports on heavily subsidized, economically favorable terms.³⁹⁶ The subsidies alone amounted to an estimated \$500 per Cuban citizen per year.³⁹⁷ This dependency was reinforced by a United States embargo, which in the 1990's tightened to prohibit trade between the United States and Cuba and to oppose economic assistance from other countries.³⁹⁸ With the fall of the Soviet bloc, Cuba lost the major markets for its sugar and agricultural products and up to eighty percent of its imports.³⁹⁹ All categories of imports were decimated, among them oil (by seventy six percent), transportation equipment (86 percent), consumer goods (82 percent), chemicals (72 percent), machinery, spare parts and food. The gross domestic product per capita fell by more than forty-eight percent.⁴⁰⁰

395. Sergio Diaz-Briquets and Jorge F. Perez-Lopez, *The Special Period and the Environment*, in CUBA IN TRANSITION, ASCE 1995, at 283 (quoting Castro's speech to the June 1992 Earth Summit in Rio de Janeiro, Brazil).

396. See *id.* at 281.

397. See Rolando H. Castañeda and George Plinio Montalván, *The "New" Cuban Economic Model (Or Socialism with Cuban Characteristics)* in CUBA IN TRANSITION, ASCE, 1995, at 154.

398. See Ramlogan, *supra* note 48, at n.17.

399. See Raul Garrido Vasquez, *Trade and Non Trade Measures Modifying Production Patterns*, (unpublished manuscript on file with author).

400. See Diaz-Briquets and Perez-Lopez, *supra* note 395, at 283.

The economy hit rock bottom in 1994-95, from which it has begun a slow recovery.⁴⁰¹

The most obvious effect of the crash on the environment was that Cuba did not have the resources even to maintain its existing levels of pollution treatment and sanitation, much less advance them. Moreover, with an overwhelming need for currency, Cuba was in no position to reject whatever new proposal came down the pike, no matter what environmental impact it carried.

Assessing these impacts in reverse order, the fact is that no country rejects development proposals for environmental reasons. Even with the statutory authority to veto new projects in rare and valuable wetlands, the United States Environmental Protection Agency has continuously approved wetland dredge and fill projects at a rate of 10,000 individual permits a year for almost thirty years, and has vetoed such permits only a dozen times.⁴⁰² The United States Department of the Interior, with an effective veto over federal activities threatening endangered species has, over the course of thousands of consultations since 1976, found "jeopardy" to species only a handful of times, and then found project modifications to avoid it.⁴⁰³ At the state level, the State of Louisiana approves no end of environmentally harmful activity,⁴⁰⁴ and it is hardly unique in this regard. None of these observations make the case that environmental law is, thus, ineffective. Rather, they make the case that environmental law works by finding modifications and imposing conditions that allow development to go forward.⁴⁰⁵

401. See Dalia Acosta, *Economy-Cuba: No End to Crisis This Year, Say Experts*, INTER PRESS SERVICE, March 17, 2000 (quoting Armando Nova, *The Cuban Economy in the 1990s*, which estimates the Cuban gross domestic product growth for the year 2000 at 3.5 to 4.6 percent, far behind the 6.2 increase recorded in 1999). See also *Report*, *supra* note 28, at 17-18; Gordon, *supra* note 41.

402. See Houck and Rolland, *supra* note 276, at 1243, n.1 (showing that out of 10,920 individual wetland development permits processed in fiscal year 1994, only 98 were denied, a rate of less than one percent).

403. See U.S. GENERAL ACCOUNTING OFFICE, *ENDANGERED SPECIES ACT: TYPES AND NUMBER OF IMPLEMENTING ACTIONS* (1992); WORLD WILDLIFE FUND, *FOR CONSERVING LISTED SPECIES, TALK IS CHEAPER THAN WE THINK: THE CONSULTATION PROCESS UNDER THE ENDANGERED SPECIES ACT* (1992).

404. See Oliver A. Houck, *Land Loss in Coastal Louisiana*, 58 TUL. L. REV. 1, 148-150 (1983) (finding that out of several thousand permits processed for wetland dredge and fill, only four were denied).

405. See *Wetland Regulation: Four Viewpoints on Section 404*, EPAJ., Jan.-Feb. 1986:

As a result of this [404] process, the Corps of Engineers annually denies slightly more than three percent of project applications. About one-third of the permits are significantly modified from their original application, and about 14 percent of the 11,000 annual permit applications are withdrawn by applicants. The Congressional Office of Technology

Such will be the case with Cuba. CITMA, whatever its legal authority to veto a project by withholding an environmental license,⁴⁰⁶ exercises this power by conditioning results in much the same way these results are conditioned in other countries. It will win some of these battles and lose others. There is evidence, for example, that CITMA, during the time it was getting itself together, could not hold the line on requiring private sewage treatment for new hotels in Havana.⁴⁰⁷ There is more recent evidence, on the other hand, that the agency is holding firm on conditions for licenses to hotels in the coastal zone.⁴⁰⁸ This is similar to the track record for environmental law found in coastal management for the State of Mississippi⁴⁰⁹ and in air quality management for the State of Texas.⁴¹⁰ The record is also like that of Mexico, Panama and most Latin American countries that face similar, if not quite so acute, economic imperatives.⁴¹¹ Cuba may not have the option of refusing harmful projects, but refusal is rarely an option anywhere. The power to say "no," in practice, leads to less harmful projects, and this is about as far as contemporary environmental law goes.

Beyond influencing Cuban environmental decisions, Cuba's economic crises has had two quite unintended consequences that could turn out to be silver linings in the years ahead. The first has

Assessment has estimated that these denials, modifications, and withdrawals save 50,000 areas of precious wetlands every year.

Id. at 3.

406. See *supra* text accompanying notes 158-178.

407. See Interview with Monreal, *supra* note 69.

408. See Coastal Zone Workshop, Presented by CITMA in Matanzas Province, Cuba, Oct. 1998 (describing permission for hotel development on a key, but relocated to avoid mangrove wetlands).

409. See Houck and Rolland, *supra* note 276 (critiquing the Mississippi coastal plan).

410. See Scott S. Greenberger, *Environmentalists Blame Bush Policies for Smog* (visited Oct. 20, 1999) <<http://www.austin360.com/news/features/national/1020bushair.html>>.

A definitive answer to the question of whether Texas' air is cleaner or dirtier than it was in 1995 is elusive. Citing TNRCC statistics, Tucker points to a 10 percent reduction in industrial air pollution since Bush has been in office. But the Texas Air Crisis Campaign, relying heavily on data from the U.S. Environmental Protection Agency, argues that most indicators on smog and other pollutants point to an increase in air pollution in most areas of the state. EPA officials cautioned Tuesday that there are many different types of air pollution, and many different causes, and that Texas' record during the past five years is a mixed bag of improvements and setbacks.

Id.

411. See Luis R. Vera-Morales, *Environmental Issues Arising From the Mayan Gate Pier Project in Cozumel, Quinta Roo, Mexico*, in *NAFTA: LAW AND BUSINESS REVIEW OF THE AMERICAS*, Winter 1996, at 44 (describing Mexican permits for new dock and resort development within the Cozumel Marine Refuge).

been to wean Cuba of its dependency on high-polluting, Soviet-built machinery and factories and industrialized agriculture featuring large-scale irrigation schemes⁴¹² with large inputs of chemical fertilizers and pesticides.⁴¹³ The dam and irrigation binge, similar to that in the western United States, led to widespread salinization and soil problems that persist today.⁴¹⁴ By the late 1980's, the effects of chemical fertilizers were perceived to be so serious on inland and coastal water quality that, even before the crises, ninety sugar cooperatives were converted for use as organic fertilizer.⁴¹⁵ The loss of fertilizer imports increased this conversion, and Cuba has capped the application of fertilizers overall, for both economic and environmental reasons.⁴¹⁶ Between 1989 and 1992, the application of chemical fertilizers dropped from around 2.6 million to about 817 thousand hectares.⁴¹⁷ Herbicide use dropped as well, from 2.2 million to 1.7 million hectares during the same time frame.⁴¹⁸ Cuba's scientific institutes began producing biological pest controls.⁴¹⁹ Like it or not, Cuba was being forced towards sustainable agriculture.⁴²⁰

Similarly, Cuba has been separated from a transportation system that was certainly more serviceable than that which exists today, but was both energy inefficient and highly polluting. As Fidel Castro noted in 1990, before the economic fall, "[t]he Hungarian buses travel six kilometers on a gallon of fuel. They fill the city with smog. They poison everybody. We could get together some data. We could get statistics on the number of people killed by Hungarian buses."⁴²¹

With the fall, Cuba imported more than 1.2 million bicycles from China and established at least five bicycle assembly plants on the island.⁴²² In the city of Havana alone, a 1992 estimate put 500,000 bicycles in operation, serving a population of 2.1 million.⁴²³ One consequence of the collapse of automotive transportation has been massive inconvenience and delays. But another consequence is that

412. See generally Sergio Diaz-Briquets and Jorge F. Perez-Lopez, *Water, Development, and Environment in Cuba: A First Look*, in CUBA IN TRANSITION, ASCE 1995.

413. See Diaz-Briquets and Perez-Lopez, *supra* note 395, at 284.

414. See *Env. Situation*, *supra* note 17, at 10-11.

415. See Diaz-Briquets and Perez-Lopez, *supra* note 395, at 282.

416. See *id.* at 283.

417. See *id.* at 284.

418. See *id.*

419. See *supra* text accompanying notes 332-338.

420. Cuba was also being forced into materials recycling. See Holly Kaufman, *A Revolution of Necessity: Crises forces Conservation in Cuba*, EARTH ACTION NETWORK, INC., Dec. 1993.

421. Diaz-Briquets and Perez-Lopez, *supra* note 395, at 285 (quoting Fidel Castro, 1990).

422. See *id.*

423. See *id.*

one can walk the streets of Havana in safety, and in the words of one observer, "almost smog free"⁴²⁴ ... unlike Mexico City, Guatemala City, Santiago and the capital cities of virtually every auto-dependant country of Central and South America.

Beyond these immediate effects, the overall effect of Cuba's economic doldrums on environmental policy has been to buy time for that policy to take hold. While the statements of Fidel Castro that Cuba is to become a "showplace for sustainable development"⁴²⁵ ring like the rhetoric of any politician seeking world favor, the fact is Cuba has an opportunity to go farther in that direction than its neighbors who have already been overwhelmed by the automobile, disposable products, and unplanned development. The City of Havana still holds the rail beds of a trolley system that provided mass transit with the same level of access and convenience as that in New Orleans and many other North American cities a century ago. An operating rail system, built initially for the sugar trade, still runs in the countryside, networking the island. With only a few heavily-polluting electric power plants and a half-built nuclear station now abandoned, sun-rich Cuba has the opportunity to build solar, wind and other technologies into a national energy system. Havana, once the most beautiful urban landscape in the Americas, could be so once again. Or it could become Miami. As discussed earlier, the same can be said for Cuban beaches, coasts, and biological resources.

The most positive effect of Cuba's failed economy on its environmental policy is that, in large part due to this failure, there is still an environment worth saving. Unlike many of its neighbors, Cuba has the time, barely, to get an environmental policy in place before a massive wave of development that is already, literally, hitting the beach.

424. *See id.* at 286 (quoting from National Public Radio, 1995). The validity of this observation is diminishing over time, with inevitable influx of automobiles, leaded gasoline and minimal environmental controls. It is no longer "smog free," and at times not even pleasant, to walk Havana's Malecon alongside the on rushing traffic.

425. *See id.* at 283.

X. STATE-OWNED ENTERPRISES

Undoubtedly, part of the failure of the primary environmental agencies in Cuba to enforce environmental laws lies inextricably in the fact that the State is the primary polluter.⁴²⁶

Protection of the Environment in Cuba

State-owned enterprises are, of course, closely connected to Cuba's current economic crises, but they present distinct problems for environmental policy as well. In brief, state enterprises have proven to be not only unsuccessful engines for economic growth but unresponsive to environmental policy as well.

Perhaps the most conclusive lesson of world history in the twentieth century was the superiority of free market capitalism to state-owned socialism in the production of goods and services. A less well observed corollary, but equally well proven, is the lack of success any nation has had in applying environmental law to state-owned entities. As the Soviet Union emerged from its own experience with state owned industries, President Boris Yeltsin announced that it was time to tell the Russian people "openly and honestly about the scale of the ecological disaster we have inherited" and its effects on public health.⁴²⁷ Pollution exceeded standards in every respect; a quarter of Russia's drinking waters were unsafe; all of its major rivers were polluted; and the landscape was studded with dumps of pesticides and chemical waste.⁴²⁸ Even in the United States, the performance record of the federal government and of local municipal treatment systems is well below that of private industry,⁴²⁹ and the costs for cleanup of federally owned nuclear energy and weapons facilities will be counted in hundreds of billions of dollars.⁴³⁰ None of this is to say that free market capitalism pro-

426. See Ramlogan, *supra* note 49.

427. See Kathy Lally, *Russia Levels with People on Pollution*, TIMES-PICAYUNE, October 8, 1992 at A-25. For a discussion of the environmental legacy of Commission in the Soviet Union, see Katherine N. Harman-Stokes, *Community Right-to-Know in the Newly Independent States of the Former Soviet Union: Ending the Culture of Secrecy Surrounding the Environmental Crisis*, 15 VA. ENVTL. L.J. 77, 78-93 (1995).

428. See Lally, *supra* note 427.

429. See U.S. GENERAL ACCOUNTING OFFICE, WASTEWATER DISCHARGERS ARE NOT COMPLYING WITH EPA POLLUTION CONTROL PERMITS i-iii (1983) (stating that sewage treatment plants are out of compliance more than 50 percent of the time).

430. See David Armstrong, *The Nation's Dirty, Big Secret*, BOSTON SUNDAY GLOBE, Nov. 14, 1999. "Federal agencies have contaminated more than 60,000 sites across the country and the

duces better environmental results, as the history of the western world up to the late twentieth century also attests.⁴³¹ It does, however, provide the *possibility* of better results, which is much of the story of environmental law for the last thirty years.

The reasons for economic and environmental failure of state owned systems are much the same. Nobody who goes to city hall for a driver's license or a building permit comes away happy. There is little way to provide meaningful incentives for initiative and production, or even simple courtesy, in a government-owned facility. Moreover, there is little way to provide sanctions for noncompliance with economic or environmental goals. It is not easy, nor very effective, for the government to fine itself. It is even less feasible to foresee a government enjoining itself for pollution violations in a court of law. These difficulties are compounded in systems that attempt, as in Cuba, to equalize wages and guarantee employment. The problems faced by the United States in sanctioning non-functioning, municipal treatment works, or under-performing defense installations, bear witness that these problems persist in the best of families. They are institutional. They present a huge problem for Cuba.

Were Cuba mired in its past, this problem might defeat real environmental policy in Cuba all by itself. Cuba, however, is maneuvering rapidly to modernize its economy while, at the same time, retaining its political grip. As noted earlier, Cuba has liberalized its foreign investment law to allow joint ventures, licenses and even ownership of Cuban property by foreign corporations.⁴³² These ventures are bearing fruit most noticeably in tourism, mining,

cost of cleaning up the worst sites is officially expected to approach \$300 billion, nearly five times the price of similar destruction caused by private companies. " *Id.* at A1. "DOE this year told Congress it will spend at least \$147 billion to cleanup 113 sites across the country —and that the work will take another 75 years to complete. " *Id.* at A33.

431. See PRESIDENT'S COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL QUALITY (1970) (cataloguing uncontrolled environmental problems of the United States by resource and by issue). Cuban economists are aware of this risk; as one Cuban economist has written: "history has demonstrated how irrational is the use of the resources when submitted to the blind forces of the market, above all it has demonstrated its inability to protect natural resources." Interview with Vazquez, *supra* note 129. Indeed, Cuba faced two large "free-market" proposals in the 1950's that would have had devastating environmental consequences. The first was the 1954 approval of a canal bifurcating the island from the Atlantic to the Gulf, flanked by a commercial zone leased to foreign developers for 99 years. See JOSÉ CANTÓN MAVARRO, HISTORIA DE CUBA 163 (1996). The second was the Batista government's approval, at about the same time, of a plan to destroy parts of the old City of Havana facing the historic Malecon, for the construction of casinos by a Nevada-based organized crime family. Personal interview with Professor Marcel Suarez, University of Havana, in Havana (Jan. 15, 2001).

432. See *supra* text accompanying note 172.

telephone service, agriculture, cement manufacture, and transportation.⁴³³ Cuba is reforming its banking and insurance laws, over-hauling its tax system,⁴³⁴ and, as earlier noted, has created an "economic chamber" within the judiciary to settle trade and business disputes.⁴³⁵ It has opened limited opportunities for self-employment, private restaurants and bed-and-breakfast-like accommodations.⁴³⁶ Indeed, by the late 1990's, more than 200,000 individuals in the city of Havana were self-employed.⁴³⁷ Cuba is also allowing new forms of property ownership, more extensive private ownership of agricultural lands, and cooperative and farmers' markets.⁴³⁸ In 1995, more than 4,000 farm cooperatives and 86,000 private producers existed alongside Cuba's state-run agricultural enterprises, then only thirty percent of Cuba's farmland remained in government collectives, down from seventy-five percent at the beginning of the decade.⁴³⁹

State-run enterprises are also in flux. On the table for consideration are the limitation and elimination of production subsidies, and adjustments to salaries and employment rights. Water and electric utilities are scaling rates to foster conservation in lieu of consumption.⁴⁴⁰ State institutes and businesses are being given ten percent of the profits from new projects and programs that they generate; these incentives, and the competition among state entities for them, are said to have revived a light metals industry, which was all but extinct ten years ago.⁴⁴¹ Foreign investors are required to "buy Cuban," requirements that in the production of hotel elevators, have led first to Cuban assembly plants, then to parts manufacture, and now to the manufacture of the final product. Ten years ago, less than ten percent of hotel equipment was made in Cuba; that figure reaches 50 percent today.

433. See ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN, UNITED NATIONS, ECONOMIC SURVEY OF LATIN AMERICA AND THE CARIBBEAN, 1996-1997 (1998), at 197-203 [hereinafter ECONOMIC SURVEY].

434. See Gordon, *supra* note 41.

435. See *supra* text accompanying note 59.

436. See *supra* text accompanying note 255.

437. See Carmelo Mesa-Lago, *Assessing Economic and Social Performance in the Cuban Transition of the 1990s*, 26 WORLD DEVELOPMENT 5 (1998), at 867-870. This employment figure does not include the significant number of individuals engaged in, and the significant income derived from, unregulated employment and the black market. See *id.* at 870.

438. See *id.* at 865.

439. See ECONOMIC SURVEY, *supra* note 433, at 197-203.

440. See Interview with Vazquez, *supra* note 129.

441. See Interview with Monreal, *supra* note 69 (commenting on the production of Hotel equipment in Cuba).

These movements noted, Cuba still faces large dinosaurs of state-owned enterprise, none so large and intractable as agriculture. It now has 156 government-owned sugar mills, with aging equipment and few environmental controls, producing only 4 million tons of sugar a year.⁴⁴² By contrast, seven mills alone in Florida produce 1.8 million tons a year. The most obvious solution would be to close 100 plants, invest in modernizing the rest, and dedicate fifty-percent or more of the lands to different uses. The most obvious problem is that an industry that employs 400,000 workers would now employ only 85,000. The challenge here is not simply to apply best environmental management practices to sugar production, but to find new uses for nearly half the productive land in Cuba and a third of a million workers. These are issues of a very large scale.

Cuba knows that it must restructure its economy and is moving, albeit with some ambivalence, in the direction of limited, free market capitalism. This capitalism raises many of the old problems such as income inequalities, the erosion of social values, dominance by foreign banks and capital⁴⁴³ that influenced the revolution of 1956, but it seems certain that the genie is now out of the bottle. Cuba is now engaged in the same high-wire tightrope act of balancing political control with a rising free market seen with Glasnost in the Soviet Union a decade ago, as well as in China and Vietnam today.⁴⁴⁴

As capitalism evolves, the presence of private actors and private responsibility opens the door for the application of environmental law both through economic sanctions and incentives, and the ultimate trump card, injunctions. It also brings with it tremendous pressures for unsustainable development and consumption that have swept Latin America and, indeed, the world.⁴⁴⁵ Whether environ-

442. *See id.* (commenting on sugar production in Cuba).

443. *See* Mesa-Lago, *supra* note 437, at 873-74.

444. *See* Castañeda and Montalván, *supra* note 397, at 157. "The disasters that have happened in the countries of the Soviet Union . . . compared to the impressive successes of China and Vietnam, clearly indicate what we can and what cannot be done if one wants to save the revolution and socialism." *FINANCIAL TIMES*, Nov. 27, 1995, at 4 (quoting Fidel Castro from July 26, 1995).

445.

[M]any of the economic emergency measures introduced during the special period convey grave threats to the environment. Particularly alarming are those associated with the development of the mining and tourist industry. The Castro government, in its zeal to promote the development of the latter sector, appears to be repeating the same mistakes responsible for the ecological deteriorating of most insular Caribbean countries.

Diaz-Briquets and Perez-Lopez, *supra* note 395, at 290 (quoting National Public Radio, 1995). These same pressures, riding a wave of "free market capitalism," have led to widespread

mental law can rise to the occasion is the question it confronts everywhere, and has nowhere been answered in full.

XI. POLITICS AND LAW

It is necessary to implement the exercise of the right to a healthy environment that guides the Law, and of other rights associated with this, as the right to information, and the right to participate in decision-making processes. It implies a necessity to revise some legal texts . . . and it is worth noting that in other countries the solution has risen to the constitutional level, by means of the introduction of certain citizens' actions in the Fundamental Law.⁴⁴⁶

Orlando Rey Santos, CITMA

Environmental law confronts politics every day of its life. No country is free from political influence over environmental decision-making, and even the United States has seen public employees censured, transferred and fired outright for having taken an "environmental" stand.⁴⁴⁷ Members of the United States Congress regularly pressure environmental agency personnel with budget and personal reprisals for infringing on pet projects within their districts,⁴⁴⁸ and for much of the 1980's both the President and his cabinet openly opposed the very environmental laws that, under the Constitution and numerous federal statutes,⁴⁴⁹ they were charged with carrying out. The interface between politics and environmental protection is even more precarious in Latin America, where environmental leaders have been physically harassed, charged with treason and even killed,⁴⁵⁰ and where the employment of someone opposing a government-favored project may be equally short-lived.

looting of natural resources in the former Soviet Union. *See Morning Edition* (PBS broadcast, May 12, 2000).

446. *See* Interview with Orlando Rey Santos, *supra* note 392.

447. *See* Houck, *supra* note 290, at 882, n.40 (documenting hostility towards, intimidation of, and lawlessness against federal resource managers).

448. *See id.*

449. For a discussion of the role of politics in U.S. environmental policy under the Reagan administration, see LASH ET AL., *supra* note 42. *See also* TODD WILKINSON, *SCIENCE UNDER SIEGE* (1998) (describing more recent political undermining of federal conservation programs).

450. *See* Steven Green, *Venezuela Persecutes Activists*, MARMAM, Feb. 9, 1995 (describing extradition hearing for Venezuelan biologist for treason, for having videotaped Venezuelan fisherman killing dolphin). *See also* Chico Mendez, *Una Lucha En Defense De La Vida*, 2 REVISTA

It is not sufficient, therefore, to simply note that politics will play a strong role in Cuban environmental policy, because this is true in every country. What is different in Cuba is the monolithic strength of politics, coupled with the shortage of those elements, found in at least rudimentary form elsewhere in the Americas, that serve to keep outright and unlawful political influence in check. The most important of these controlling elements include free press, multi-party politics, nongovernmental organizations, and a rule of law.

In Cuba, such institutional safeguards are limited by a philosophy at the core of the Cuban Constitution that the government *is* the people, its organs are those of the people, and thus other institutions are superfluous.⁴⁵¹ There is no need to check-and-balance a system that is of the people and working only for the public good. The concomitant limitations, particularly on press and politics, are reinforced by Cuba's perception that it is on the receiving end of an economic, political, and, at times, armed war from the United States, legitimizing the suppression of dissent.⁴⁵² As naïve as Cuba's view of governance may appear in the abstract, it certainly finds parallels in the positions of agency heads and industry magnates in all countries, convinced that they know what is best for the nation and that no further inquiry is necessary. Environmental law challenges that mindset frontally, from its requirements for environmental impact analysis on up the chain. The question in Cuba is the extent to which environmental law will affect its system of governance, already reacting to the strains of free market initiatives and the uncertainties of a post-Fidel Castro world.

Perhaps the first notion to clarify is the extent of the Cuban monolith. In political life the authority of the Communist Party is apparently total, but government life proceeds in much the same fractious, internecine, argumentative and compromising way that characterizes all governments. Where enactments of environmental law are concerned, the best evidence is that interactions among government personnel and institutions are freewheeling and produce significant changes in original proposals.⁴⁵³ Ultimately, confrontations over major policy issues or particularly controversial

MEDIO AMBIENTE Y TRABAJO, Mar. 1999 (honoring the memory of Chico Mendez, who fought for agrarian and environmental reform, and who was assassinated on December 22, 1998).

451. See D. EVENSON, *supra* note 44, at 14-40.

452. See *El Imperioalismo Norteamericano Bombardea a Cuba*, PRENSA OBRERA, Nov. 6, 2000 (describing U.S. attack on Cuban policies and government).

453. See Interview with Orlando Rey Santos, *supra* note 392 (describing the lengthy negotiation process preceding the enactment of Law 81).

permits may indeed be settled by the Communist Party and outside of the government box.⁴⁵⁴ However, if the lawmaking and implementation record described earlier in this article is any measure, there is a considerable free-fire zone within Cuban government on environmental decision-making. With this understanding, the elements of society and governance important to, and most likely to be affected by, Cuban environmental law are non-governmental organizations and administrative and public law.

A. *Non-governmental Organizations*

At least three kinds of non-governmental organizations are found in Cuba. The first to emerge, from the outset of the revolutionary government, were the mass organizations of popular power: the Organization of Cuban Trade Unions, the Federation of Cuban Women, and National Association of Small Farmers, separate organizations for students at the secondary school and university level, and local Committees for the Defense of the Revolution (CDRs).⁴⁵⁵ These organizations were conceived of as a way of infusing public opinion into decision making, controlled by a close but informal relationship with the Communist Party. As noted earlier, they were explicitly authorized in the Constitution of 1976 and were granted significant rights, including that of proposing and reviewing proposed legislation.⁴⁵⁶ Membership in these organizations, while not mandatory, may have significant personal and professional consequences.⁴⁵⁷ The organizations with the most direct relationship to the environment are the CDRs, which have evolved from an original role in civil defense-cum-loyalty police to include significant social work at the local level, such as literacy campaigns, public health and immunization, and environmental education and reforestation.⁴⁵⁸ While the connection of these groups to government precludes any expectation of their becoming an independent voice for environmental protection, they do constitute vehicles for environmental education and the implementation of government environmental policy at the grassroots level.

454. See *infra* text accompanying note 466.

455. See D. EVENSON, *supra* note 44, at 23; Bethell, *supra* note 4, at 105-6, 127-29.

456. See D. EVENSON, *supra* note 44, at 23.

457. "Membership in the mass organizations in the 1980's had become a prerequisite for a successful life in Cuba. Responsible positions were open only to those who were integrated into the revolutionary process by their membership in one or more such organizations." Bethell, *supra* note 4, at 128.

458. See *id.* at 127. See also *Workshop*, *supra* note 11, at 38-39 (describing a range of CDR environmental activities, primarily with local communities in rural areas).

A second set of groups is rooted in Cuba's deep tradition in the sciences and the association of these scientists in government research centers and institutes across the country. Several of these organizations, such as the Cuban Speleological Society, long predated the revolution and others, like the National Academy of Sciences, were launched by revolutionary leaders from academia.⁴⁵⁹ They operate with official sanction, but on their own initiatives and resources. The Cuban Zoological Society, by way of illustration, has its own budget, elects its own officers and directors, sets its own program, and holds well-attended, annual symposia on a wide range of environmental issues, some highly technical, others involving research with findings critical of specific government proposals and programs.⁴⁶⁰ The orientation of at least some of these societies is frankly environmental. In fact, the motto of the Cuban Zoological Society is "[t]o preserve the collections of natural history, an obligation for future generations."⁴⁶¹ In the aggregate, these societies provide a separate base of highly informed citizens involved in environmental issues and organized with at least functional independence from the Cuban government.

Environmental citizen groups form a last category of non-governmental organizations and, in most regards, resemble their counterparts in other countries.⁴⁶² Social organizations of this nature

459. See *supra* text accompanying note 2. Additional scientific societies include the Thomas Roig Scientific Society, The Felix Varela Center, Cuba-Solar, the Society of Ocean-Sciences, the Geography Society, and the Meteorology Society. See Moreno and Santos, *supra* note 120, at 26.

460. See INSTITUTE OF ECOLOGY AND SYSTEMATICS, CITMA, FOURTH SYMPOSIUM ON ZOOLOGY (Nov. 1997).

461. See *id.*

462. For a discussion of Cuban non-governmental organizations generally, albeit circa 1994, see Gillian Gunn, *Cuba's NGOs: Government Puppets or Seeds of Civil Society?*, GEORGETOWN UNIVERSITY CARIBBEAN PROJECT (Feb. 1995), <<http://sfswww.georgetown.edu/sfs/programs/clas/Caribe/bpt.htm>> (concluding that Cuban NGOs were both puppets and seeds, and quite different in their operations and degree of independence). As of 1994, approximately 2,200 NGOs were registered in Cuba, ranging from the mass organizations of popular power, to the Union of Writers and Artists of Cuba, to ProNaturaleza. Cuban Law 54, promulgated in 1985 on "Associations and their Regulation" requires NGOs to register a statement of goals and organizational structure; list the names of at least thirty members and the names and addresses of its leadership; demonstrate that it will be self-financing and the absence of an NGO with the same purpose; and obtain the sponsorship of a "state reference institution," with the right to attend meetings and impact the organization's records. *Id.* at 3, 4. Apparently, these requirements are implemented with considerable variability. *Id.* at 4. Further, of the more than two-dozen NGO's interviewed in the course of the referenced study, "none had ever had their board meetings attended or their books visited by a state reference institution." *Id.* at 5. Nevertheless, the potential for state intrusion is far greater in Cuba than that by, for example, the filing and information requirements of the United States Internal Revenue Service for charitable organizations under 26 U.S.C § 501(c)(3). See *id.*

are recognized by the constitutional revisions of 1992,⁴⁶³ which granted the rights to their own budgets, property and management.⁴⁶⁴ These groups are also exempted from income taxes and are authorized to engage in such mission-related businesses as the sale of periodicals, books and merchandise.⁴⁶⁵ Two of the largest such organizations are ProNaturaleza and the Foundation for Nature and Man, although other, smaller and often issue-specific environmental groups are emerging as well. ProNaturaleza claims 5,000 members in Cuba, with chapters in each of the 14 provinces.⁴⁶⁶ It is the closest organization in Cuba to an environmental watchdog, lobbying on legislation, organizing action-oriented conferences, reporting violations of laws, and at times, directly opposing government proposals, with some reported success.⁴⁶⁷ The Foundation for Nature and Man is not a membership organization in the same sense; it is rather an organization with some twenty-six employees located in Havana and six regional cities dedicated to specific environmental projects and to the publication of a national newsletter.⁴⁶⁸ The Foundation's projects include urban gardens and greenspace, watershed planning, improved agricultural practices and action-alerts on current issues. Originally funded from the estate of Antonio Nunez, the Foundation receives additional revenue from publications and from foundations in Canada, Italy and other countries.

In sum, Cuba has a nucleus of non-governmental organizations, with variable independence from politics and the Communist Party, available to perform the role of outside expert and critic that has

463. See CUBAN CONST., *supra* note. 64

464. See CUBAN CONST., *supra* note 64, Art. 22.

465. See Gunn, *supra* note 462.

466. Interview with Armando Fernandez, Investigator, Foundation for Nature and Man (March 22, 2000); interview with Liliana Nunez, Vice President, Foundation for Nature and Man (June 2000). The majority of Pro-Naturaleza's numbers and of its leadership are employees of CITMA and its associated institutes and research stations; this employment places Pro-Naturaleza in a "whistleblower" role on projects of concern to them and to the agency, somewhat as the Association of Forest Service Employees for Environmental Ethics and similar groups operate within federal agencies in the United States. Access to the web has made this "whistleblowing" easier, as it can be done anonymously. Interview with Dalia Acosta, Reporter, Spanish News Service, Havana, Cuba (June 2000).

467. See Evenson, *supra* note 108, at text accompanying note 201-4 (describing ProNaturaleza's success in opposing hydro-electric development). See also Gunn, *supra* note 462, at 9 (describing ProNaturaleza success in resolving a case of illegal woodcutting by arranging for alternate fuel from the local government); Interview with Teresita Telleria, Vice President, Pro-Naturaleza (June 2000) (describing successful opposition to a proposed coastal development).

468. See Interview with Armando Fernandez, *supra* note 466. See also Interview with Liliana Nunez, *supra* note 466.

emerged, worldwide, as an indispensable ingredient to successful environmental policy. One cannot overstate the importance of these groups in public education; environmental permitting, monitoring and compliance; dialogue with government and industry; media information; and daily vigilance. One of CITMA's challenges will be to break itself from the insular traditions of a bureaucracy and develop these groups as active constituencies, even at the pain of their criticism and dissatisfaction with the pace of progress and with particular agency decisions.⁴⁶⁹ This same challenge is of course faced by environmental agencies in Louisiana and elsewhere, not always with good humor or success.

B. Administrative and Public Law

In fact, the recognition of a right to a healthy environment, opens the door to legal actions for environmental harm, even without the plaintiff having received direct injury to his person or property, including the undertaking of collective actions.⁴⁷⁰

Orlando Rey, CITMA

Consider the implications of this statement. If there is a challenge greater than involving citizens and the general public in environmental decision-making, it is the empowerment of these groups in law. The world of 2000 is full of vigorous-sounding environmental laws, many of which are not put into practice in more than a perfunctory manner. The great innovation of environmental law in the United States was not only its substance, which by now has been mirrored in most countries, but also its process: public access to information, public participation in decision-making, and judicial review. If the relative strength of environmental organizations is one good indicator of the success of environmental policy in any given jurisdiction, then the presence or absence of these administrative processes is an equally good one.

469. For an example of CITMA's cautious approach to independent citizen organizations, see Statement of Orlando Rey Santos, Director of Environmental Policy Directorate, CITMA, *supra* note 217 (placing primary reliance on the organizations of popular power for public participation in the environmental impact review process).

470. See *Profile*, *supra* note 29, at 46.

Day-to-day environmental decision making is administrative: the scope and adequacy of environmental analysis, for example, emissions standards for a discharge permit, observance of a set-back line from coastal vegetation, or access to a biological reserve. These are not decisions of legislators but of agency employees who are under heavy pressure from applicants, other agencies and at times their own superiors to expedite the approvals, downplay adverse impacts, and cut a deal. They operate under the shadow of knowing, further, that any decision adverse to a private interest can be, and probably will be, administratively and judicially appealed. Bad environmental decisions are not made by bad people; they are made by people seeking to appease their superiors and stay out of trouble.

One successful way to offset these otherwise overwhelming pressures has been to empower environmentalists as a counter-force. This empowerment begins with legal requirements for public notice, information, and genuine participation in decision-making. It ends with the most sensitive subject of all: judicial review.

The process is new to Cuba. The Cuban Constitution, as noted earlier, requires the state to protect the environment and contribute to the "achievement of sustainable development," and declares it to be the duty of citizens to contribute to this protection. Article 4 of Law 81 interprets sustainable development to mean that the state "establish and facilitate the necessary means and guarantees to protect the right to a sound environment in an adequate and timely manner";⁴⁷¹ that these obligations "constitute a responsibility of all national and local state agencies and bodies within their jurisdiction";⁴⁷² that "every person must have adequate access, in conformance with established legal requirements, to all available information in the possession of state agencies and bodies regarding the environment";⁴⁷³ that "public knowledge of environmental actions and decisions and consultation with the public will be assured in the best manner possible, but in every case must occur";⁴⁷⁴ and that "*every natural or legal person, as authorized by law, must have adequate and sufficient access to administrative or judicial means to demand compliance with this Law,*" and with subsequent, implementing laws.⁴⁷⁵

471. See CUBAN CONST., *supra* note 64, art. XXVII.

472. Law 81 art. 4(f).

473. *Id.* at (e).

474. *Id.* at (k).

475. *Id.* at (l) (emphasis added).

On their face, the scope and lack of ambiguity in these provisions would be impressive for any law. For Cuba, the right to all governmental environmental information (and nearly all environmental information in Cuba is governmental); the right to know of government actions in advance and to be consulted on them; and most of all, the right to access administrative and judicial bodies to demand compliance with law is revolutionary.⁴⁷⁶ If, and this is a huge "if," it can be enforced.

The inquiry now reaches the unknown: the extent to which Law 81 and its daughter laws will open up the administrative and judicial process to review of agency decision making. The first part of this inquiry is whether Cuban civil courts have the jurisdiction to review the lawfulness of government environmental decisions. The Cuban Code of Civil Procedure,⁴⁷⁷ similar to the codes of many countries and the Administrative Procedure Act of the United States,⁴⁷⁸ expressly provides for judicial review of actions that are final and when administrative remedies have been exhausted. The Code proceeds to list certain subjects as exempt from judicial review, but environmental issues, — perhaps, felicitously, because they post-date the Code — are not listed.⁴⁷⁹ A literal reading of the Code, then, would recognize a right of judicial review.

The second half of the inquiry is to understand exactly who may exercise this right, the question of "standing to sue." Traditionally, an industry denied an environmental license or an individual whose property was harmed by its issuance would have the requisite interest. Not so certain are the interests of those individuals and organizations that seek to prevent environmental injury in the future, from an allegedly unlawful government act.

The scope and nature of the injury necessary for standing to sue is, in all countries, one of the hottest topics in administrative environmental law. It can be said with some confidence, however, that from jurisprudence historically narrow in confining these interests to those suffering financial or physical injury, both Latin American and European civil code jurisdictions are trending rapidly towards the acceptance of expanded standing, in some cases more expansive

476. For a discussion of Cuba's resistance to the concept of judicial review, although more open to the expansion of public participation, see D.EVENSON, *supra* note 44, at 79. For a discussion of public participation in Cuba through complaints about government conduct to local-elected deputies, see Bethell, *supra* note 4, at 134.

477. See Law of Civil, Administrative and Labor Procedure, art. 654 (on file with author).

478. See Administrative Procedure Act, ch. 324, 60 Stat. 237 (1946) (current provisions in Revised Title at 5 U.S.C. §§ 551-59, 701-06, and other sections).

479. See Law, *supra* note 477 at art. 657.

even than that found in the United States,⁴⁸⁰ and are allowing judicial review for prospective, environmental injury on the part of individuals and environmental organizations.⁴⁸¹ In 1998, the Chilean Supreme Court, on behalf of several individual legislators who represented districts remote from the project site, enjoined a massive logging project for failures in the licensing process.⁴⁸² That same year the Supreme Court of Greece allowed the Hellenic Ornithological Society to challenge an environmental impact analysis for one of the largest public works projects in the country.⁴⁸³ In 1999, the Supreme Court of Russia granted review of a citizen suit and revoked an oil lease for failure to conduct the required environmental impact analysis at all.⁴⁸⁴

The Cuban Law of the Environment confers primary environmental law enforcement responsibilities on CITMA, in conjunction with the Attorney General and related ministries.⁴⁸⁵ In Article 71, it further confers on CITMA, the Attorney General, or any other person or entity that has "personally suffered" damage to claim both money damages and restoration for environmental harm.⁴⁸⁶ The same article provides, however, that only the first two entities, CITMA and the fiscal, may "act in defense of the social interest in environmental protection."⁴⁸⁷ It is unclear whether Article 71's limitations on standing by private individuals will be interpreted as only limiting claims enumerated in Article 71, such as those for money damages

480 See leading U.S. cases on standing to sue for environmental groups, including *Sierra Club v. Morton*, 405 U.S. 727 (1972); *Friends of the Earth v. Laidlaw*, 528 U.S. 167 (2000).

481 See NAVIA, *supra* note 103 at 94-143 (describing rise of citizen enforcement in Latin America); see also *Her Majesty's Inspectorate of Pollution and Ministry of Agriculture, Fisheries and Food v. Greenpeace, Ltd.*, 4 All Eng. 321, 349-51 (1994) (Ottan, J.) (granting environmental organization study to challenge radioactive waste discharge); Douglas L. Parker, *Standing to Litigate Abstract Social Interests in the United States and Italy: Reexamining Injury in Fact*, 33 COLUM. J. TRANSNAT'L L. 259, 284-98 (discussing Italian law provisions granting standing for environmental groups).

482. See C. Suprema, Rol No. 4.658-96, *Gazeta Jurídica* (Mar. 19, 1997) (injunction ordered by Chile Supreme Court). See also "Kattan," *Juzgado N° 2 105 E.D.* 246 (1983) (federal court of Argentina) (both cases on file with author).

483. See *Hellenic Ornithological Society v. Minister of National Economy and Tovista (Acheloo)*. No. 2759 (Greece 1994).

484. See *Russia Today* (National Public Radio broadcast, May 12, 2000).

485. See Law 81 at Art. 12.

486. See *id.* at art. 71. An earlier draft of Law 81 also provided expressly for class actions and for joint liability on behalf of private parties; these provisions were dropped from the final version. See F. Evenson, *supra* note 80, at text accompanying n.270, 1.

487. *Id.* The earlier draft of Law 81 also provided for private actions for plaintiffs exercising their rights to a healthy environment; this provision too, was deleted in the final law. See F. Evenson, *supra* note 80, at text accompanying n.269. It is unclear from the description whether the deleted provision referred to private, compensatory or to public, non-economic claims.

and restoration of environmental harm already done, or whether they will limit relief for harm *anticipated* from governmental actions such as inadequate impact analyses, permits that exceed regulatory requirements, or violations of public law. One way to read Article 71 is that it intends to exclude this relief for private plaintiffs. An opposite interpretation is that Article 71, by its very title, speaks only to civil liability, that is to say to damages and restoration, and not to review of prospective harm. This latter interpretation is supported by the unambiguous statement in Article 4, that every person "must have adequate access to administrative *and judicial* means" to demand compliance with this and other environmental laws.⁴⁸⁸ Under this view, Law 81 limits private monetary relief for past harm, but Law 81 does not limit, indeed it guarantees, judicial review to enforce compliance with law.

The resolution to this important question may be years in the making. It was certainly years in the making in the United States, which only opened its courts to citizen enforcement of public law in the 1960's,⁴⁸⁹ and to expanded citizen standing in the 1970's.⁴⁹⁰ As discussed earlier, CITMA has seen fit to provide administrative review of its environmental impact and licensing decisions within the agency on behalf of the applicant, but has yet to confer the same right on citizen groups;⁴⁹¹ it has further deferred its required regulations for public participation to later rulemaking.⁴⁹² On the other hand, neither door is closed and the Director of CITMA's Office of Environmental Policy is on record as recognizing the need to implement the exercise of these public rights.⁴⁹³ Meanwhile, as also discussed earlier, Cuba has created special tribunals to provide judicial review for economic and environmental cases.⁴⁹⁴ Whether and how CITMA goes forward to provide administrative review for public organizations, and whether the courts will accept review and participation in appeals from these organizations, will go a long way to test Cuba's commitment to the implementation of its new

488. *See id.* at art. 4(l).

489. *See* Administrative Procedure Act, *supra* note 478.

490. *See* Scenic Hudson Preservation Conference v. Federal Power Comm'n, 354 F.2d 608 (2d Cir. 1965) (establishing a public right of standing), *cert. denied*, 385 U.S. 941 (1966).

491. *See supra* text accompanying notes 216-7.

492. *See supra* text accompanying notes 212-7.

493. *See supra* text accompanying note 446.

494. *See supra* text accompanying note 59.

environmental laws, and to separate Cuba from the flock of countries in which these rights are not available.⁴⁹⁵

As important as these developments are to the achievement of Cuba's environmental policy, they could have equally significant effects on Cuban governance as well. Many governments view public participation as a threat, limit access to environmental information, and provide little or no judicial recourse. One might have thought that Cuba would lead this pack. It may not, and the shape of Cuban decision-making will change to the extent it adopts more expansive concepts of administrative environmental law. There is still the Party, but now there are also the courts and the seeds of a rule of law. Though it has not happened yet, Law 81 and its daughters open the door to these potentially large consequences.

XII. CONCLUSION

The simple truth is that a free flow of American goods is more likely to rout communism in Cuba than the same strategy in China The island is so small and so close that Castro's regime would be unlikely to withstand a full frontal assault from American culture and consumer goods. Mickey Mouse and McDonald's are among the most powerful weapons in America's arsenal. Let's send them in.⁴⁹⁶

Cynthia Tucker

Cuba has made a commitment to environmental protection. It has begun to effectuate this commitment through law. The laws are incomplete and the mechanisms to implement them more so, but they are irrefutably under way.

495. To be sure, expanded rights of public participation and judicial review are no guarantee of decisions favoring environmental protection or the sustainable use of natural resources. The general public in Cuba, much as the general public in Louisiana, for example, may care little about environmental protection or sustainability. Judicial review may, too, turn hostile to environmental protection even when this protection is mandated by public laws. See Oliver A. Houck, *Environmental Law and the General Welfare*, 16 PACE L. REV. 1 (1998) (describing "deconstruction" of environmental law by recent federal court decisions). These results will be all the more likely in countries with no tradition of citizen participation or an independent judiciary, or those that offer administrative and judicial review exclusively to economic interests. Unless the scales of public law are balanced, they do not work. See *id.*

496. Cynthia Tucker, *Mickey Mouse Will Bring Castro Down*, THE TIMES PICAYUNE, June 1, 2000, at B-7.

The emerging laws may not comport with United States standards, but the incredible geometry of the Clean Air Act and the high-powered warfare conducted over proposed environmental regulation in the United States and Europe are not necessarily the Gold Standard for all nations to follow. Further, it may be just a little presumptuous for the United States, whose practices of resource consumption and waste lead the world, to sit in judgment on the efforts of any other country towards sustainable development. Cuba's laws may fail, but they may also lead to practices that have a far more balanced impact on the earth than those of their neighbors. It is too early to say.

What may be surprising, or even be believed, is that the Cuban government would undertake such a journey in such severely difficult economic times. A large and experienced cadre of scientists in Cuba has been driving in this direction for decades, and it has caught the imagination of the Cuban leadership.

The movement may prove to be transitory, though the idea of caring for the land goes back at least to the days of Jose Marti. The revolutionary government of 1959 and its mega-programs paid little heed to the environment, but neither did the programs of any country until very recent years, and the state-owned system of Cuban enterprise has been changing rapidly since 1992. The movement may prove to be illusory, as are the environmental programs of many countries, but as of this date there is no reason yet to conclude that it will. The best evidence indicates that the responsible agency, CITMA, is in there trying, accompanied by a fair measure of political support, while other ministries and institutions are coming on board.

The immediate next question is the implementation of this new body of law, which will require more law and more changes than perhaps were originally contemplated or bargained for. These measures include enforcement and incentives, as well as two, time-proven ingredients for effective environmental policy: public participation and independent judicial review. If, and as, they emerge, these measures could create new modes of decision-making and a rule of law. This outcome is by no means assured, but it is a very real possibility.

In the future, and perhaps even the near future, Mickey Mouse is sure to arrive, bringing with him the aptly predicted "full frontal assault" of American culture and consumer goods. At that point, the presence of a functioning system of environmental protection supported by an involved public and effective public law will be critical. Leadership, funding and political support for CITMA will be

no more a given in the future Cuba than they are for the Environmental Protection Agency in the United States. The money for exploiting anything of value in any fashion will be enormous. However far away that day is, Cuba has just that much time to get its environmental act together, and little more.

THE TRI-STATE COMPACT: FALLING WATERS AND FADING OPPORTUNITIES

DUSTIN S. STEPHENSON[?]

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INTRODUCTION

In today's rapidly expanding global marketplace, water is indeed a precious commodity. Water is absolutely critical in many phases of life; it provides life to crops, an ecosystem to aquatic life, an air purification system, it satisfies people's needs for domestic use, drinking, recreation, and beauty.¹ However, for this primary natural resource to be useful, it must be available to people in sufficient quantity and quality, be located at the right place at the right time, and be cost efficient.² In the United States, water rights disputes are common in the arid West, where the supply of water is simply not plentiful when compared to the vast area of land; in fact, the western water rights doctrine dates back to the Gold Rush days of the mid 1800's.³ The Southeastern United States, however, with its humid climate, lush greenery, and plentiful rainfall, has always had an abundant

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1. See DAVID H. GETCHES, *WATER LAW IN A NUTSHELL* 1 (2d ed. 1990).

2. See WILLIAM GOLDFARB, *WATER LAW* 8 (2d ed. 1988).

3. See Larry Copeland, *Water Wars Loom Amid Southern Boom*, USA TODAY, Nov. 24, 1998, at 5A.

water supply for its needs.⁴ Therefore, the region has been mostly immune from the 'water wars' that have plagued the west. With such a bounty of water, the Southeast seems an unlikely locale for a water war. But the sprawling development and booming industry in and around the Atlanta, Georgia, area has sparked a three state dispute between Alabama, Florida, and Georgia over water rights in the Chattahoochee River.⁵ Indeed, a water war has begun in the Southeast, and the first battle is over the "Hootch."⁶

I. THE DISPUTE: BACKGROUND AND HISTORY

A. *The Chattahoochee River as a Water Resource*

The Chattahoochee River Basin is one of the primary water resources of the Southeast. It begins with the headwaters of the Chattahoochee River in the north Georgia mountains and flows southwesterly over 400 miles where it intersects with the Flint River near the Alabama and Florida borders. There it becomes the Apalachicola River, which continues to run south through the Florida panhandle before emptying into the Gulf of Mexico at Apalachicola Bay.⁷ The river's flow passes the burgeoning city of Atlanta and continues on to form the southern half of the Georgia-Alabama border. The water of the Chattahoochee River is critically important to communities throughout the region as a primary source of drinking water, hydroelectric power, and local impoundment, as well as industrial transportation, recreation and many other uses.⁸

The Chattahoochee is especially important to north Georgia, specifically, the Atlanta area. As the river runs southwest, it feeds Lake Sidney Lanier, located just outside of Atlanta. Lake Lanier is the largest source of water for the metro-Atlanta area, providing approximately 70% of the city's drinking water.⁹ Atlanta depends heavily upon the Chattahoochee for its very survival. However, Atlanta's geographical location creates a problem of its own. Since the city is located near the headwaters of the Chattahoochee, the natural flow is smaller there; this is unfortunate because the greatest

4. *See id.*

5. *See id.*

6. Locals often refer to the Chattahoochee River simply as the "Hootch." *See id.*

7. *See* GUY J. KELNHOFER, JR., METROPOLITAN PLANNING AND RIVER BASIN PLANNING: SOME INTERRELATIONSHIPS 30 (1968).

8. *See id.* at 31-43.

9. *See River Rivalry*, THE ECONOMIST, Mar. 30, 1991, at 26.

demand as a water resource is placed upon the river before it can really accommodate it.¹⁰

Furthermore, a remarkable 45% of Georgia's entire population is concentrated in the Atlanta area, which only intensifies the pressure put on the Chattahoochee as a water resource.¹¹ With a population of approximately 3.5 million residents and the boom of industrial and residential development in and around the Atlanta area, there is an incredible need for water.¹² Also, along with such rampant growth comes the corresponding increase in population. According to 1990 estimates, Atlanta should expect approximately 800,000 new residents as people move to the city over the course of the next twenty years.¹³ As of 1997, the population was already approaching the year 2000 estimates, so clearly the growth is occurring faster than expected.¹⁴ Atlanta's industrial growth and urban sprawl have put a great deal of strain upon the Chattahoochee River as a water resource because of the enormous amounts of water required to sustain such a localized boom.

Additionally, downstream communities in both Alabama and Florida need the Chattahoochee's water. Southeastern Alabama relies upon the Chattahoochee for much of its water supply for drinking, industry, agriculture, and recreation.¹⁵ This water supply is critical for Alabama to sustain its own future growth, albeit at a much slower pace than Atlanta's. On the other hand, Florida relies upon the waters of the Chattahoochee to fertilize the rich oyster beds found in Apalachicola Bay.¹⁶ Florida has a \$70 million per year oyster industry,¹⁷ 90% of which comes from Apalachicola Bay.¹⁸ The fresh water from the Chattahoochee (which becomes the

10. See Melanie Peeples, *NPR's Morning Edition: Battle for Water Rights* (NPR radio broadcast, Oct. 9, 1998), available in 1998 WL 3309037.

11. See *id.* Additionally, "[t]he Chattahoochee is the smallest river in the country serving as the primary water source for a major metropolitan area." Jay Bookman, *My Opinion: Water, Water Everywhere; But is it Pure?*, ATLANTA J. & CONST., Apr. 12, 1999, at E3.

12. See Peeples, *supra* note 10.

13. See Greg Jaffe, *Water Deal May Settle Old Dispute*, WALL ST. J., Sept. 11, 1996, at F1.

14. See Charles Seabrook, *Georgia's Growth Muddies Water Sharing Pact - State's Partners Irked: Population Estimates for Allocating Rivers' Largess are Already Exceeded*, ATLANTA J. & CONST., Apr. 25, 1998, at D5. In fact, "[m]etro Atlanta is the fastest growing metro region in the country." Bookman, *supra* note 11.

15. See Jim Nesbitt, *Water Wars Move South, East as Cities Gulp Supplies*, NEW ORLEANS TIMES-PICAYUNE, May 24, 1998, at A25.

16. See *id.*

17. See Jonathan Kerr, *Southeastern States form Interstate Compact to Resolve Water Disputes*, WEST'S LEGAL NEWS, Sept. 18, 1996, available in 1996 WL 524406.

18. See Peeples, *supra* note 10. Apalachicola Bay also comprises about 10% of the national oyster industry. See *id.*

Apalachicola River in Florida) is necessary to flush crucial nutrients from the surrounding Florida wetlands into the river and bay, which stabilizes the salinity of the bay water at the optimum level for oyster bed cultivation.¹⁹ The fresh water also helps to nurture many other juvenile seafood species found in the bay that are important to Florida's economy, such as several species of fin fish, blue crab, shrimp, and scallops.²⁰ Finally, of difficult measurability, are demands on the Chattahoochee to furnish the fresh water needs of both South Georgia farmers and the planned development of thousands of acres of pulp wood forests in the northwest Florida panhandle, just north of Apalachicola Bay.²¹ With Georgia, Alabama, and Florida all placing significant demands upon the same water resource, the Chattahoochee River is simply becoming overburdened. If all three states intend to continue using the Chattahoochee as a fresh water resource in the years to come, some limits may need to be set to ensure its future sustainability.

B. History of the Water Rights Dispute

The dispute between Alabama, Florida, and Georgia over the Chattahoochee River began in the late 1980's when Alabama realized the upstream demands placed on the river by Georgia's robust growth could detrimentally affect Alabama's own ability to use the Chattahoochee as a source of fresh water. The problems first arose in 1986, when Georgia weathered an extreme drought.²² The condition forced Atlanta to implement water rationing; it dropped the flow of the Chattahoochee to a level that threatened barge traffic; and it dropped the level of Lake Lanier so low that its dam could not produce normal levels of electricity for the city of Atlanta.²³ In 1989, to negate the effects of the drought on Atlanta's fresh water needs, to prepare for the influx of an estimated 800,000 new residents over the next twenty years, and to better protect itself from future droughts, the city of Atlanta and the U.S. Army Corps of Engineers announced a plan to withdraw an additional 529 million gallons of water *per day* from the Chattahoochee River as it flowed through Lake Lanier.²⁴

19. See Nesbitt, *supra* note 15.

20. See Peebles, *supra* note 10.

21. See Nesbitt, *supra* note 15.

22. See Charles Seabrook, *Atlanta to Get More Water From Lanier*, ATLANTA J. & CONST., June 10, 1988, at A1.

23. See *River Rivalry*, *supra* note 9; Charles Seabrook, *Water Wars Take Shape Between Ga., Neighbors*, ATLANTA J. & CONST., Nov. 27, 1989, at A1.

24. See Jaffe, *supra* note 13; *River Rivalry*, *supra* note 9.

This withdrawal amounted to a 50% increase over then current withdrawal levels.²⁵ Additionally, the plan provided for the creation of several new reservoirs that would serve as water supplies for north Atlanta suburbs and other areas throughout north Georgia.²⁶

The response from Alabama was not long in coming. In 1990, Alabama filed suit in federal court against the U.S. Army Corps of Engineers seeking an injunction to prevent the implementation of Atlanta's withdrawal plan.²⁷ Shortly thereafter, Florida joined the suit to protect its own interest in maintaining the flows of the Chattahoochee.²⁸ Alabama and Florida officials claimed that the Corps' plan threatened the water supply necessary to ensure their own expected growth. Specifically, Alabama claimed that such drastic water withdrawal upstream would curtail "badly needed economic development" throughout southeast Alabama;²⁹ it needed the river flow primarily for farming, industry, hydropower, and barge navigation. Florida claimed that the additional withdrawals upstream would disrupt the natural flow and cause significant damage to its multi-million dollar seafood and oyster industry.³⁰ Additionally, Florida was concerned about losing the water source it needed for the potential future residential or commercial development of thousands of acres of pulp wood forests in the panhandle region.³¹

Water *quantity* was not the only concern for Alabama and Florida. Officials from both states claimed that the additional withdrawals upstream would cause further deterioration of the water *quality* downstream.³² Since Georgia's already polluted water runs downstream to Alabama and Florida, increased withdrawals in north Georgia would decrease the water flow to Alabama and Florida, which would cause the pollutants to be less diluted upon reaching those downstream states.³³ In addition to maintaining a *sufficient* water flow all along the Chattahoochee, both downstream states wanted to ensure it remained a *clean* water flow.

25. See Jaffe, *supra* note 13.

26. See Seabrook, *supra* note 23.

27. See Carrie Teegardin, *The Shot Heard Round the Hooch*, ATLANTA J. & CONST., June 29, 1990, at A1.

28. See Mike Williams, *Florida Seafood Workers Fear Being Left High, Dry in Water War*, ATLANTA J. & CONST., Aug. 9, 1991, at F4.

29. See *id.*

30. See *id.*

31. See Nesbitt, *supra* note 15.

32. See Seabrook, *supra* note 23.

33. See *id.*

Before the dispute escalated into a court battle, the Governors of all three states signed an agreement on January 3, 1992, that moved the dispute from the courtroom to the negotiating table.³⁴ The agreement was very important because it suspended the legal action, it forced the states to support a five year, \$15 million U.S. Army Corps of Engineers comprehensive study of the current and future water requirements of the three states, it froze water usage levels, and it called for the states to negotiate and share information with one another.³⁵ During the 1996-1997 legislative session, in anticipation of the study's completion, all three states introduced to their state legislatures a bill for an interstate water compact that would create a committee made up of one representative from each state (appointed by the state's Governor) plus one federal representative (appointed by the President) to analyze the results of the comprehensive study and negotiate each state's allocation accordingly.³⁶ The compact was approved by all three states and subsequently by the United States Congress and President Clinton.³⁷

II. TOWARD A SOLUTION

In order to understand this type of a resolution, two preliminary matters warrant discussion. First, the different water rights doctrines found in the United States must be explored, fostering a better understanding of the different types of water rights claims of each state involved in the present dispute. Next, the various options for a solution to the water rights dispute must be examined to reveal the best option for bringing the dispute to a resolution.

A. Water Rights Doctrines

Water is somewhat of a unique natural resource. It is migratory, it has a natural flow that often crosses many different boundaries and landscapes, and it is relied upon by both upstream and downstream users. This migratory nature has made it difficult to assign property rights in the flow of water. Across the United States, three

34. See Tom Watson, *Pact Eases Water War in Southeast; 3-State Dispute on River Supply Has Threatened Atlanta's Growth*, WASH. POST, Jan. 4, 1992, at A8.

35. See *id.*; see also Jay Reeves, *States Sign a Cease-fire in Water War*, MACON TELEGRAPH, Jan. 4, 1992, at 1. The original agreement included a \$9 million dollar comprehensive study, but that figure grew to \$15 million.

36. See Charles Seabrook, *Heading Off a Tri-State Water War*, ATLANTA J. & CONST., Feb. 19, 1998, at C1.

37. See *id.*; see also U.S. CONST. art. I, § 10, cl. 3 (requiring Congressional approval of all interstate compacts).

main water rights doctrines have developed to address this unique problem. The western states have adopted a form of prior appropriation, the eastern states have adopted a riparian system, and some states have developed new, hybrid regimes.³⁸ The doctrine adopted by any particular state will often dictate *who* can make claims to use a water resource and *how* it may be used. However, under each of the systems, the right to the water generally only goes to its *use*, not actual ownership of the resource itself.

1. *The Western Model: Prior Appropriation*

In the more arid states, west of the Mississippi River, the regime of prior appropriation developed as the controlling doctrine for water rights.³⁹ This doctrine evolved in response to the competing water demands of a growing western frontier in the nineteenth century.⁴⁰ The regime is well suited for the relative scarcity of water in the west because it is based not upon riparian ownership, but upon an economically beneficial use of the water.⁴¹ A right to use water under the prior appropriation doctrine attaches when three requirements have been met: an *intent* to divert water for a beneficial use,⁴² an actual *diversion* of water, and application of the water to the *beneficial use* intended.⁴³ Procedurally, most states also require the appropriator to get a permit or decree from the relevant administrative agency or a court before the right becomes fully vested.⁴⁴ However, even when the right attaches, it is not an absolute right to the water; the state can still apply certain restrictions to protect downstream users.⁴⁵ Also, in order to keep the

38. See Patricia K. Flood, *Water Rights of the Fifty States and Territories*, in WATER RIGHTS OF THE FIFTY STATES AND TERRITORIES 31, 35-69 (Kenneth R. Wright ed., 1990).

39. See A. DANTARLOCK, LAW OF WATER RIGHTS AND RESOURCES § 5:1 (1988).

40. In addition to a scarcity of water in the west, there was a growing population, an emerging agriculture industry, and an extensive mining industry all competing for water resources. See WILLIAM GOLDFARB, WATER LAW 8 (2d ed. 1988).

41. See GOLDFARB, *supra* note 40, at 33.

42. Historically, a beneficial use had to be either a domestic or an economic use, however, now it also includes aesthetic beauty, recreation, and ecological concerns. See *id.* at 35. However, it is sometimes difficult to determine exactly what constitutes a beneficial use because the definition varies from state to state. Generally, states employ a hierarchy of uses: 1) domestic, 2) agricultural, and 3) industrial are "top tier," while 4) fish, wildlife, and recreation are distinctively "bottom tier." See *id.* at 37.

43. See GETCHES, *supra* note 1, at 75.

44. See *id.*

45. See Stuart L. Somach, *Water Rights*, in NATURAL RESOURCES LAW HANDBOOK 202, 210-12 (Government Institutes, Inc., 1991).

right, the appropriator must “use it or lose it,” as the right to the water will continue only so long as the beneficial use is maintained.⁴⁶

One of the precepts of the prior appropriation doctrine is “first in time, first in right.”⁴⁷ Essentially, whoever first acquires the right to use the water acquires the most senior claim, with all other claims falling junior to the first, in chronological order of attachment.⁴⁸ This means that if a conflict of use arises, the water needs of the senior appropriator will be met, while junior appropriators may conceivably encounter a water shortfall. One potential drawback to this system is that it favors older users over more efficient users. The regime, however, has attempted to preempt this critique by allowing water rights to be bought and sold.⁴⁹ Although the state can place certain restrictions on these water rights transfers to protect downstream users,⁵⁰ the water rights can still be traded just like any other commodity. According to economic theory, this should allow water rights to end up in the hands of the most efficient user at the end of the day.

2. *The Eastern Model: Riparian Rights*

In contrast to the arid west, the eastern states have always enjoyed a humid climate, plentiful rainfall, and an abundant water supply.⁵¹ As a result, a strict system of water allocation was not required. States east of the Mississippi River, where water resources have historically been accessible and available, adopted a form of the English regime of riparian rights as the dominant water rights doctrine.⁵² England had used a strict “natural flow” version of riparian rights, which stated that an owner of property adjacent to a watercourse was entitled to an undiminished portion of the water.⁵³ Over time, however, that system proved inefficient with the Industrial Revolution placing ever-greater pressures on water resources, spotlighting the need for a regime to protect more efficient uses of water. As an answer, the eastern United States developed a

46. See GETCHES, *supra* note 1, at 74.

47. See *id.* at 75.

48. See *id.*

49. See Kathleen Marion Carr and James D. Crammond, *Introduction to WATER LAW TRENDS, POLICIES, AND PRACTICE* (Kathleen Marion Carr and James D. Crammond eds., 1995).

50. See *id.*

51. See Copeland, *supra* note 3, at 5A.

52. See Somach, *supra* note 45, at 203-04.

53. See GETCHES, *supra* note 1, at 17.

“reasonable use” version of riparian rights.⁵⁴ Under the “reasonable use” doctrine, a riparian owner⁵⁵ can make any reasonable use of the water flowing through a watercourse adjacent to land the riparian *owns*, so long as that use does not adversely affect the rights of other riparian owners along the watercourse.⁵⁶ In order for riparian rights to attach, the water flow must be part of a natural watercourse.⁵⁷ As a general rule, riparian rights cannot attach to the water flow in an artificial watercourse unless it has been maintained as a natural watercourse for a period of years.⁵⁸ In sum, a riparian owner possesses a right to reasonably use the water on her land, so long as the use does not detrimentally affect other riparians along that same natural watercourse.

One of the significant features of a riparian system is its relative self-governance. Riparian systems generally require very little control from a centralized authority.⁵⁹ While this system keeps cost and regulation to a minimum, the resulting riparian rights are very generalized, increasing uncertainty and creating enforcement problems.⁶⁰ Also problematic is an imprecise definition of the term “reasonable use.”⁶¹ These shortcomings often force riparians to look to the courts – the most inefficient and costly method possible – for dispute resolution and clarification of rights

3. *The New Model: Hybrid Systems*

In many eastern states, the once rich supply of water resources is now showing signs of scarcity. The riparian system has failed to adequately deal with continually increasing demands on fewer available water flows in several states. Therefore, the trend in the

54. *See id.* at 18-19 (the “reasonable use” standard was eventually embraced by England); *see generally* Tyler v. Wilkenson, 24 F. Cas. 472 (1827) (rejecting the natural flow theory of riparian rights in favor of a reasonable use standard).

55. A riparian owner is a person who owns real property bordering a natural watercourse. *See* BLACK’S LAW DICTIONARY 1327 (6th ed. 1990).

56. *See* Somach, *supra* note 45, at 204.

57. A natural watercourse is defined as “[a] natural stream flowing in a defined bed or channel; one formed by the natural flow of the water, ... as distinguished from an “artificial” water course, formed by the work of man, such as a ditch or canal.” A watercourse is defined as “[a] running stream of water; a natural stream fed from permanent or natural sources, including rivers, creeks, runs, and rivulets.” BLACK’S LAW DICTIONARY 1592 (6th ed. 1990).

58. *See* Somach, *supra* note 45, at 204-05.

59. *See* James B. MacDonald, *Riparian Doctrine*, in WATER RIGHTS OF THE FIFTY STATES AND TERRITORIES, 19, 21 (Kenneth R. Wright ed., 1990).

60. *See id.*

61. *See* George A. Gould, *Water Rights Systems*, in WATER RIGHTS OF THE FIFTY STATES AND TERRITORIES, 9 (Kenneth R. Wright ed., 1990) (stating that there is a general trend in the East of moving towards hybrid systems).

East is toward a hybrid or combination system of water rights, which blends the "reasonable use" riparian system with elements of prior appropriation.⁶²

Generally, hybrid systems recognize riparian rights, while also implementing an administrative permit mechanism for new demands placed on water resources.⁶³ These new use permit programs vary widely across the states. None, however, place as much emphasis on priority in time as does the western model of prior appropriation.⁶⁴ Further, nearly all hybrid systems have one centralized state authority issuing new water use permits. The notable exception is Florida, which has five regional water management districts rather than one central state agency.⁶⁵

Each of these water rights doctrines are important in the present dispute over the Chattahoochee River. Georgia and Alabama employ a regime of riparian rights, whereas Florida uses a hybrid system.⁶⁶ While none of these states rely solely on prior appropriation (which focuses on beneficial use), Florida's hybrid system could be called a "reasonable beneficial use" standard of water rights allocation.⁶⁷ This water rights system attempts to blend the elements of riparian rights doctrine with the elements of prior appropriation doctrine to eliminate the shortfalls of each. In Florida, new permit applicants must meet a three-prong test to be granted a water use permit: the use must be defined as a reasonable beneficial use,⁶⁸ the use must not adversely affect other riparian users, and the use must be consistent with the public interest.⁶⁹

Despite Florida's hybrid system, a riparian rights analysis should figure prominently in the Chattahoochee River dispute. Therefore,

62. See *id.*

63. See GOLDFARB, *supra* note 2, at 26.

64. See *id.*

65. See *id.*

66. Technically, Alabama also uses a hybrid system of "regulated riparianism," but the Alabama Water Resources Act specifically states that the Act is *not* intended to change or modify the existing riparian system of water rights allocation. Thus, Alabama should be treated as a riparian state rather than a hybrid state. See William S. Cox III, *The Alabama Water Resources Act: A Hybrid Model of "Regulated Riparianism,"* in WATER LAW TRENDS, POLICIES, AND PRACTICE, *supra* note 49, at 151.

67. See Ronald A. Christaldi, *Sharing the Cup: A Proposal for the Allocation of Florida's Water Resources*, 23 FLA. ST. U. L. REV. 1063, 1080 (1996); see generally Frank E. Malony et. al., *Florida's "Reasonable Beneficial" Water Use Standard: Have East and West Met?*, 31 U. FLA. L. REV. 253 (1979) (discussing and explaining Florida's reasonable-beneficial use standard).

68. Reasonable beneficial use is defined as, "the use of water in such quantity as is necessary for economic and efficient utilization for a purpose and in a manner which is both reasonable and consistent with the public interest." FLA. STAT. § 373.019 (13) (2000).

69. See Christaldi, *supra* note 67, at 1080-81.

debate will likely focus on an equitable allocation of the Chattahoochee River. However, since this dispute is over rights to a limited water resource, prior appropriation-type arguments are certain to make their way into the discussions.

B. Resolution Options

There are primarily three methods of solving these types of water rights disputes: legislative or congressional apportionment; judicial apportionment; and, interstate compacts.⁷⁰ Although, on occasion, Congress or the Supreme Court has been called upon to resolve these disputes, an interstate compact is the preferred method of resolution.⁷¹ Compacts are more popular than judicial and legislative apportionment solutions because the latter are often based on incorrect or incomplete information. Further, courts and legislative bodies often lack the technical knowledge and ability to gather and incorporate all the information needed for an allocation decision. Despite these general shortcomings, all three allocation methods are viable options for Alabama, Georgia, and Florida to consider as possible solution mechanisms to this dispute.

1. Legislative Apportionment

The Supreme Court first acknowledged legislative apportionment in 1963 by holding Congress' implied authority under the Commerce Clause includes the authority to apportion or regulate interstate waters.⁷² With this new power, Congress could then settle interstate water rights conflicts itself by introducing and passing a bill to distribute the water to the disputing states, thereby settling the dispute. Since that time, however, Congress has been very reluctant to use this authority. As a result, legislative apportionment has been used only once since *Arizona v. California* to resolve a conflict between California and Nevada over the Truckee and Carson Rivers and Lake Tahoe in 1990.⁷³

There are three primary reasons why legislative apportionment is a disfavored methodology: politics, limited information, and a lack of interest. First, Congress operates within a political system where

70. See GOLDFARB, *supra* note 2, at 52-55.

71. See *id.*

72. See *Arizona v. California*, 373 U.S. 546, 597-598 (1963) (allowing legislative apportionment under the Commerce Clause); see also U.S. CONST. art. I, § 8, cl. 3 (granting Congress the ability to regulate commerce among the states).

73. See Jerome C. Muys, *Approaches and Considerations for Allocation of Interstate Waters*, in WATER LAW TRENDS, POLICIES, AND PRACTICE, *supra* note 49, at 311, 312.

members, lobbied by all interested parties, are heavily influenced by special interests.⁷⁴ Consequently, water rights disputes are highly politicized, leaving individual members of Congress very hesitant to choose a side, unless their home state has a stake in the outcome or all the parties have reached a compromise. A second major drawback to legislative apportionment is that Congress is usually not very well informed about a particular region's water problems.⁷⁵ Congress may inform itself to some degree through speeches and legislative hearings, but individual legislators themselves often lack the technical, specialized knowledge necessary to fully understand all the issues in a water rights dispute.⁷⁶ Third, most members of Congress have little or no interest in water problems specific to a relatively localized region.⁷⁷ For example, it is doubtful that a member of Congress from North Dakota will have any particular interest in the present Chattahoochee River dispute. Under such conditions, party politics are likely to play a role in any decision.

2. *Judicial Apportionment*

The second option for resolving the Chattahoochee River dispute is judicial apportionment, in which states litigate the issue and the United States Supreme Court issues a ruling allocating water rights between the states. Although the Supreme Court routinely functions as an appellate body, it maintains original jurisdiction over "controversies between two or more states."⁷⁸ Thus, the Supreme Court possesses original jurisdiction in a multi-state rights dispute, such as the current controversy between Alabama, Florida, and Georgia, over the Chattahoochee River.

Judicial apportionment as a means of solving water rights disputes was first applied in 1907, in a dispute between Colorado and Kansas over the Arkansas River.⁷⁹ Although the Supreme Court ruled for Colorado on the merits of the case, it announced that in all future water rights disputes, the equitable apportionment doctrine would be the applicable rule.⁸⁰ The equitable apportionment doctrine was adopted from international law and favors a fair distribution of water between the disputing states over any existing

74. *See id.* at 312.

75. *See id.*

76. *See id.*

77. *See id.*

78. U.S. CONST. art. III, § 2, cl. 1.

79. *See Kansas v. Colorado*, 206 U.S. 46 (1907).

80. *See id.* at 117-18.

common law water rights regime, such as prior appropriation and riparianism.⁸¹ If, however, a dispute arises between two states using the same water rights doctrine, then that doctrine will be presumptively applied.⁸² Under equitable apportionment, if two states use different water rights systems, or if local law will leave one state at a significant disadvantage, the Court is free to disregard the existing regimes and fashion a more equitable resolution.⁸³

The case of *New Jersey v. New York*⁸⁴ is illustrative of the equitable apportionment doctrine at work, and contains similar facts to the Chattahoochee River dispute. That case involved a conflict between two states regarding the use of the water in the Delaware River. Essentially, New York claimed it needed more of the water to sustain its growth (much like Georgia), while New Jersey claimed that it had a right to an undiminished quantity of the water as a downstream user (much like Alabama and Florida). The Court recognized that both states had valid claims which had to be reconciled as fairly as possible.⁸⁵ Neither state could win completely; New York could not appropriate all the water for itself, leaving nothing for downstream users, and New Jersey could not turn off the water supply to New York.

The Court ultimately allowed New York to continue diverting water from the Delaware River to meet the needs of New York City, but prohibited the state from increasing its current level of water withdrawal.⁸⁶ Additionally, the Court placed certain water quality and quantity regulations on New York governing the discharge of water back into the Delaware River.⁸⁷ This result seemed fair to both states because it met New York's current needs while still protecting New Jersey, a downstream user. This case provides an obvious corollary to the current Chattahoochee River dispute; if the states involved choose to settle the water rights dispute in court, judicial apportionment may be the mechanism used and the final resolution will likely resemble the outcome in *New Jersey v. New York*.

81. See GOLDFARB, *supra* note 2, at 52-53.

82. See *id.*

83. "The [equitable apportionment] doctrine is neither dependant on nor bound by existing legal rights to the resource being apportioned." Idaho ex rel. Evans v. Oregon, 462 U.S. 1017, 1017 (1983).

84. 283 U.S. 336 (1931).

85. The court said, "[b]oth states have real and substantial interests in the [Delaware] River that must be reconciled as best they may be." *Id.* at 342-43.

86. See *id.* at 346-48.

87. See *id.* (requiring water treatment, release limitations, and permission for Delaware to inspect certain New York dams and other relevant facilities).

Judicial apportionment, although fraught with serious problems, appears to be more favored and utilized more often, than legislative apportionment. The three significant drawbacks to using judicial apportionment as a method for resolving a water rights dispute are lack of expertise, extremely high costs, and lack of ability to monitor the solution. The most common critique of equitable apportionment is that the Court lacks the technical resources and expertise necessary to make important water allocation decisions.⁸⁸ Critics contend that as an institution, the Court is simply “not equipped to deal with the mass of technical data introduced into evidence in equitable apportionment litigation. ... [E]valuating conflicting evidence on these points requires the help of a trained technician, and the tradition of the courts tends to restrain them from securing such help.”⁸⁹ In fact, the Court is often reluctant take up these questions, pronouncing instead that it is not the best forum in which to resolve these issues.⁹⁰ Currently to assist the court with the technical issues involved in most water rights cases, the Court appoints a Special Master to hear evidence, preside over hearings, report findings, and recommend a resolution.⁹¹ Although the Court is the final arbiter and is not bound to follow the Special Master’s recommendation, it is usually given great deference.⁹²

A second problem with judicial apportionment is the high cost of litigation.⁹³ It is extremely expensive to gather the technical data necessary to litigate a water rights dispute. In addition, the resolutions are rarely final, and are often re-litigated, further increasing costs.

A third sizable drawback to judicial apportionment is that the Court simply does not have the resources to monitor the parties compliance with the resolution. Unfortunately, this creates an

88. See GOLDFARB, *supra* note 2, at 53.

89. CHARLES J. MEYERS & A. DAN TARLOCK, *WATER RESOURCE MANAGEMENT* 401-02 (2d ed. 1980).

90. See *Kansas v. Colorado*, 206 U.S. 46 (1907) (noting that interstate water controversies ... necessitate expert administration rather than judicial imposition of a hard and fast rule); *New York v. New Jersey* 256 U.S. 296, 313 (1921) (stating that a water rights dispute “is one more likely to be wisely solved by cooperative study and by conference and mutual concession on the part of the representatives of the States which are vitally interested [in it] than by proceedings in any court however constituted.”).

91. See William D. Olcott, Comment, *Equitable Apportionment: A Judicial Bridge Over Troubled Waters*, 66 NEB. L. REV. 734, 736 (1987).

92. See *id.*

93. “[J]udicial apportionment is expensive ... the Special Master in *Arizona v. California* [*supra* note 72] received, as compensation (not including expenses), \$185,000. Prof. Corker, who represented California in the litigation, estimates total costs at \$50 million.” MEYERS, *supra* note 89, at 402.

incentive for the parties to cheat or push the envelope since the only way to enforce the resolution is through further litigation. Consequently, small transgressions are not remedied because it is simply not cost efficient for the state to do so.

Taken together, the lack of expertise, expense of litigation, and inability to monitor the parties make equitable apportionment a problematic resolution option. The unpredictability of the result makes it a particularly risky endeavor for the Chattahoochee River dispute. Furthermore, the Court is usually hesitant to take on questions involving interstate water conflicts, which tend to resemble legislative decision-making.⁹⁴ The Court, instead, openly favors the use of interstate water compacts as a resolution mechanism.⁹⁵

3. *Interstate Water Compacts*

The third primary method to resolve the Chattahoochee River rights dispute is through an interstate water compact. A compact is essentially a contract in which the disputing states negotiate their own settlement for water allocation with a focus on "present appropriation for future use."⁹⁶ The process of creating an interstate compact often begins with the states requesting congressional authorization to negotiate a resolution among themselves. Once Congress grants authorization (often mandating that a federal representative be present at the negotiations), the states may begin the negotiation process.⁹⁷ When the states reach an agreement, they must then seek congressional approval of the terms of that agreement.⁹⁸ Only after Congress has given final consent does the compact become federal law.

Beyond the approval process itself, no additional federal regulations govern interstate compacts. Since the agreement reached is based on negotiations between the states involved, Congress assumes the compact is suitable to the states involved. Thus, once the negotiations have yielded an agreement, Congress almost always ratifies it. In fact, Congress rarely restricts, or gets involved with, the mechanics of an interstate water compact. Therefore, interstate

94. See GOLDFARB, *supra* note 2, at 53.

95. See *id.*

96. GETCHES, *supra* note 1, at 406.

97. See *id.* at 407.

98. See TARLOCK, *supra* note 39, § 10.24, at 10-25; See JOSEPH L. SAX ET AL., LEGAL CONTROL OF WATER RESOURCES: CASES AND MATERIALS 736 (1986) (noting that once ratified, compacts become federal law and the compact takes precedence over inconsistent state laws. Further, a compact state cannot withdraw from the compact by any means other than those established by the compact itself).

compacts can be set up in virtually any manner to solve any type of interstate water rights dispute.

The states' authority to create interstate compacts, subject to Congressional approval, is found in the Compact Clause of the U.S. Constitution.⁹⁹ The first interstate compact resolving water rights dispute was the Colorado River Compact of 1922, which simply allocated the waters of the Colorado River between the states involved.¹⁰⁰ Since that time, Congress has approved over thirty interstate water compacts, each with varying complexities stemming from various water resource disputes.¹⁰¹ The vast majority of these water compacts have taken place in the arid western states where the water supply is relatively scarce.¹⁰² In fact, every western state has participated in at least one interstate water compact.¹⁰³

A significant dynamic underlying these water compacts is that the states are negotiating their water allocations for *future* use. As such, the states must anticipate their future water needs as accurately as possible and negotiate an appropriation accordingly. However, even the best estimates are sometimes off the mark and as a result, the compact's enforcement mechanism becomes extremely important. A water compact can be enforced in two ways: through the compact itself or through an interstate commission. The compact itself acts as the enforcement mechanism by providing certain guidelines for state agencies to follow in allocating the water supply. This prescriptive scheme was used in the early water compacts.¹⁰⁴ Today, this scheme is disfavored because it does not really provide enforcement at all. Rather, it merely provides guidelines for the state agencies to follow. As a result, any enforcement of the compact usually requires court intervention, at a significant cost to the litigants.

It is far more common today to use the second model, which incorporates a standing interstate commission or agency to plan, operate, monitor, and enforce the compact.¹⁰⁵ These commissions all vary to some degree but most include one or more federal repre-

99. See U.S. CONST. art. I, § 10, cl. 3 (stating, "No State shall, without the Consent of Congress ... enter into any Agreement or Compact with another State,").

100. See GOLDFARB, *supra* note 2, at 54.

101. See *id.*

102. See *id.*

103. See *id.*

104. For example, the Colorado River Compact of 1922 may be considered a prescriptive-type compact because all it did was simply allocate the water between the states by providing a few guidelines for the state agencies to follow in allocating the water within each state.

105. See GOLDFARB, *supra* note 2, at 54.

sentatives for each state involved, usually appointed by the respective governors.¹⁰⁶ Depending on how the compact arranged the commission, the federal representative(s) may or may not have full voting rights.¹⁰⁷

These permanent commissions are how interstate water compacts make their greatest contribution to water resource management. Through these commissions, compacts create the much-needed authoritative structure for true regional water-resource management.¹⁰⁸ The permanent commission can constantly gather new information and can remain in continuous negotiation, allowing adaptation to new circumstances. Also, because the commission is one centralized body, the costs normally associated with information gathering and continuous negotiation may be drastically reduced. Thus, these commissions are able to enforce (or adapt) the compact efficiently.

Interstate compacts are, by far, the preferred method for resolving interstate water rights conflicts.¹⁰⁹ They enjoy three principal advantages over other methods of water allocation. First, the compacts are much more flexible in that they are tailored to each situation and can be set up with few external constraints.¹¹⁰ Also, if a commission is established, flexibility increases because the water allocations can be continually adjusted to meet changing conditions. Secondly, one of the best attributes of a water compact is that it routinely involves water resource management experts.¹¹¹ Usually, the chief negotiators and those appointed to the commission are water resource experts. This arrangement offers advantages over other water allocation methods simply because the decision-makers understand the technical data, the long-term consequences and ramifications, and the different solution options. Thus, they are the most qualified to make these choices in the first place. Thirdly, compacts with a commission have a much better enforcement mechanism in the form of the commission itself.¹¹² Since it is an independent body, it is less likely to be influenced by the motives of individual states. The commission can also enforce the compact cheaper and just as

106. *See id.*; *See also* TARLOCK, *supra* note 39, § 10:25, at 10-36.

107. *See id.*

108. *See* SAX, *supra* note 98, at 736-37.

109. *See supra* notes 74-77, 88-95 and accompanying text; *see also* GOLDFARB, *supra* note 2, at 53 (stating that although the Supreme Court has used judicial apportionment at times, it has more often discouraged lawsuits in favor of interstate compacts).

110. *See* TARLOCK, *supra* note 39, § 10:24, at 10-34.

111. *See id.*

112. *See id.*

effectively as the court. In addition, the commission scheme also grants more certainty, efficiency, and equity to the water allocation issue. Overall, an interstate water compact is the best resolution for a water rights conflict.

Interstate water compacts, however, are not perfect solutions, and have some problems of their own. Water compacts have three main recognized detriments, although the benefits still seem to outweigh the shortfalls. First, water compacts are often preceded by long, protracted negotiations.¹¹³ These initial negotiations can be very complex, expensive, and time consuming. Yet if the compact is set up properly, these negotiations may prove to be a worthwhile investment down the road. Secondly, very difficult issues are usually drafted with a great deal of ambiguity.¹¹⁴ The states involved are hesitant about signing a compact that does not include a bit of "wobble room" around the more contentious issues. Such ambiguity could conceivably unravel even the best of compacts if it is too pervasive or creates loopholes in the agreement. Thirdly, the commissioners are appointed by the governors of the states involved and are not given free rein over the water policy of the state.¹¹⁵ The commissioners are still accountable to each respective governor and state legislature, so each commissioner is neither completely independent nor autonomous. The commissioner must rely on state policymakers to inform her of the state water policy and its position on certain issues. Thus, if the state water policy shifts, it could alter the work of the commission, or perhaps the entire compact. While interstate water compacts are not a perfect solution, they remain the preferred option to resolve a water rights dispute.

III. THE COMPACT APPROVED

Recognizing the significant problems associated with judicial apportionment, on January 3, 1992, Alabama, Florida and Georgia removed the Apalachicola-Chattahoochee-Flint River dispute from the pageant of the courtroom in favor of negotiating a water compact.¹¹⁶ The agreement signed by the states suspended legal action, pending the completion of a U.S. Army Corps of Engineers five-year comprehensive study of the entire river basin system and

113. See MEYERS, *supra* note 89, at 419.

114. See *id.*

115. See TARLOCK, *supra* note 39, § 10:25 at 10-36.

116. See *supra* note 34 and accompanying text.

the three states' current and future water needs.¹¹⁷ The agreement also froze water withdrawals at current levels, with small increases to be made only with the consent of all three states.¹¹⁸ Further, it called for all three states to cooperate and share information regarding the river basin.¹¹⁹

The 1992 agreement served as a "treaty" that stayed legal proceedings while the study was conducted over the course of several years. The estimated completion date of the study was late 1997. During their respective 1997 legislative sessions, the Alabama, Georgia, and Florida legislatures adopted identical bills creating the Apalachicola-Chattahoochee-Flint River Basin Compact ("ACF Compact").¹²⁰ The compact allowed each state to study the Corps of Engineers' completed research, and to negotiate a water allocation formula accordingly.¹²¹ The bills were subsequently ratified by Congress and signed into federal law by President Clinton on November 20, 1997.¹²²

The compact's structure was absolutely ideal. It created the ACF Basin Commission to negotiate a water allocation formula among the three states.¹²³ The commission is comprised of one representative from each state, appointed by its respective governor, and one non-voting federal representative, appointed by President Clinton.¹²⁴ The commission is an effective mechanism, because it allows the appropriate experts to be involved in the negotiations and enforcement of any final agreement. Also, if an agreement is reached, the compact makes the ACF Basin Commission a permanent standing body that will monitor, enforce, and alter the agreement as needed.¹²⁵

Under the compact, the commission was to meet and negotiate a water allocation plan by December 31, 1998.¹²⁶ If no agreement resulted, the compact itself would terminate, essentially sending the

117. See *supra* note 35 and accompanying text.

118. See *id.*

119. See *id.*

120. See FLA. STAT. § 373.71 (2000); GA. CODE ANN. § 12-10-100 (2000); ALA. CODE § 33-19-1 (2000).

121. See *supra* note 36 and accompanying text.

122. See Apalachicola-Chattahoochee-Flint River Basin Compact, Pub. L. No. 105-104, 111 Stat. 2219 (1997).

123. See *id.* at § 1, art. VI (a).

124. See *id.* at § 1, art. VI (a-c). Although the federal representative is non-voting, she does have the ability to concur with or veto any agreement the states reach. A veto terminates the compact and sends the dispute back to litigation. See *id.* at § 1, art. VII (a); art VIII (a)(4).

125. See *id.* at § 1, art. VI (g).

126. See *id.* at § 1, art. VI (g)(12); art. VII (a); art VIII (a)(3).

states back to court, unless the commissioners unanimously agreed to extend the negotiations.¹²⁷ Since the ACF Compact was signed into federal law on November 20, 1997, this gave the commission a little over one year to reach an agreement over the water allocation formula. While the states laid the groundwork for achieving a commission-based water compact, the time restrictions proved too burdensome for resolving such complex issues.

IV. AN OVERVIEW OF THE COMPACT NEGOTIATIONS

The compact negotiations have, indeed, proven to be too complex to be resolved thus far. The negotiations were ready to begin only after the ACF Compact was signed into federal law, the ACF Commission was created, and the commissioners themselves were officially appointed and charged with the duty of negotiating a water allocation formula.¹²⁸ After the commission was established, the commissioners knew they only had about a year in which to do a great deal of work. Thus, the commission immediately began meeting on a monthly basis.¹²⁹ At the beginning of the process, the negotiators were mostly feeling each other out; there was a great deal of hesitancy about seriously negotiating.¹³⁰ As a result, there was simply not much substantial progress made at first. Over time, however, the commission established a better working relationship and was able to make progress toward an agreement, despite large differences still remaining.¹³¹

By the Fall of 1998, the states were still significantly far from agreement and the deadline was quickly approaching. Adding to the pressure of the looming December 31 deadline were the gubernatorial elections in November of 1998.¹³² As politics would have it, Alabama, Florida, and Georgia, all elected new governors, which put the negotiations in a questionable position. The three previous

127. *See id.* at § 1, art. VIII (a)(3).

128. Bob Kerr is the Georgia representative, Jim Campbell is the Alabama representative, David Struhs is the Florida representative, and Lindsay Thomas is the federal representative.

129. *See* Telephone Interview with Ruth Mathews, (Apalachicola Project Manager) of the Nature Conservancy (Apr. 4, 1999) (on file with author) (hereafter Telephone Interview). The Nature Conservancy is a nationwide conservation and environmental organization working directly with the state of Florida to protect Apalachicola Bay in the Apalachicola-Chattahoochee-Flint Compact negotiations.

130. *See id.*; *see also* *Negotiator Fears Stall in Water-Sharing Talks*, ATLANTA J. & CONST., Apr. 17, 1999, at G2; Charles Seabrook, *The Water War: Drought of Compromise*, ATLANTA J. & CONST., Feb. 15, 1999, at E5 (quoting Jim Lloyd of the Southeastern Power Administration, that the states have done "a lot of posturing for a whole year.").

131. *See* Telephone Interview, *supra* note 129.

132. *See id.*

governors had all been very engaged in the water compact negotiations and had been working together toward a resolution.¹³³ The election of new governors brought new policies, less cooperation, and less knowledge of the situation as a whole.¹³⁴ This was a serious setback to the commission and the negotiation process because the governors could not tell their commissioners the state's negotiation position or policy until the governors themselves formulated it. With the deadline for an agreement only a few weeks away, it was apparent that time would run out on the compact before any agreement could be reached. The commission agreed that the negotiations were a very complex process, but that it had made some significant steps toward an agreement and had worked too hard to simply allow the compact to dissolve.¹³⁵ Therefore, on December 18, 1998, the commissioners unanimously agreed to a one-year deadline extension so the compact negotiations could continue without losing the enormous investment the states had made.¹³⁶ With the negotiations beginning to pick up steam, the extension was seen as a positive thing, an endorsement of the entire compact process.¹³⁷ It gave the commission a renewed sense of faith and more time to come to an agreement, but more importantly, it also gave the new governors time to educate and engage themselves enough in the issue to be able to effectively direct the negotiators as to the states' policy and negotiation position.

Unfortunately, the second year of negotiations did not get off to a good start. The elections had simply turned both the commission and the negotiations upside down. In both Florida and Georgia, there was no practical difference after the election because both states maintained the same policy position the previous administration had maintained.¹³⁸ In fact, if anything, the election had a positive effect on those two states because both new governors wanted to continue with the negotiations. However, in Alabama, the gubernatorial election caused problems. The new governor was not engaged in the issue and did not have a working relationship with its representative on the ACF Commission.¹³⁹ The political situation in

133. *See id.*

134. *See id.*

135. *See id.*

136. *See id.*

137. *See id.*

138. *See id.*

139. *See id.*; *see also Negotiator Fears Stall in Water-Sharing Talks*, *supra* note 130 (quoting Georgia Representative Bob Kerr that the Alabama negotiator's office had "opposed the new

Alabama remained a bit disorganized and chaotic for several months as the new administration established itself. As a result, the Alabama representative refused to meet with the commission to negotiate until he had a clear directive from his governor.¹⁴⁰ Meanwhile, the other representatives of the ACF Commission continued to meet on a monthly basis, albeit in an unofficial capacity, to discuss technicalities of the water compact.

The first official ACF Commission meeting since December of 1998, when the deadline extension was signed, took place on March 12, 1999, when Alabama decided to rejoin the negotiations.¹⁴¹ Thus, the commission lost about three months negotiation time while it waited on the Alabama political situation to iron itself out. Since the new deadline for an agreement was December 31, 1999, the commission again had its work cut out. Although the states were further along at this point than they were the year before, they were still far from an overall agreement on a water allocation formula.¹⁴² With only eight months left before the new deadline, and significant issues still to be resolved, a legitimate question was raised as to whether the states could meet such a deadline. After all, if the ACF Commission could not reach an agreement in twelve months, despite having made some progress, was it realistic to expect an agreement in only eight months? The answer, unfortunately, was no.

On December 28, 1999, just three days before the deadline was to expire, the states agreed to yet another extension, which put the new deadline at May 1, 2000. Florida officials were becoming less and less willing to extend the negotiations any longer because Georgia was simply refusing to agree to any specific minimum flow conditions on the river system.¹⁴³ With Georgia steadfastly maintaining such a position, and Florida and Alabama both requiring some type of minimum flow guarantee, there remained significant distance between the three states. Furthermore, all three states were seemingly entrenching themselves into their respective positions and becoming more and more disenfranchised with the lack of progress in the negotiation process. Compounding the difficulty was the

governor" and was "feuding with the governor" which "certainly hinders the ability of the Alabama people to sit at the table with a lot of confidence.").

140. See Telephone Interview, *supra* note 129.

141. See *id.*

142. See Stacy Shelton, *States Far From Water Pact, Negotiator Says*, ATLANTA J. & CONST., Apr. 21, 1999, at JJ3.

143. See Charles Seabrook, *States Far From Extending Deadline to Reach Water Pact*, ATLANTA J. & CONST., Dec. 13, 1999, at B2.

limited five-month timetable before expiration of this new deadline. Unfortunately, very little headway was made in those five months.

The ACF Commission agreed to yet another, even shorter, deadline extension creating a new, August 1, 2000, deadline.¹⁴⁴ However, with such distance still remaining between the states, it is unlikely they will be able to resolve the impasse in only three additional months of negotiation. A bit of a twist has recently been introduced to the ACF Commission, though. The federal representative has strongly recommended that the states bring in a mediator to aid in reaching an agreement.¹⁴⁵ The states have apparently reached a deadlock and without mediation, may not be able to make further progress.¹⁴⁶ In response to that suggestion, Talbot "Sandy" D'Alemberte, the President of The Florida State University, and a former President of the American Bar Association, was just named as a mediator for this water rights dispute.¹⁴⁷ Evidently, the three states have now agreed to non-binding mediation with a December 30, 2000, deadline.¹⁴⁸ Although the mediation session(s) will be held behind closed doors¹⁴⁹, perhaps this move signals a significant effort by all three states to reach some sort of a positive compromise. If the mediation efforts go awry, or the states simply continue their pattern of just agreeing to disagree, this conflict may well be headed to the United States Supreme Court for one of the most costly and complex water rights disputes in the history of this country.¹⁵⁰ Of course, the commission can always agree to another deadline extension if need be, but only time will tell.

V. QUESTIONS RAISED BY THE NEGOTIATIONS

If the states are unable to come to an agreement, the conflict will return to the court, and no state is likely to get exactly what it wants. The negotiations have raised several questions as to whether this dispute may be, in fact, headed for judicial apportionment. First, a

144. See "Water Wars" Deadline Is Extended, GEORGIA ENVTL. L. LETTER, May 2000.

145. See Charles Seabrook, *Mediator Needed in States' Water Fight, Observer Says*, ATLANTA J. & CONST., Apr. 22, 2000, at C3.

146. See *id.*

147. See Charles Seabrook, *Water War Mediator is Floridian*, ATLANTA J. & CONST., Nov. 1, 2000, at C1.

148. See *id.*

149. See *id.*

150. In fact, Bob Kerr, Georgia's chief negotiator on the ACF Commission has stated that this dispute, "would be one of the most complex water cases ever before the court ... [i]t could be tied up in the court for years, and the court could put a moratorium on new uses of water. The economic loss to Georgia could be in the billions of dollars." Charles Seabrook, *Water Wars: Seven Year Battle*, ATLANTA J. & CONST., Oct. 18, 1999, at C1.

big question is simply whether the states can come to an agreement by the December 30, 2000 deadline. If no agreement is reached by that time, it looks like the compact may be headed for termination (which would lead to judicial apportionment, with its corresponding costly and complex litigation) or another deadline extension,¹⁵¹ before any agreement is reached.¹⁵²

Another question has been raised as to Georgia's good faith participation in the negotiations. In late 1997, Georgia budgeted \$46 million in state funds to go ahead with one of its planned reservoirs, despite the original agreement of 1992, which halted the legal action and froze water withdrawal rates until a compact, and allocation formula, was agreed upon.¹⁵³ After loud protests from Alabama, Georgia withdrew its permit application until such time as the ACF Commission has agreed upon a water allocation formula.¹⁵⁴ Georgia's plan had threatened to derail the entire compact process.

It is also possible that Alabama and Florida are dragging out the negotiation process to force Georgia to look elsewhere for its water supply. Since north Georgia is the "water hog" of the Chattahoochee, using an enormous amount of its flow and leaving a great deal of pollution (in a reduced flow) to the downstream states, both Alabama and Florida would love to cut out Georgia as much as possible. Since water withdrawal levels are frozen until an agreement is reached,¹⁵⁵ one way to tie Georgia's hands is to drag out the negotiation process as long as possible. Growth is going to occur in north Georgia, whether an agreement is reached or not, and when that growth occurs, Georgia must find a fresh water supply somewhere. Thus, postponing any agreement may force Georgia to either violate the compact (by increasing its withdrawal levels and proceeding with the development of its reservoirs) or turn to other sources of water for its water supply. If Alabama and Florida stall the negotiations long enough to force Georgia to look to other sources of fresh water to fuel this growth, Georgia's claim to such a large allocation of the Chattahoochee River flow will be seriously undermined. If that occurs, both Alabama and Florida should be practically guaranteed a very healthy allocation of the Chattahoochee

151. See *supra* notes 125, 126 and accompanying text.

152. See Seabrook, *supra* note 130.

153. See Kathey Pruitt, '98 Georgia Legislature: Budget Writers are Ready to Go to Work, ATLANTA J. & CONST., Jan. 19, 1998, at B1.

154. See *id.*

155. See *supra* notes 35, 36 and accompanying text.

River flow for years to come with few, if any, concessions given to Georgia.

In addition, the political situation in Alabama had created some concern as to whether or not the state was really still in the game.¹⁵⁶ It now appears that Alabama has returned from the sidelines and is permanently back at the table.¹⁵⁷ This is critically important because Alabama was the original state that filed suit against Georgia to stop the additional withdrawals. If Alabama actually withdrew itself from the negotiation process, a question would arise regarding the validity and effectiveness of the ACF Compact itself. The compact requires all three states to form a unanimous agreement on an allocation formula; if Alabama withdrew, there could be no unanimity. At that point, Florida would have had to decide whether or not to seek an entirely new water compact with Georgia. This subplot appears to have ironed itself out, as Alabama seems back in the ACF Compact to stay.¹⁵⁸

Lastly, a concern has been raised regarding how close (or far) the states actually are to an agreement. One of the first plans introduced by Georgia called for guaranteed minimum levels in Lake Lanier. In return, Georgia would reduce the water flow it used to generate hydroelectric power, but Alabama and Florida would have to accept a reduced downstream flow.¹⁵⁹ Neither Alabama nor Florida was willing to entertain Georgia's plan, but it was a first attempt. Shortly thereafter, Alabama countered with a plan of its own, calling for a release of more water than usual from Lake Lanier to ensure downstream users an increased flow in the Chattahoochee River.¹⁶⁰ Georgia, however, did not believe Alabama's plan was realistic.¹⁶¹ More recently, after nearly three years of negotiations between the states, Georgia has rejected Alabama's "final offer" of February 23, 2000, on the grounds that it would still take too much water from Georgia.¹⁶² Thus, the states seem to be at an impasse with the negotiations; and without a bit more compromise, flexibility, or the use of mediation, the current outlook is poor for the ACF Compact.

In the grand scheme of the negotiations, it appears Georgia's claims are nearly mutually exclusive of Alabama's and Florida's

156. See Telephone Interview, *supra* note 129.

157. See *id.*

158. See *id.*

159. See Charles Seabrook, *Tri-State Water War Rages Again; Glitch Further Threatens Negotiations*, ATLANTA J. & CONST., May 24, 1999, at 2E.

160. See *id.*

161. See *id.*

162. See Seabrook, *supra* note 145.

claims. Georgia wants a minimum level established for Lake Lanier, as well as increased withdrawals from the river to develop additional reservoirs that will fuel north Georgia's growth in the coming years.¹⁶³ Meanwhile, downstream, Alabama seeks to ensure that it receives a plentiful flow in the Chattahoochee River to fuel its own needed industrial and farming growth in the South Alabama region.¹⁶⁴ Alabama also wants to ensure the levels of the river remain sufficient to maintain commercial barge navigation, and support the hydropower needs of the state.¹⁶⁵ Florida primarily wants to protect its seafood and oyster industry, as well as the ecosystem of Apalachicola Bay, where the Chattahoochee (Apalachicola) empties into the Gulf of Mexico.¹⁶⁶ In order to do so, Florida wants to ensure that enough clean, fresh water comes downstream for the seafood industry and ecosystem to survive. In addition, Florida has the potential of a great deal of development and growth in the panhandle region in the coming years, and the Chattahoochee is an essential water resource if that is to occur.¹⁶⁷ Also, to further complicate the issue, there have been some recent federal environmental concerns regarding threats to various species found within the river system if the levels of the river downstream are not maintained above minimum flows.¹⁶⁸ In fact, the Endangered Species Act has emerged as a new player in this dispute, adding yet another tangled web of complexity to the existing difficulties.¹⁶⁹ With these complicated, competing interests and the extremely high stakes involved, it is no wonder that the three states have not yet come to an agreement. It is becoming all too clear that no state will get everything it wants out of these negotiations. Use of the ACF Compact will allow them to come as close as possible. It is most likely a better solution than anything litigation would yield.

163. See discussion, *supra* Part II.

164. See *id.*

165. See Telephone Interview, *supra* note 129; Seabrook, *supra* note 130.

166. See discussion, *supra* Part II.

167. See *id.*

168. See Seabrook, *supra* note 130.

169. The U.S. Army Corps of Engineers is currently refusing to increase Atlanta's draw on the river system's headwaters because of the effects of a reduced downstream flow in the Apalachicola River. Such a reduced flow would adversely impact certain species of threatened and endangered mussels found in the Apalachicola River. See Bruce Ritchie, *U.S. Law Prevents Reduction of River's Flow*, TALL. DEM., Aug. 16, 2000.

VI. CONCLUSION

The ACF Compact presents an opportunity for the states of Alabama, Florida, and Georgia to get it right the first time. The three states have a unique chance to learn from what has worked (and not worked) and avoid the lengthy 'water wars' and court battles that have plagued many western states. Although the Southeast has never had a serious water shortage, the boom of a healthy economy, and the growth that follows comes with a price tag. The growth seems to have finally caught up to the Apalachicola-Chattahoochee-Flint River Basin.

One thing is certain, to ensure the future sustainability of the Chattahoochee River as a water resource, sacrifices will have to be made. The states have simply put too much demand upon the river for it to continue support all the competing claims; some limits must be set and some changes must be made if the Chattahoochee is to remain a usable fresh water resource.

The states have answered the bell with the ideal mechanism for resolving the water rights dispute. The ACF Compact is the best regime under which to allocate the waters of the river. It is not necessarily a perfect solution, and the states will not necessarily get everything they want, however, it is far better than relying upon the judiciary or the legislature to allocate the waters. The big question now becomes, will the states choose to take full advantage of this opportunity?

DELEGATION AND DISCRETION: STRUCTURING ENVIRONMENTAL LAW TO PROTECT THE ENVIRONMENT

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INTRODUCTION

The District of Columbia Circuit Court (D.C. Circuit) “sent shock waves through the environmental community”¹ by reviving the non-delegation doctrine, after sixty years of dormancy, in *American Trucking Associations, Inc. v. United States Environmental Protection Agency*.² The D.C. Circuit used the nondelegation doctrine to restrict the Environmental Protection Agency’s (EPA) discretionary decision making capacity, which could have a sweeping effect on Congress’ authority to defer to agency decision making in general.³ The

*J.D. anticipated December 2000, University of Florida, Levin College of Law. Winner of the 2000 Dean Frank E. Maloney Memorial Writing Contest. Special thanks to Professor Alyson Flournoy for her feedback on an earlier draft.

1. Steven L. Kass & Jean M. McCarroll, *Judicial Review of EPA Air Quality Standards*, N.Y. L.J., July 12, 1999, at 7.

2. 175 F.3d 1027 (D.C. Cir. 1999), *modified on reh'g* by 195 F.3d 4 (D.C. Cir. 1999), *modified by* Michigan v. United States EPA, 213 F.3d 663 (D.C. Cir. 2000) (limiting the scope of American Trucking, stating “[w]here the scope increases to immense proportions ... the standards must be correspondingly more precise”) (citations omitted) *cert. granted sub nom.* American Trucking Ass’ns, Inc. v. Browner, 120 S. Ct. 2193 (2000).

3. See Kass & McCarroll, *supra* note 1, at 7.

decision in *American Trucking*, however, may have a limited effect if it is only applied to narrowly construed circumstances.⁴

The United States Constitution grants the legislative power exclusively to Congress, not to the President, courts, or governmental agencies.⁵ Nonetheless, the Supreme Court has long recognized that Congress may delegate legislative power to governmental agencies, provided that the legislative act limits the delegated power and provides a standard to guide the agency's actions.⁶ Thus, agencies are not creating law, they are executing the law within specific parameters in accordance with legislative intent.⁷ Delegating legislative power in this circumscribed manner allows Congress to be flexible in areas of law that require expertise, without violating the constitutional separation of power.⁸ Congress has delegated legislative power to the EPA under the Clean Air Act

4. *See id.*

5. *See* U.S. Const. art. I, § 1.

6. *See* U.S. Const. art. I, § 8, cl. 18 (authorizing Congress to make all laws necessary and proper to execute Congressional power); *see also* J.W. Hampton, Jr., & Co. v. United States, 276 U.S. 394, 409 (1928) (stating that power Congress delegated to the President was constitutional because Congress qualified the delegated power); *infra* Part II.A.

7. *See* J.W. Hampton, 276 U.S. at 407. Quoting Judge Ranney of the Ohio Supreme Court, the Court stated:

[t]he true distinction, therefore, is, between the delegation of power to make the law, which necessarily involves a discretion as to what it shall be, and conferring an authority or discretion as to its execution, to be exercised under and in pursuance of the law. The first cannot be done; to the latter no valid objection can be made.

Id. (quoting *Cincinnati, Wilmington & Zanesville, R.R. Co., v. Comm'rs. Ohio State* 77, 88 (852).

8. *See* *Panama Ref. Co. v. Ryan*, 293 U.S. 388, 421 (1935) (recognizing Congress' need to adapt to complex situations). As noted in section II of this article, *Panama Ref Co.* has been repeatedly distinguished in subsequent Court decisions.

9. *See* Clean Air Act § 109(b)(1), 42 U.S.C. § 7409(b)(1).

10. *See* Clean Air Act § 101(b)(1), 42 U.S.C. § 7401(b)(1). The CAA aspires to prevent pollution, *see id.* at § 101(c), 42 U.S.C. § 7401(c), through its main four purposes, provided in part:

1. to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population;
2. to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution;
3. to provide technical and financial assistance to State and local governments in connection with the development and execution of their air pollution prevention and control programs; and
4. to encourage and assist the development and operation of regional air pollution prevention and control programs.

Clean Air Act § 101 (b), 42 U.S.C. § 7401 (b).

Despite the statute's multiple purposes, agencies tend to simplify and emphasize only one main purpose. *See also* *Howard Latin, Regulatory Failure, Administrative Incentives, and the New Clean Air Act*, 21 *Envtl. L.* 1647, 1652 (1991).

(CAA) to revise national ambient air quality standards (NAAQS).⁹ The main legislative purpose behind the CAA is to “promote the public health,”¹⁰ a job more suited for the EPA to implement than Congress because of the scientific criteria involved in determining health effects of air pollutants and the NAAQS.¹¹ This delegation has presented problems when courts must rule on how much discretion the EPA should have. The EPA needs flexibility to address scientific uncertainty about the health effects of air pollution, yet if Congress delegated legislative authority to achieve that flexibility, the delegation may be unconstitutional.¹²

Denying broad discretion by the EPA may frustrate the legislative intent of protecting the public health underlying the CAA. Arguably, the public health was not protected when the court denied the EPA discretion in *American Trucking*.¹³ In *American Trucking*, the EPA promulgated a rule that lowered the ozone NAAQS from 0.09 parts per million (ppm) to 0.08 ppm.¹⁴ The rule was challenged and the District of Columbia Circuit Court struck down the rule, holding the EPA’s interpretation of the CAA was an unconstitutional delegation of legislative power.¹⁵ The court stated that the 0.08 ppm level for ozone must be based on an “intelligible principle,” a standard higher than “reasonableness.”¹⁶ Thus, the ozone NAAQS remains at 0.09 ppm where the EPA had determined that severe health effects are more certain than at 0.08 ppm.¹⁷ By not allowing the EPA to lower the NAAQS, the court arguably prevented the EPA from promoting the CAA’s policy of protecting the public health.

11. Cf. *Industrial Union Dep’t, AFL-CIO v. American Petroleum Inst.*, 448 U.S. 607, 690 (1980) (“The Benzene Case”) (5-4 decision) (Marshall, J., dissenting) (stating that the Secretary of Labor, not the courts, has the expertise to interpret OSHA in order to protect workers’ health and safety). Delegating power to an agency is more cost economical. See Gregory C. Ward, *Lussier v. Maryland Racing Commission: Maryland’s Court of Appeals Upholds a Fine Imposed by an Administrative Agency Despite a Lack of Specific Authorization to Fine from the General Assembly*, 27 U. Balt. L. Rev. 515, 529 (1998); see also Thomas J. Byrne, *The Continuing Confusion Over Chevron: Can the Nondelegation Doctrine Provide a (Partial) Solution?*, 30 Suffolk U. L. Rev. 715, 722 (1997) (explaining that “the agency will have the resources to continuously monitor the activities of the complex institutions that characterize our modern industrial society”).

12. See, e.g., *J.W. Hampton*, 276 U.S. at 409.

13. See *American Trucking*, 175 F.3d 1027 (D.C. Cir 1999).

14. See *id.* at 1035.

15. See *id.* at 1033.

16. See *id.* The court noted that if the EPA set the ozone NAAQS at a zero ppm level, this level would eliminate all health effects and satisfy the intelligible principle requirement despite being unreasonable. See *id.* at 1038.

17. See *id.* at 1035, 1059.

Although *American Trucking* contrasts with federal courts' general reluctance to apply the nondelegation doctrine, many state courts have adhered to a strict nondelegation doctrine.¹⁸ In Florida, courts require the state legislature to provide specific guidelines so that the legislative intent is clear and focused.¹⁹ While federal statutes are generally allowed to have broad standards,²⁰ more specific guidelines may be more effective to ensure that legislative intent is followed.

This Note compares governmental agencies' need for discretion with the need for strict legislative guidelines in an effort to promote legislative policies of protecting the public from potentially severe health effects. Part II discusses the Supreme Court's judicial development in the "intelligible principle," as the standard for a constitutional delegation of legislative power. Part III discusses agency discretion in interpreting statutes in Supreme Court decisions, focusing on health and environmental agencies. Part IV discusses the D.C. Circuit's analysis comparing the nondelegation doctrine with statutory interpretation. Part V comments on whether application of a strict nondelegation doctrine will impede or improve environmental protection.

I. THE NONDELEGATION DOCTRINE

A. *The Intelligible Principle*

The constitutional principle of separation of powers underlies the United States federal system of government.²¹ To keep Congress' legislative power separate from the executive and judicial branches of government, the Constitution limits Congressional delegation of

18. See Jim Rossi, *Institutional Design and the Lingering Legacy of Antifederalist Separation of Powers Ideals in the States*, 52 Vand. L. Rev. 1167, 1196-97 (1999) (noting that the courts of Florida, Texas, Arizona, Illinois, Kentucky, Massachusetts, Montana, Nebraska, Nevada, New Hampshire, New Mexico, New York, Ohio, Oklahoma, Pennsylvania, South Dakota, South Carolina, Virginia, and West Virginia all ascribe to a strict nondelegation doctrine).

19. See *Askew v. Cross Key Waterways*, 372 So. 2d 913, 918-19 (Fla. 1979) (holding that environmental regulation allowing local governments to designate areas of critical concern violated the nondelegation doctrine because it failed to clarify the legislative policy). Florida land use law has gained national importance because its state comprehensive plan is "'intended to be a direction-setting document.'" JULIAN CONRAD JUERGENSMEYER & THOMAS E. ROBERTS, *LAND USE PLANNING AND CONTROL LAW*, § 13.7 (1998) (quoting FLA. STAT. § 187.101(2)).

20. See *infra* note 60.

21. See generally *Mistretta v. United States*, 488 U.S. 361, 371-72 (1989) (discussing whether the Sentencing Commission's sentencing guidelines violated the separation of powers principle).

legislative power to the other branches of government; courts have referred to this principle as the nondelegation doctrine.²² The nondelegation doctrine, however, does not entirely prevent Congress from delegating legislative power because the Supreme Court has recognized Congress' need for assistance.²³ When, then, can Congress delegate its legislative power?

The Supreme Court first answered this question in *J.W. Hampton, Jr., & Co. v. United States*.²⁴ In *J.W. Hampton*, Congress, under the Tariff Act, delegated power to the President to regulate foreign commerce by adjusting rates of duty.²⁵ This delegation of legislative power was protested as being unconstitutional because "[t]here was no specific provision by which action by the President might be invoked under this act."²⁶ Arguably, Congress violated the constitutional principle of separation of powers by giving its legislative power to the President.²⁷ Regardless, the Court held that the Tariff Act satisfied the nondelegation doctrine because it was based on an "intelligible principle," which makes a congressional delegation permissible.²⁸ Although Congress cannot simply give the President legislative power to regulate foreign commerce, "[i]f Congress shall lay down by legislative act an intelligible principle to which the

22. See *id.*; see also David Schoenbrod, *Delegation and Democracy: A Reply to My Critics*, 20 *Cardozo L. Rev.* 731, 735-36 (1999). The delegation of legislative power may be undemocratic if laws emerging from agencies do not reflect legislative ideologies. See *id.* at 743-44. Furthermore, judicial review of agency decision making is inconsistent with our representative form of government because judicial ideologies may conflict with legislative ideologies. See Byrne, *supra* note 11, at 716-17.

23. See *Mistretta*, 488 U.S. at 371-72; see also sources cited *supra* note 11.

24. See *J. W. Hampton*, 276 U.S. 394 (1928).

25. See *id.* at 401. Section 315(a) of the Tariff Act provides, in relevant part:

That in order to regulate the foreign commerce of the United States and to put into force and effect the policy of the Congress by this act intended, whenever the President, upon investigation of the differences in costs of production of articles wholly or in part the growth or product of the United States and of like or similar articles wholly or in part the growth or product of competing foreign countries, shall find it thereby shown that the duties fixed in this act do not equalize the said differences in costs of production in the United States and the principal competing country he shall, by such investigation, ascertain said differences and determine and proclaim the changes in classifications or increases or decreases in any rate of duty provided in this act shown by said ascertained differences in such costs of production necessary to equalize the same.

Id.

26. *Id.* at 405.

27. See *Mistretta*, 488 U.S. at 371-72. The separation of powers doctrine does not typically allow Congress to delegate its legislative power to other branches of the government. See *id.*

28. See *J.W. Hampton*, 276 U.S. at 409. One commentator explains that Congress is allowed to delegate legislative power under the Necessary and Proper Clause of the Constitution. See Ward, *supra* note 11, at 520-21.

person or body authorized to fix such rates is directed to conform, such legislative action is not a forbidden delegation of legislative power."²⁹ Thus, the "intelligible principle" represents the guidelines that Congress must establish when delegating legislative power.

The *J.W. Hampton* Court gave several reasons for holding that the Tariff Act contained an "intelligible principle."³⁰ First, the congressional intent was clear; Congress intended for the President to impose customs duties on imported foreign merchandise to equalize the difference between the cost of production in a foreign country and the cost of sales in the United States.³¹ The tariffs would allow domestic producers to compete with foreign producers.³² Second, because of changing future conditions inherent in a fluctuating market, Congress was not able to set fixed tariff rates.³³ This fact justified the Tariff Act provision allowing the President to adjust tariff rates as necessary.³⁴ Third, the Tariff Act required the President to investigate tariff rates with the assistance of the United States Tariff Commission, a commission "appointed under Congressional authority."³⁵ Fourth, the Tariff Act provided specific criteria that the President must consider.³⁶ Thus, Congress had authority to delegate legislative power by providing an "intelligible principle" that sufficiently limited and guided the President.³⁷

B. Violating the Constitution

Only a few years after *J.W. Hampton*, the Court decided two cases holding Congressional acts to be unconstitutional delegations of

29. *J.W. Hampton*, 276 U.S. at 409. The theory is that "Congress retains the power to enact a statute." Schoenbrod, *supra* note 22, at 738-39.

30. *See J.W. Hampton*, 276 U.S. at 401-02, 404, 407-08.

31. *See id.* at 404-05.

32. *See id.* at 404.

33. *See id.* at 404-05.

34. *See id.* The Court noted that Congress was making the law to be executed by the President. *See id.* at 407.

35. *Id.* at 409.

36. *See id.* at 401-02. The criteria provided, in relevant part:

1. the differences in conditions in production, including wages, costs of material, and other items in costs of production of such or similar articles in the United States and in competing foreign countries;
2. the differences in the wholesale selling prices of domestic and foreign articles in the principal markets of the United States;
3. advantages granted to a foreign producer by a foreign government, or by a person, partnership, corporation, or association in a foreign country; and
4. any other advantages or disadvantages in competition.

Id.

37. *See id.* at 409.

legislative power.³⁸ At issue in *Panama Refining Co. v. Ryan*, was congressional authorization for the President to “prohibit the transportation in interstate and foreign commerce of petroleum” under section 9(c) of the National Industrial Recovery Act (NIRA).³⁹ By executive order, the President approved the “Petroleum Code” which provided quotas for producing petroleum.⁴⁰ Panama Refining Company, an oil refining plant, argued that section 9(c) of NIRA exceeded Congress’ constitutional power.⁴¹ The Court agreed.⁴² Acknowledging that the general policy under NIRA was clear and that Congress needed flexibility to adapt to complex conditions,⁴³ the Court still held section 9(c) of NIRA to be unconstitutional.⁴⁴ Policy and the need for flexibility alone did not sufficiently establish an “intelligible principle.”⁴⁵ The Court stated that section 9(c) of NIRA was unconstitutional because it failed to qualify or limit the power delegated to the President.⁴⁶ In other words, section 9(c) of NIRA failed to provide criteria that would guide the President’s discretion.⁴⁷

Within a year of *Panama Refining*, the Court again held a legislative act to be an unconstitutional delegation of legislative power because Congress failed to provide the President with a guiding intelligible principle. In *A.L.A. Schechter Poultry Corp. v. United States*,⁴⁸ the President approved the “Live Poultry Code” pursuant to section 3 of NIRA.⁴⁹ Section 3 authorized the President to approve “code of fair competition,” it failed, however, to define

38. See *A.L.A. Schechter Poultry Corp. v. United States*, 295 U.S. 495 (1935); *Panama Ref. Co. v. Ryan*, 293 U.S. 388 (1935). As noted in section II of this article, both of these cases have been repeatedly distinguished in subsequent decisions.

39. See *Panama Ref. Co.*, 293 U.S. at 406.

40. See *id.* at 410.

41. See *id.* at 410-11, 433.

42. See *id.* at 433.

43. See *id.* at 417. The policy of the National Industrial Recovery Act was to prevent unemployment, increase consumer and industrial spending, raise labor standards, and promote conservation. See *id.*

44. See *id.* at 415.

45. See *id.*

46. See *id.* The Court suggested if the President were merely an agent of Congress, the delegation of legislative power would be constitutional; but not if the President had unlimited power to make the law. See *id.* at 426.

47. See *id.* at 415. Arguably, even if agencies are constrained, there is no guarantee that what they produce will be good. See Schoenbrod, *supra* note 22, at 763.

48. See *A.L.A. Schechter Poultry Corp. v. United States*, 295 U.S. 495 (1935). As noted in section II of this article, *Schechter Poultry* has been repeatedly distinguished in subsequent Court decisions.

49. See *id.* at 521-22.

“fair competition.”⁵⁰ Hence, the Court compared section 3 of NIRA to section 5 of the Federal Trade Commission Act (FTCA), which authorized the Federal Trade Commission to approve “unfair methods of competition.”⁵¹ Although section 5 of the FTCA was constitutional, the Court held that section 3 of NIRA was not.⁵²

The Court explained section 5 of the FTCA created a commission to review any action taken under the Act.⁵³ Moreover, section 5 of the FTCA set up a special procedure including hearings and appropriate findings of fact that would only apply in particular circumstances.⁵⁴ In contrast, section 3 of NIRA had a much broader range than section 5 of the FTCA.⁵⁵ The broad policy of NIRA itself did not sufficiently restrict the President.⁵⁶ Section 3 of NIRA failed to provide a standard to guide the President; specifically, it did not require an administrative procedure for the President to follow nor a commission to assist the President as FTCA did.⁵⁷

After *Schechter Poultry* in 1935, the Court appeared not only to have created a standard for delegating legislative power, but also appeared prepared to apply that standard strictly. Thus, despite clear legislative intent to guide the exercise of delegated power and Congress’ need for flexibility, the intelligible principle appeared to require something more.⁵⁸ When Congress delegates legislative power, it must provide specific criteria to constrain the delegated power and satisfy the nondelegation doctrine.⁵⁹ Lastly, after *J.W. Hampton*, *Panama Refining*, and *Schechter Poultry*, the Court seemed

50. *See id.* at 523 n.4, 531. The National Industrial Recovery Act provided, in relevant part: “[u]pon the application to the President by one or more trade or industrial associations or groups, the President may approve a code or codes of fair competition for the trade or industry or subdivision thereof.” *Id.* at 523 n.4.

51. *See id.* at 532-33.

52. *See id.* at 533-34.

53. *See id.*

54. *See id.*

55. *See id.*

56. *See id.* at 538-39. The NIRA did provide two restrictions on the President’s delegated power, but the Court found these restrictions insufficient. *See id.* at 538. First, when approving a code of fair competition, the President must find that the applicant group or association imposes no inequitable restrictions on admission to the group. *See id.* The Court found this restriction applied only to applicants and did not limit the scope of the President’s delegated power. *See id.* Secondly, the codes the President approves must not promote monopolies. *See id.* The Court found this second restriction insufficient as well because it left open too many legislative possibilities for the President. *See id.*

57. *See id.* at 539.

58. *See J.W. Hampton, Jr. & Co. v. United States*, 276 U.S. 394, 401-02, 408 (1928); *see also A.L.A. Schechter Poultry Corp. v. United States*, 295 U.S. 495, 538-39 (1935); *Panama Ref. Co. v. Ryan*, 293 U.S. 388, 415 (1935). As noted in section II of this article, *Schechter Poultry* and *Panama Ref. Co.* have been repeatedly distinguished in subsequent Court decisions.

59. *See J.W. Hampton*, 276 U.S. at 404-05.

most concerned about Congress delegating power solely to the President; yet when a legislative act required a commission to assist the President, the Court seemed much more willing to uphold the act's constitutionality.⁶⁰

II. STATUTORY INTERPRETATION

Schechter Poultry, however, was the last in that series of cases in which the Court held a delegation of legislative power unconstitutional.⁶¹ In the 1940's, the Court decided several cases addressing the nondelegation doctrine with much more leniency, practically making the nondelegation doctrine a non-issue.⁶² However, in all these cases the Court upheld the delegation of legislative power to governmental agencies rather than the President, as in *Panama Refining* and *Schechter Poultry*.⁶³ The Court seemed to prefer that Congress delegate authority to agencies rather than the President, continuing the trend that began in 1928 with *J.W. Hampton* and the Court's emphasis on whether a mandatory commission assisted the President.

Beginning in the 1970's, Congress passed numerous health and environmental acts.⁶⁴ Even though Congress permissibly delegated power to health and environmental agencies, some courts held that an agency's interpretation of the relevant statute was impermissible.⁶⁵ Thus, even if a statute with broad guidelines survives an improper delegation attack, an agency's interpretation of

60. See *id.* at 407-08 (upholding a delegation of legislative power to the President where Congress required a commission to assist the President); see also *Schechter Poultry*, 295 U.S. at 538-39 (rejecting a delegation of legislative power to the President where the assistance of a commission was optional).

61. See Ward, *supra* note 11, at 529.

62. See, e.g., *Lichter v. United States*, 334 U.S. 742, 785 (1948) (stating that when Congress "lay[s] down by legislative act an intelligible principle," a specific formula is not necessary so long as an agency interprets the act by considering the act's purpose within statutory context) (quoting *J.W. Hampton Co. v. United States*, 276 U.S. 394, 409 (1928)); *Yakus v. United States*, 321 U.S. 414, 420, 426 (1944) (stating that the standards of the Emergency Price Control Act are sufficiently definite and precise to be a constitutional delegation of legislative power); *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591, 600-01 (1944) (stating the "just and reasonable" standard of the Natural Gas Act was a constitutional delegation of legislative power despite the act's failure to express a specific rule).

63. Compare *supra* note 62 with *supra* Part II.B.

64. See, e.g., National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321, et. seq. (1994); Clean Water Act of 1972, 33 U.S.C. §§ 1251, et. seq. (1994); Clean Air Act of 1977, 42 U.S.C. §§ 7401, et. seq. (1990).

65. See *Chevron v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984) (holding that EPA permissibly defined a statutory term of the CAA) *rev'g* *Natural Resources Defense Council, Inc. v. Gorsuch*, 685 F.2d 718 (D.C. Cir. 1982); *The Benzene Case*, 448 U.S. 607 (1980) (holding Secretary of Labor's interpretation of OSHA to be invalid).

that statute may be subject to close scrutiny because the statutory guidelines are so broad. The statutory interpretation issue is closely related to the issue of whether Congress should provide more specific guidelines under the nondelegation doctrine.

A. Broad Agency Discretion

The leading case addressing an agency's interpretation of a legislative act is *Chevron v. Natural Resources Defense Council, Inc.*, where the EPA's interpretation of an undefined term was challenged.⁶⁶ Congress amended the CAA in 1977 to require permits regulating "stationary sources."⁶⁷ The EPA defined "stationary sources" using a plant-wide definition (the "bubble concept"); thus, if a plant installed a new pollution-emitting device that violated permit conditions by itself, the plant could still obtain a permit so long as the total emissions from the plant satisfied the permit conditions.⁶⁸ Even though the EPA's definition merely maintained air quality rather than improving it, the Court held that the EPA acted reasonably.⁶⁹

Attempting to settle the issue of an agency's discretion to interpret statutes, the Court established a two-part test for reviewing an agency's interpretation of a legislative act.⁷⁰ First, if Congress has directly addressed the issue under review, there is nothing for the agency to interpret.⁷¹ However, in *Chevron*, "stationary source" was not defined, which prompted step two of the *Chevron* test.⁷² If Congress is silent on a particular issue, the agency must then interpret the statute.⁷³ Courts should not overrule an agency's interpretation if the interpretation is reasonable.⁷⁴ Oftentimes, however, the legislative delegation is implicit and the agency should then have broad discretion in interpreting the act.⁷⁵

66. See *Chevron*, 467 U.S. at 841.

67. See *id.* at 848.

68. See *id.* at 847-48.

69. See *id.* at 845. The Court acknowledged that the EPA's interpretation failed to promote the CAA's purpose of improving air quality, yet the Court avoided this problem by stating that the EPA's interpretation, in this particular permit program within the CAA, was reasonable. See *id.*

70. See *id.* at 842-43.

71. See *id.* at 842.

72. See *id.* at 843.

73. See *id.*

74. See *id.* at 845.

75. See *id.* at 862.

B. Scientific Uncertainty

Broad discretion can be an important tool for agencies in furthering legislative intent, even though the EPA arguably failed to use its discretion for this purpose in *Chevron*.⁷⁶ Health and environmental statutes are generally designed to protect the public against adverse health effects that are often scientifically uncertain.⁷⁷ With broad discretion, agencies can account for the uncertainty in assessing health effects by providing a margin of error and by providing adequate protection for public health and the environment, consistent with the general purpose of such health and environmental statutes. Additionally, agencies, rather than courts, have the knowledge to determine the margin of safety from adverse health effects.

Scientific uncertainty about adverse health effects was a major issue in the *Benzene*⁷⁸ decision, which the Court decided four years before *Chevron*. In *Benzene*, the Occupational Safety and Health Administration (OSHA) promulgated a standard that lowered workers' permissible exposure to benzene because OSHA determined that a causal connection between benzene and leukemia existed.⁷⁹ The Occupational Safety and Health Act (Act) mandated that OSHA promulgate standards "to provide safe or healthful employment."⁸⁰ OSHA's standard was challenged and the Court struck it down because OSHA failed to show that the pre-existing standard created a risk of harm that rendered the revised standard "necessary," even though OSHA had more expertise than the Court to make that determination.⁸¹ Thus, the Court concluded that to justify lowering permissible exposure levels OSHA must provide some certainty of a risk of harm; and that reducing exposure levels was impermissible without proof of the existence of harm and

76. See *id.* at 845.

77. See Wendy E. Wagner, *Congress, Science, and Environmental Policy*, 1999 U. Ill. L. Rev. 181, 192 (1999). Often scientific knowledge is not definitive because experiments on animals must be extrapolated to humans, and effects of high doses found in experiments must be extrapolated to realistic dose exposure. See *id.*; see also Thomas O. McGarity, *A Cost-Benefit State*, 50 Admin. L. Rev. 7, 12-13 (1998) (discussing the scientific uncertainty in assessing health risks).

78. See *The Benzene Case*, 448 U.S. 607 at 625. See *Chevron v. Natural Resources Defense Council, Inc.* 467 U.S. 837 (1984).

79. See *The Benzene Case* at 613.

80. *Id.* (citations omitted).

81. See *id.* at 634-35.

demonstrating the need for a lower permissible exposure level to achieve a minimum level of safety.⁸²

Justice Marshall recognized, in his dissent, that when assessing health risks agencies often consider issues on which there is no present scientific certainty when assessing health risks.⁸³ Justice Marshall also noted that after extensive hearings where OSHA rigorously questioned “epidemiologists, toxicologists, [and] physicians,”⁸⁴ OSHA determined that no safe level of benzene existed and that the health risks declined as the level of exposure declined.⁸⁵ Courts could not expect OSHA to find a safe exposure level that avoided a definitive risk of harm if one did not exist. If OSHA had had the benefit of broad discretion established in *Chevron*, decided after *Benzene*, OSHA arguably could have promoted the Act’s policy of protecting workers’ health with its interpretation of the statute as requiring a reduction in exposure to benzene to achieve an acceptable level of safety.⁸⁶ Instead, the *Benzene* majority effectively left workers exposed to higher levels of benzene and a greater risk of leukemia, despite OSHA’s scientific studies.⁸⁷ In essence, the Court substituted its determination of an appropriate level of scientific certainty for that of the agency’s.⁸⁸

The Supreme Court in *Benzene* and *Chevron* reviewed agency discretion in the interpretation of statutes where the nondelegation doctrine was not an issue. In *Benzene*, OSHA arguably was not accorded enough discretion to effectively promote the purpose of the Act;⁸⁹ whereas in *Chevron*, the EPA had so much discretion that it was not required to strictly follow the purpose of the CAA.⁹⁰ Part of the problem is that statutes rarely have one single, clear purpose.

82. *See id.* The Court stated that absolute certainty was not necessary; nonetheless, by requiring a minimum level of safety, the Court required at least some certainty. *See id.* at 642.

83. *See* The Benzene Case, 448 U.S. 607, 690, 706 (Marshall, J., dissenting).

84. *Id.* at 696.

85. *See id.* at 707.

86. Although science may not be able to provide certainty regarding safe exposure levels, it can help narrow down the search for safe levels. *See* Wagner, *supra* note 77, at 187.

87. *See* The Benzene Case, 448 U.S. at 706-07 (Marshall, J., dissenting).

88. *See generally id.* at 712-13 (Marshall, J., dissenting).

89. *See id.* at 705-07 (Marshall, J., dissenting).

90. *See Chevron*, 467 U.S. 837 at 845 (stating “Once [The Court of Appeals] determined after its own examination of the legislation, that Congress did not actually have an intent regarding the applicability of the bubble concept to the permit program, the question before it was ... whether the Administrator’s view that it is appropriate in the context of this particular problem is a reasonable one.”).

Thus, both courts and agencies may have difficulty in determining whether legislative policy has been promoted.⁹¹

Although neither *Benzene* nor *Chevron* addressed the non-delegation doctrine, doing so may have helped to avoid the problem of agency decisions potentially disregarding the environment and the public health. A strict nondelegation doctrine may have helped to clarify legislative policy by requiring the legislature to provide specific guidelines articulating legislative policy.⁹² For example, the Supreme Court of Florida has suggested when enacting statutes that the state legislature should prioritize policies to help agencies determine how heavily to weigh various factors when considering environmental and health effects.⁹³ Hence, the nondelegation doctrine appears to have an impact beyond the separation of powers doctrine by affecting an agency's statutory interpretation of legislative intent.

III. THE DISTRICT OF COLUMBIA CIRCUIT COURT'S INTERPRETATION OF STATUTORY INTERPRETATION

A. *Separating the Issues*

The nondelegation issue and the statutory interpretation issue overlap. Courts may choose to avoid the nondelegation issue and decide a case by addressing an agency's interpretation of a statute for two reasons. First, in federal courts, the nondelegation doctrine has appeared to be a non-issue since *Schechter Poultry*, although it has not been completely ignored.⁹⁴ Secondly, the canon of judicial restraint provides courts with a means of avoiding constitutional issues if a case can be decided on non-constitutional grounds.⁹⁵ A court's rejection of an agency's statutory interpretation where the statutory language is broad and open-ended, however, stems from the similar problem of a determination that the statute lacks an intelligible principle.⁹⁶ Whether the issue is considered to be constitutional or not may affect what standard of review applies.⁹⁷ The District of

91. See *Latin*, *supra* note 10, at 1648 (stating that "the gap between the text and implementation of environmental laws has grown so wide that most regulatory practices cannot be understood by studying the applicable legislation").

92. See *Askew v. Cross Key Waterways*, 372 So. 2d 913, 918-19 (Fla. 1979).

93. See *id.* at 919-21.

94. See *Ward*, *supra* note 11, at 529.

95. See *id.* at 534-35.

96. See *id.* at 535-36.

97. Compare *American Trucking*, 175 F.3d at 1034 (stating the nondelegation doctrine requires an intelligible principle, a standard higher than reasonableness), with *Rust v. Sullivan*,

Columbia Circuit Court (D.C. Circuit), which reviews administrative law issues regularly and more frequently than the Supreme Court,⁹⁸ may help to illustrate the similarities between the nondelegation doctrine and statutory interpretation.

In *Lead Industries Association v. EPA*, the D.C. Circuit reviewed the EPA's promulgation of ambient air quality standards under the CAA.⁹⁹ One issue was whether the EPA had the authority to institute revised standards.¹⁰⁰ The court stated that the issue was one of statutory interpretation, and that the EPA's interpretation of the CAA to allow only the consideration of health factors was reasonable, thus according the EPA broad discretion.¹⁰¹

In comparison, the *Lead Industries* court could have addressed the same issue as a nondelegation issue. The court stated that the underlying question was whether the EPA had the authority to promulgate the revised standards.¹⁰² For the EPA to have authority, Congress must have properly delegated legislative power to the EPA by providing an intelligible principle.¹⁰³ The court even referred to specific statutory guidelines that could be considered an intelligible principle.¹⁰⁴

B. Confusing the Issues

Similar to *Lead Industries*, the issue in *American Trucking* was EPA interpretation of the CAA.¹⁰⁵ However, the *American Trucking* court addressed the issue as a nondelegation problem instead of as a statutory interpretation problem.¹⁰⁶ The *American Trucking* court held that the EPA's interpretation of the CAA violated the

500 U.S. 173, 189-90 (1991) (stating that the Secretary of Health and Human Services' statutory construction was sufficient because the Secretary's interpretation was reasonable).

98. See Ronald M. Levin, *The Anatomy of Chevron: Step Two Reconsidered*, 72 Chi.-Kent L. Rev. 1253, 1262-63 (1997) (discussing statutory interpretation under Chevron).

99. See *Lead Industries*, 647 F.2d 1130 (D.C. Cir. 1980).

100. See *id.* at 1148.

101. See *id.* at 1147-49.

102. See *id.* at 1147.

103. See *supra* Part II.

104. See *Lead Industries*, 647 F.2d at 1147-49, 1161. The court stated that under the CAA the EPA can only consider health factors, and not cost or technology. See *id.* at 1147-49. Furthermore, the court upheld three specific health factors: "the amount of uncertainty involved, the size of the population affected, and the severity of the effect." *Id.* at 1161.

105. See *American Trucking* 175 F.3d 1033 (D.C. Cir. 1999), modified on reh'g by 195 F.3d 4 (D.C. Cir. 1999), modified by *Michigan v. United States EPA*, 213 F.3d 663 (D.C. Cir. 2000) (limiting the scope of *American Trucking*, stating "[w]here the scope increases to immense proportions ... the standards must be correspondingly more precise") (citations omitted) cert. granted sub nom. *American Trucking Ass'ns, Inc. v. Browner*, 120 S. Ct. 2193 (2000).

106. See *id.* at 1034-40.

nondelegation problem because the EPA failed to articulate an intelligible principle.¹⁰⁷ The court seemed to be confusing the nondelegation doctrine with statutory interpretation.

Typically, when the nondelegation doctrine is violated, Congress, and not the EPA, has failed to articulate an intelligible principle.¹⁰⁸ Hence, if a court determines that the nondelegation doctrine is violated, the court will strike the unconstitutional statutory provision.¹⁰⁹ The *American Trucking* court instead stated that the EPA failed to articulate an intelligible principle and struck the EPA's interpretation.¹¹⁰

In addressing the constitutional issue of nondelegation, the court stated that the EPA failed to articulate an intelligible principle, a standard higher than reasonableness.¹¹¹ If the issue was statutory interpretation, under *Lead Industries* and *Chevron* the standard would merely have been reasonableness.¹¹² Arguably, because the EPA was interpreting the CAA, the court should have applied a non-constitutional standard of reasonableness applicable to statutory interpretation.

IV. CONCLUSION

In effort to further the legislative policies of protecting the environment and the public health, the amount of discretion a court accords an agency may determine whether an agency is successful. In *Lead Industries*, the EPA successfully revised the NAAQS to reduce air pollution because the court was deferential to the EPA's interpretation of the CAA.¹¹³ Yet in a similar case, the *American Trucking* court rejected the EPA's interpretation of the CAA, which left the pre-existing NAAQS intact.¹¹⁴ In comparison, the *Benzene* Court effectively substituted its own interpretation for OSHA's.¹¹⁵ The *Benzene* dissent argued that OSHA should have been accorded more discretion because OSHA has more scientific expertise than the courts, which was needed to address the problem of scientific uncertainty.¹¹⁶ The Court's majority, however, was not deferential to

107. See *id.* at 1034.

108. See *supra* Part II.

109. See *id.*

110. See *American Trucking*, 175 F.3d at 1034-40.

111. See *id.* at 1034.

112. See *supra* Parts III.A and IV.A.

113. See *Lead Industries*, 647 F.2d at 1147-49.

114. See *American Trucking*, 175 F.3d at 1034-40.

115. See generally *The Benzene Case*, 448 U.S. 607.

116. See *id.* at 690 (Marshall, J., dissenting).

OSHA's interpretation despite OSHA's attempt to protect the public health.¹¹⁷

Nonetheless, if agencies are accorded broad discretion, they will not necessarily use it to benefit the environment.¹¹⁸ In *Chevron*, the EPA had broad discretion yet it chose to interpret the CAA in a manner that merely maintained the air quality rather than promote cleaner air.¹¹⁹ Despite its policy of promoting air quality, the CAA also contains other purposes and policies.¹²⁰ Broad discretion allows an agency the freedom to interpret the hierarchy of multiple purposes and policies. Therefore, because the CAA has several broad policies, the *Chevron* decision suggests that the EPA has the power to mold its actions to fit within any one of the CAA's policies.¹²¹

The *American Trucking* court's attempt to revive the non-delegation doctrine could be used to guide agencies to protect the environment and the public health. If legislative policy is too broad, as it arguably was in *Chevron*, a strict nondelegation doctrine may help to focus legislative policy by requiring the legislature to articulate an intelligible principle.¹²² For example, some state courts have suggested that the legislature prioritize its policies.¹²³

While the nondelegation doctrine may address the problem of broad, unclear legislative policy, it may create other problems. One problem the nondelegation's revival may cause is the confusion of constitutional and non-constitutional issues.¹²⁴ The non-delegation doctrine is generally an issue when statutory language is broad, yet this can also be viewed as a statutory interpretation issue that should be within an agency's discretion. Although these two issues are similar, the intelligible principle standard of the nondelegation doctrine is a standard higher than the reasonableness standard of statutory interpretation.¹²⁵

Another problem with reviving the nondelegation doctrine is that it may defeat the purpose of allowing Congress to delegate the

117. See generally *id.*

118. See *supra* note 47.

119. See *Chevron*, 467 U.S. at 862-63; see also *Latin*, *supra* note 10, at 1648 (stating that effective environmental regulation requires "good implementation, not good legislative intentions").

120. See *supra* note 10.

121. See *Latin*, *supra* note 10, at 1654, 1657, 1666-67 (noting agencies often act according to political and social pressures as well as personal motives).

122. See *Askew v. Cross Keys Waterways*, 372 So. 2d 913, 918-19 (Fla. 1979).

123. See *id.* at 919-21.

124. See *supra* Part IV.

125. See *American Trucking*, 175 F.3d at 1034.

need for agency expertise and flexibility. The intelligible principle requires more than just a prioritization of legislative policies, Congress must provide specific guidelines.¹²⁶ Thus, the revival of the nondelegation doctrine could force Congress to provide standards that would more appropriately be determined by an agency because of the agency's expertise.¹²⁷

The conflicting concepts of delegation and discretion each have advantages and disadvantages that may be used towards protecting the environment and public health. Whether or not the nondelegation doctrine is revived, environmental protection will likely depend on the interplay between Congress, agencies, and the courts. Congress has the power to determine the shape of agency discretion.¹²⁸ Agencies with broad discretion have the power to interpret broad statutory language.¹²⁹ Courts have the power to strike either a statutory provision or an agency's interpretation of that provision.¹³⁰ Therefore, although a revived nondelegation doctrine may confirm environmentalists' worst fears regarding environmental protection, the doctrine could have the opposite effect by forcing Congress to strengthen environmental law.¹³¹

126. See *supra* Part II.

127. See Latin, *supra* note 10, at 1653 (more detailed statutes will not necessarily solve the problem of discrepancies between the policy and the implementation of environmental laws).

128. See *supra* Part II.A.

129. See *supra* Part III.A.

130. See *supra* Part IV.B.

131. To some extent, the D.C. Circuit has already mitigated the impact of *American Trucking*. See *Michigan v. United States EPA*, 213 F.3d 663, 680 (D.C. Cir. 2000) (limiting the scope of *American Trucking*, stating "[w]here the scope increases to immense proportions ... the standards must be correspondingly more precise") (citations omitted).

RECENT DEVELOPMENTS

LUKE G. SHERLOCK[?]

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INTRODUCTION

This section highlights recent developments in federal and state environmental and land use case law, as well as notable legislation recently passed by the Florida Legislature. In addition to the sources cited in this section, the reader is encouraged to consult the official website of the Florida Legislature at <www.leg.state.fl.us>, the Florida Department of Environmental Protection's website at <www.dep.state.fl.us>, and the Florida Department of Community Affairs' website at <www.dca.state.fl.us>. Other useful sources the reader may wish to consult include the website of the Environmental Land Use Section of the Florida Bar, <www.eluls.org>, and the FLORIDA ENVIRONMENTAL COMPLIANCE UPDATE, available through M. Lee Smith Publishers, LLC, <www.mleesmith.com>.

I. FEDERAL DECISIONS

Mobil Oil Exploration and Producing Southeast, Inc. v. United States;
Marathon Oil Co. v. United States
120 S. Ct. 2423 (2000)

In *Mobil Oil*, the Court reversed a Federal Circuit decision denying restitution to oil companies who had paid \$156 million to the United States for the rights to explore and develop oil off the North Carolina coast.¹ The Court held the government's unilateral

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1. See *Mobil Oil Exploration & Producing Southeast, Inc. v. United States*, 120 S.Ct. 2423 (2000).

suspension of an oil lease contract, authorized by a statute enacted after the contract was executed, was a breach for which restitution could be sought.

Mobil Oil and Marathon Oil were seeking restitution of \$156 million they had paid the United States "in return for lease contracts giving them rights to explore for and develop oil off the North Carolina coast."² The companies successfully argued that the contracts were conditioned on acquiring additional governmental permissions and that denial of certain "permission-seeking opportunities"³ amounted to a repudiation of the contracts by the government, entitling the companies to restitution according to the Restatement of Contracts.⁴ The Court accepted the argument that the law treats contracts between the United States and private individuals, as if the United States were a private individual.⁵

At issue were two contract provisions requiring the oil companies to "prepare and obtain Department of Interior approval for a Plan of Exploration"⁶ and "obtain an explanatory well drilling permit."⁷

The companies submitted an initial Exploration Plan, approved by Interior in 1990, before the Outer Banks Protection Act came into effect. The final Exploration Plans, however, were submitted after enactment of the OBPA.⁸ Under that statute, Interior approval of Exploration Plans and Development and Productions Plans was now subject to several new conditions and requirements.⁹ The Secretary of Interior accordingly wrote the Governor of North Carolina, copying to Mobil, that the Plan was "approvable in all respects,"¹⁰ but that OBPA "prohibits the approval of any Exploration Plan at this time."¹¹ In addition, the letter granted a suspension of the lease at issue.¹² Eighteen months later the Secretary received the new panel's report and stated that he would not consider the Exploration Plan until the oil company did further studies.¹³ North Carolina then "objected to the companies' CZMA [Coastal Zone Management Act

2. *Id.* at 2429.

3. *Id.*

4. *See id.* (citing Restatement (Second) of Contracts § 373).

5. *See id.*

6. *See id.* at 2430.

7. *See id.*

8. *See id.*

9. *See id.*

10. *See id.*

11. *Id.* at 2432.

12. *See id.*

13. *See id.*

of 1972] consistency certification," a requirement of the contracts, claiming that Mobil did not provide enough information on possible environmental impacts.¹⁴ The OBPA was repealed in 1996.¹⁵

The Government put forth three arguments in its defense: (1) "it did not breach the contracts or communicate intent to do so;"¹⁶ (2) if there was a breach, it was not "substantial;"¹⁷ (3) either way, the oil companies "waived their rights to restitution."¹⁸ The court refused all three arguments.

As to the "no breach" defense, the Court stated first, that the OCSLA provision that allowed a lessee to suspend operations or activities did not apply to the lessor, here the United States, and was therefore unconvincing.¹⁹ Second, the OPBA provision allowing suspension of activities pending an environmental analysis was not in effect at the time the contract was executed.²⁰ The Court limited contract language referring to "all other applicable ... regulations"²¹ to "include only statutes and regulations already existing at the time of the contract ..." and future regulations issued pursuant to those statutes and regulations.²³ Third, Interior stated that the Exploration Plan "fully complied" with the current legal requirements; arguing non-compliance with the OPBA was unpersuasive as the new requirements were not a condition in the contract.²⁴ Fourth, Interior did not have the authority to impose an approval delay under any of the regulations it referred to.²⁵ Finally, Interior, "in communicating its intent to follow the OBPA" communicated its intent to breach the contract.²⁶

The Court disagreed with Government's claim that the breach was not substantial.²⁷ The companies purchased a promise from the Government that it would not deviate from the standards and procedures it set out in the contracts, but it did.²⁸ The Court held that

14. *See id.*

15. *See id.*

16. *Id.* at 2433.

17. *Id.*

18. *Id.*

19. *See id.*

20. *See id.*

21. *Id.*

22. *Id.*

23. *See id.*

24. *Id.* at 2434.

25. *Id.*

26. *Id.* at 2435.

27. *See id.* at 2435-36.

28. *See id.* at 2436.

the Government promised a “timely and fair consideration of a submitted Exploration Plan” but did not deliver one.²⁹ Although the oil companies only purchased a conditional promise, “a gateway to the companies’ enjoyment of all other rights,”³⁰ “[t]o significantly narrow that gateway”³¹ amounted to a substantial breach of the contract.³²

The Court was also not persuaded by the the Government’s last argument, that the companies waived their right to restitution.³³ First, the companies submitting their Exploration Plans after the OBPA became law did not amount to continued performance, as the companies received nothing with respect to those plans.³⁴ Second, the Secretary, as advised by the OPBA created review panel rejected the companies’ appeal of North Carolina’s CZMA consistency certificate objections.³⁵ The Court stated the Secretary’s actions did not rise to the kind of consideration called for under the contracts.³⁶ Third, the suspension of the leases does not amount to significant performance because the companies were already entitled to these suspensions under a separate agreement.³⁷ Finally, the fact that the companies had not met the CZMA consistency requirements missed the mark.³⁸ The companies here were seeking restitution of their initial payments, which they were entitled to because of the Government’s repudiation of the lease contracts – whether or not they “would, or would not, ultimately have produced a financial gain or led them to obtain a definite right to explore.”³⁹

Appalachian Power Co. v. United States EPA, 208 F.3d 1015
(D.C. Cir. 2000)

The D.C. Circuit Court set aside the Environmental Protection Agency’s (EPA) Periodic Monitoring Guidance for Title V Operating Permits Programs (Guidance) in its entirety. The court held that the Guidance was not an interpretative rule because it broadened the

29. *Id.*

30. *Id.*

31. *Id.*

32. *Id.*

33. *See id.* at 2436-37.

34. *See id.* at 2437.

35. *See id.*

36. *See id.*

37. *See id.*

38. *See id.* (citing the Clean Air Act).

39. *Id.*

underlying EPA rule and was therefore improper in the absence of formal rulemaking procedures.⁴⁰

Petitioners, electric power companies and trade associations representing the chemical and petroleum industry, had petitioned for a review of the EPA's Guidance document.⁴¹ The petitioners argued that the document imposed unauthorized requirements on states in connection with their operating permits under the Clean Air Act, the D.C. Circuit agreed.⁴²

After the 1990 amendments to the Clean Air Act, Title V changed the methods of governmental air pollution regulations.⁴³ The amendment held that stationary sources of air pollution had to obtain operating permit from local authorities that administered "their EPA-approved implementation plans."⁴⁴ The EPA was instructed by Congress to establish the "minimum elements of a permit program..." through regulations, which were to be administered by an "air pollution control agency."⁴⁵ The key dispute at issue was EPA's Guidance on the "periodic monitoring rule."⁴⁶ Usually, the EPA delegates its authority to enforce compliance with these standards to the States. The States in turn implement the federal standards into the permit requirements along with their own emissions limitations needed to comply with the national ambient air quality standards. These state requirements usually include not only emissions limitations, but monitoring requirements as well.⁴⁷

The EPA's Guidance document called for periodic monitoring when the "applicable requirement does not require ... monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit."⁴⁸ Hence, if a requirement imposed only a "one-time testing requirement, periodic monitoring is not satisfied" under the new Guidance.⁴⁹

The court held the Guidance document was a final agency action for purposes of judicial review.⁵⁰ The court recognized that the Guidance document, while not promulgated as a legislative rule

40. See *Appalachian Power Company v. United States EPA*, 208 F.3d 1015 (D.C. Cir. 2000).

41. See *id.*

42. See *id.*

43. See *id.* at 1017.

44. *Id.*

45. *Id.*

46. *Id.* at 1017-18 (citing § 70.6 (n) (3) (i) (B) of the Clean Air Act).

47. See *id.* at 1019.

48. *Id.* at 1020.

49. *Id.*

50. See *id.*

under the statutorily required notice and comment procedure, was nonetheless binding as a “practical matter.”⁵¹ The court stated that an interpretive rule could nonetheless be binding if the document is “controlling in the field, if [the agency] treats the document in the same manner as it treats a legislative rule, if it bases enforcement actions on the policies or interpretations formulated in the document, if it leads private parties or State permitting authorities to believe that it will declare permits invalid unless they comply with the terms of the document, then the document is for all practicable purposes ‘binding.’”⁵² Because the EPA Guidance document has the effect of a rule and the EPA had stated that its position on the “central legal issue here—the appropriateness of a sufficiency review of all Title V monitoring requirements—indeed is settled” the Guidance is binding.⁵³

The court further used a two-part test to determine if the agency action was final. First, the “action must mark the ‘consummation’ of the agency’s decisionmaking process.”⁵⁴ The court found this condition met as the Guidance document was titled “EPA Draft *Final* Periodic Monitoring Guidance.”⁵⁵ The second part is that the action is one by which “‘rights or obligations have been determined,’ or from which ‘legal consequences will flow.’”⁵⁶ The court found this condition satisfied, as States were required, under the Guidance, to determine if the standards in effect provided enough monitoring and must insert additional monitoring requirements for permits if the State finds that the current requirements are inadequate.⁵⁷ The court found these to be requirements as they created obligations on the States.⁵⁸

The court agreed with petitioners that the Guidance created a “new legal regime” in that the Guidance now gave the EPA solid legal grounds for denying State issued permits if States did not comply with the Guidance document.⁵⁹ This in effect amended the

51. *Id.* at 1020-21.

52. *Id.* at 1021 (quoting Robert A. Anthony, *Interpretive Rules, Policy Statements, Guidances, Manuals, and the Like – Should Federal Agencies Use Them to Bind the Public?* 41 DUKE L.J. 1311, 1328-29 (1992)).

53. *Id.* at 1021-22.

54. *Id.* at 1022 (quoting *Chicago & Southern Air Lines, Inc. v. Waterman S.S. Corp.*, 333 U.S. 103, 113 (1948)).

55. *Id.* at 1022 (emphasis added).

56. *Id.* (quoting *Port of Boston Marine Terminal Assn. v. Rederiaktiebolaget Transatlantic*, 400 U.S. 62, 71 (1970)).

57. *See id.* at 1022.

58. *See id.* at 1023.

59. *Id.* at 1023-24.

periodic monitoring rule.⁶⁰ The court held that an agency could not usurp the notice and comment rulemaking procedure by “labeling a major substantive legal addition to a rule a mere interpretation.”⁶¹ The Guidance now purports to give a broad scope to the periodic monitoring rule, which as originally written has only a very narrow one.⁶² Hence, the court set aside the entire Guidance document.⁶³

American Trucking Ass’ns, Inc. v. United States EPA, 195 F.3d 4 (D.C. Cir. 1999), *aff’g in part and denying in part* 175 F.3d 1027 (D.C. Cir. 1999), *reh’g denied* 195 F.3d 4 (D.C. Cir. 1999), *cert. granted sub nom. Browner v. American Trucking Ass’ns*, 120 S. Ct. 2003 (2000) (*ops. combined at* 195 F.3d 4 (1999))

This rehearing of *American Trucking*, and other, petitions for review challenged final rules issued by the Environmental Protection Agency (EPA) that had revised the national ambient air quality standards (NAAQS) for ozone and particulate matter.⁶⁴

The EPA petitioned the D.C. Circuit for a rehearing that was granted in part and denied in part.⁶⁵ The EPA challenged the D.C. Circuit’s initial holdings that: (1) The EPA has no intelligible principle to channel the application of the factors it uses to determine the degree of public health concern associated with different levels of a pollutant; (2) that Subpart 2, not Subpart 1, gives the classifications and attainment dates for non-attainment areas under the revised primary ozone NAAQS, also the EPA is required to enforce any revision of primary ozone under Subpart 2; and (3) that the EPA has to consider the positive identifiable effects of a pollutant’s presence in the ambient air when formulating the air quality standards under § 108 and NAAQS under § 109.⁶⁶

The court first found that the EPA had previously placed forth no asserted intelligible principle that they now claim to find in the statute and its corollaries.⁶⁷ Thus the agency failed to state the acceptable intelligible limiting principles in setting the NAAQS and

60. *Id.* at 1023.

61. *Id.* at 1024.

62. *See id.* at 1026.

63. *See id.* at 1028.

64. *See American Trucking Ass’ns, Inc. v. United States EPA*, 195 F.3d 4 (D.C. Cir. 1999), *aff’g in part and denying in part* 175 F.3d 1027 (D.C. Cir. 1999), *reh’g denied* 195 F.3d 4 (D.C. Cir. 1999), *cert. granted sub nom. Browner v. American Trucking Ass’ns*, 120 S. Ct. 2003 (2000)(*ops. combined at* 195 F.3d 4 (1999)).

65. *See id.* at 6.

66. *See id.*

67. *See id.* at 6, 7.

to show that the NAAQS was promulgated in accordance with that principle.⁶⁸

The EPA next challenged the court's jurisdiction over Subpart 2 and the revised ozone standard.⁶⁹ The EPA claimed it had not taken final agency action implementing the revision, thus the court lacked jurisdiction.⁷⁰ The court, using a functional inquiry, held that because the revision had imposed requirements on the states, the action was final, and the court had jurisdiction.⁷¹

The court, however, granted EPA's challenge on Subpart 2.⁷² The court stated it had erred in treating the attainment dates set by Congress as if it was their judgment about what is "as expeditiously as practicable." Rather, the court held that the attainment dates truly represent the "outer limits" for reducing ozone levels in the area.⁷³ The court revised their holding on this issue stating "we conclude that Subpart 2 erects no bar to the EPA's requiring compliance with a revised secondary ozone NAAQS 'as expeditiously as practicable.'" ⁷⁴

The court also granted EPA's challenge to a discrepancy in the court's initial conclusion.⁷⁵ At Part III.A.2, the court originally stated, "the EPA must enforce any revised primary ozone NAAQS under Subpart 2,"⁷⁶ but then said at the end of the opinion "revised ozone NAAQS 'cannot be enforced by virtue of [Subpart 2].'"⁷⁷ The Court here replaced the first sentence with: "Because the reference to § 107(d) in § 181(a)(1) includes the designation of an area as non-attainment for ozone under a revised ozone NAAQS, that is, under § 107(d)(1), the EPA can enforce a revised primary ozone NAAQS only in conformity with Subpart 2."⁷⁸ The second sentence was replaced with: "We do not vacate the new ozone standards because the parties have not shown that the standard is likely to engender costly compliance activities in light of our determination that it can be enforced only in conformity with Subpart 2."⁷⁹

The court, without express opinion, denied EPA's third challenge on benefit health efforts.

68. *See id.* at 7.

69. *See id.* at 8

70. *See id.*

71. *See id.*

72. *See id.* at 9, 10.

73. *Id.*

74. *Id.*

75. *See id.*

76. *American Trucking, Inc. v. United States EPA*, 175 F.3d 1027, 1050 (D.C. Cir. 1999).

77. *Id.* at 1057.

78. *American Trucking Inc.*, 195 F.3d at 10.

79. *Id.*

II. FLORIDA DECISIONS

Jesus Fellowship, Inc. v. Miami-Dade County, Florida
752 So. 2d 708 (Fla. 3d DCA 2000)

The Third District Court of Appeals quashed an order that denied a church's zoning application for special exceptions and an unusual use. The court remanded the case to the circuit court with instructions to direct the County Commission to grant the church's application without the limitations the Commission had imposed.⁸⁰ The Third DCA found that the circuit court relied on incompetent evidence and failed to apply the proper principle regarding special exceptions and unusual uses.⁸¹

Jesus Fellowship, Inc. owned 12.2 acres in an area zoned for one-acre estate homes.⁸² The church sought to expand its facilities as well as add a private school and day care center, filing a zoning application for special exceptions and an unusual use.⁸³ The Zoning Appeals Board approved the application after the church agreed to make changes, including limiting enrollment to 524 students, recommended by the county's professional staff.⁸⁴ Objectors appealed the decision to the County Commission, which approved the application generally but denied it in part, requesting the church limit the private school to grades K-6 and 150 students.⁸⁵ The church petitioned the circuit court for a writ of certiorari, alleging the Commission's decision to reduce the enrollment was not supported by competent substantial evidence, but the court upheld the Commission's partial denial.⁸⁶

The Third DCA held the circuit court erred in concluding that the Commission had sufficient basis to deny the application without relevant valid evidence.⁸⁷ The presence in the record of county zoning maps, the professional staff recommendations, aerial photographs, and testimony in objection are not necessarily sufficient.⁸⁸ The maps did not support the Commission's decision, because the land use plan and the zoning districts permit the special exceptions

80. See *Jesus Fellowship, Inc. v. Miami-Dade County, Florida*, 752 So. 2d 708, 711 (Fla. 3d DCA 2000).

81. See *id.* at 709.

82. See *id.* at 708.

83. See *id.* at 709.

84. See *id.*

85. See *id.*

86. See *id.*

87. See *id.*

88. See *id.*

and the unusual use requested by the church.⁸⁹ The professional staff's report recommendation for approval of the application did not support the denial.⁹⁰ The objectors' testimony, consisting of lay opinion testimony, letters, complaints of past violations, irrelevant testimony, and testimony by the director of planning confirming the application was consistent with the zoning code, did not support the denial.⁹¹ In fact, no evidence appeared in the record related to the restrictions on number of grades and students.⁹² The objectors' attorney suggested the restrictions on grades and students after the evidentiary hearing had closed, whereupon the Commission passed a motion to deny the application.⁹³

Putnam County Environmental Council, Inc. v. Board of Comm'rs of Putnam County, 757 So. 2d 590 (Fla. 5th DCA 2000)

The Fifth District Court of Appeals reversed a lower court's dismissal order denying a nonprofit corporation's request for injunctive and declaratory relief to prevent a rezoning.⁹⁴ The Fifth DCA held that the nonprofit corporation, Putnam County Environmental Council, Inc. (PCEC), did have standing to challenge the order under section 163.3215, *Florida Statutes* (1999).⁹⁵

Roberts Land and Timber Company owned property in Putnam County, zoned for agricultural use, located next to the Etoniah Creek State Forest.⁹⁶ Roberts and the Putnam County District School Board applied for a special exception to the county's comprehensive plan in order to build a middle school complex on Robert's property.⁹⁷ The PCEC filed a complaint after the County Commission ratified the Board of Adjustment's approval of the special exception application, seeking to enforce Putnam County's comprehensive plan pursuant to Chapter 163.⁹⁸ The County Commission moved to dismiss the complaint on the grounds that PCEC lacked standing under section 163.3215.⁹⁹ The trial court granted the motion to dismiss with leave

89. *See id.* at 710.

90. *See id.*

91. *See id.*

92. *See id.*

93. *See id.* at 711.

94. *See Putnam County Environmental Council, Inc. v. Board of County Comm'rs*, 757 So. 2d 590, 591 (Fla. 5th DCA 2000).

95. *See id.*

96. *See id.*

97. *See id.*

98. *See id.*

99. *See id.*

to amend.¹⁰⁰ PCEC amended its complaint to include allegations of the specific adverse effects that it and its members would suffer to their interests in the conservation and protection of the natural resources of the Etoniah Creek State Forest if the school were built on the Roberts property.¹⁰¹ The complaint indicated that the presence of the school would prevent the use of controlled burns necessary to manage the State Forest, and the increased activity engendered by the presence of the school would interfere with the ability of wide-ranging species such as the black bear to reach or remain in the forest. Further, these conditions would negatively affect the ability of PCEC, its members, and others who participate in PCEC-sponsored activities to observe those species.¹⁰² The County Commission dismissed the amended complaint with prejudice, arguing that PCEC lacked standing to challenge the order.¹⁰³ While the trial court narrowly construed the standing requirement of section 163.3215, PCEC claimed those with standing included those seeking to enforce local comprehensive plans.¹⁰⁴

The Fifth DCA held that the 1985 adoption of section 163.3215, *Florida Statutes* liberalized the standing requirements, thus PCEC's assertions are sufficient to give PCEC standing to seek enforcement of Putnam County's Comprehensive Plan, although the mere fact of PCEC's interest in the environment is alone insufficient to give PCEC standing.¹⁰⁵ PCEC can demonstrate specific injuries it would suffer if the middle school complex were built on Roberts' property, including loss of habitat for species studied by PCEC members and the elimination of access to the forest by PCEC members and wild creatures due to overgrowth resulting from the cessation of controlled burns.¹⁰⁶ The diminution of species being studied by a group is a harm particular to PCEC, therefore the allegations in PCEC's complaint are sufficient to demonstrate the requisite level of interest.¹⁰⁷ PCEC therefore possesses standing to challenge the order under the liberalized standing test.¹⁰⁸ PCEC's involvement in the acquisition and active involvement in the state forest further indicate

100. *See id.*, at 591-2.

101. *See id.* at 592.

102. *See id.*

103. *See id.*

104. *See id.*

105. *See id.* at 593.

106. *See id.*

107. *See id.*

108. *See id.* at 594.

a greater interest than that which all persons share in the community good.

Southwest Florida Water Management Dist. v. Charlotte County, et al., 25 Fla. L. Weekly D2113 (Fla. 2d DCA 2000)

The Second District Court of Appeals ruled that the Southwest Florida Water Management District (District) has broad power to force local governments and utilities to conserve water in order to protect the environment.¹⁰⁹ The District is a Florida agency controlling water resources over a sixteen county area.¹¹⁰ The Court's decision allows water managers to compel water suppliers to use recycled wastewater and purified salt water as alternatives to Florida's groundwater reserves.¹¹¹ Further, utilities applying for water use permits may be required to adopt water conservation rates, which require heavy users to pay more, and to meet criteria aimed at protecting wetlands, wildlife and other natural resources.¹¹²

Contamination of the Floridan Aquifer led the District to enact new regulations to protect the region's groundwater.¹¹³ The District found that the aquifer is being overused and that saltwater is intruding into and contaminating the aquifer as a result.¹¹⁴ Several counties and various other groups challenged the regulations as an invalid exercise of their delegated legislative authority.¹¹⁵ The Administrative Law Judge (ALJ) ruling would have forced the District to modify some of the restrictions. Rather than modify, the District appealed the administrative order.¹¹⁶

The Second District ruled in favor of the District on all thirteen points on appeal. Chapter 373, *Florida Statutes* states that in order to obtain a water use permit (WUP), an applicant must satisfy a "three prong test."¹¹⁷ The test requires that the proposed use "(a) is reasonable-beneficial; (b) will not interfere with any presently existing legal water use; and (c) is consistent with the public interest."¹¹⁸ The

109. See *Southwest Florida Water Management Dist. v. Charlotte County*, 25 Fla. L. Weekly D2113 (Fla. 2d DCA 2000).

110. See *id.* at 1.

111. See *id.* at 8.

112. See *id.*

113. See *id.* at 1, 2.

114. See *id.* at 8.

115. See *id.* at 1.

116. See *id.*

117. See *id.* at 1, 2.

118. *Id.* at 2.

counties argued that the District had to apply a two-prong test and not the three-prong test to water uses established before Chapter 373 was enacted.¹¹⁹ That test required only a reasonable-beneficial use and that it be allowable under the common law.¹²⁰ The court held that the two-prong test was only intended for use as a transitional procedure when converting from the common law use to a permitted use.¹²¹

In implementing the three-prong test, the District promulgated a rule that contains fourteen criteria that a WUP applicant must meet in order to demonstrate that the three-prong test has been satisfied.¹²² First, the court reversed the ALJ, who had held the District cannot require that all fourteen conditions must be met and that the District must apply a balancing test.¹²³ The court stated that only the Florida Department of Environmental Protection (DEP) has the authority to invalidate the requirement.¹²⁴ Second, the court reversed the ALJ's finding that allowing mitigation of any of the conditions that an applicant must meet in order to obtain a permit "to the satisfaction of the District" was an unbridled exercise of discretion.¹²⁵ According to the court "to the satisfaction of the District" did not appear in the rules setting forth those conditions and how to meet them.¹²⁶ The court stated that the form of mitigation could not be prescribed by rule as it can only be determined on a case-by-case, site-specific basis.¹²⁷ Third, the court held that the fourteen conditions were not vague because of the inclusion of terms such as "unacceptable," "adverse," or "significant."¹²⁸ It is acceptable for the rules to allow for the exercise of professional judgment because whether or not an adverse impact will occur is essentially a scientific determination.¹²⁹ Fourth, the court affirmed the ALJ's determination that the District's Basis of Review is valid.¹³⁰

Outside of the fourteen criteria, the court reversed the ALJ's invalidation of the District's authority to require an applicant to investigate the feasibility of the use of reclaimed groundwater and to

119. *See id.* at 6.

120. *See id.*

121. *See id.* at 7.

122. *See id.* at 4.

123. *See id.*

124. *See id.*

125. *Id.*

126. *Id.* at 4, 5.

127. *See id.* at 5.

128. *See id.*

129. *See id.*

130. *See id.* at 6.

use such water if the District determined it was feasible.¹³¹ The court found that the requirements were site-specific, subject to scientific and technical determinations and were within the definition of “reasonable-beneficial.”¹³² The court also reversed the ALJ’s determination that requiring an applicant to consider the economic, environmental and technical feasibility of desalination in lieu of groundwater use was an invalid delegation of legislative authority.¹³³ The Court stated that requiring applicants with a demand for more than 100,000 gallons a day to complete a desalination feasibility investigation was within the three-prong test and an element of the “reasonable-beneficial use.”¹³⁴

The court accepted the District’s argument that permitting wholesale public supply customers to evade the permit requirement transferred water conservation responsibility to other customers.¹³⁵ Because of the public interest to conserve water, the Court found that the District has the authority to require wholesale public supply customers to obtain a permit, and that this was not an unlawful impairment of contract.¹³⁶

The Court held that the District can require water supply utilities to adopt “water conservation rate structures.”¹³⁷ The Court found no conflicts with Section II, Consumptive Uses of Water, Chapter 373, *Florida Statutes*, in that requirement, but stated that in any conflicts with other state laws concerning local governments’ authority, Chapter 373 controls.¹³⁸

131. *See id.* at 8.

132. *See id.*

133. *See id.*

134. *See id.* at 8, 9.

135. *See id.* at 14.

136. *See id.* at 16.

137. *Id.* at 17.

138. *See id.*

III. NOTABLE BILLS PASSED DURING FLORIDA'S 2000 LEGISLATIVE SESSION

The descriptions below are excerpts from Senate or House Committee summary reports compiled by legislative staff and listed at the Florida Legislature's web site, <www.leg.state.fl.us>. Summaries for many of these bills are also available at either the Department of Community Affairs' site, <www.dca.state.fl.us>, or the Department of Environmental Protection's web site, <www.dep.state.fl.us>. The reader is also encouraged to review the Florida Bar Environmental and Land Use Section summary of the 2000 legislative session, prepared by Eric T. Olsen of Hopping, Green, Sams and Smith, P.A. and Kathryn Mennella, general counsel for the St. Johns River Water Management District, available at <www.eluls.org/june2000_summary.html>.

CS/CS/HB 221, 1957 Save Our Everglades Trust Fund, Everglades Restoration Investment Act Chapter 2000-129, *Florida Statutes*

This Act exempts the Save Our Everglades Trust Fund from certain service charges; revises the redistribution criteria for unencumbered balances from the Florida Preservation 2000 program; directs a transfer of funds from the Forever Trust Fund into Save Our Everglades Trust Fund; and creates the "Everglades Restoration Investment Act."

The Act requires the South Florida Water Management District, in cooperation with the Army Corps of Engineers, to complete a Project Implementation Report to address each of the project component features that were mandated in last year's law (see section 373.1501, *Florida Statutes*) including such things as its economic and environmental benefits and engineering feasibility and identify the increase in water supplies resulting from the project component. Finally, the Act dedicates approximately \$100 million in state funding to the Comprehensive Everglades Restoration Program.

CS/CS/HB 991, 1189 Lake Okeechobee Protection Trust Fund Chapter 2000-130, *Florida Statutes*

This Act creates a trust fund to establish a comprehensive, long-term program to restore and protect Lake Okeechobee and downstream receiving waters. The Lake Okeechobee Protection Program phases in phosphorous load reductions by requiring: (a) construction

of stormwater and other detention treatment centers; (b) detailed evaluation and monitoring of the water quality in the watershed; (c) development of “best management practices” for all non-point sources, (d) implementation of measures to protect native flora and fauna, and (e) a study to assess ways to reduce the phosphorus loads within Lake Okeechobee followed by implementation of the findings.

The Act also establishes Lake Okeechobee Protection Permits which requires all water control structures discharging into or from the lake to obtain an operating permit. The Appropriations Act contains a \$38.5 million appropriation for Lake Okeechobee.

CS/CS/CS/SB 1406 Brownfields
Chapter 2000-317, *Florida Statutes*

This bill improves the cleanup procedures associated with brownfield redevelopment sites. In the past four years there have been only a small number of brownfield redevelopment projects which have implemented site rehabilitation agreements. The modifications made this year are intended to further increase brownfield cleanup and redevelopment. To more closely conform with the American Society for Testing and Materials, the bill makes more clear the risk based corrective action (RBCA) cleanup criteria to describe the iterative process of risk analysis. The bill requires the Department of Environmental Protection (DEP) to make available an early decision while the analysis is ongoing informing the party responsible for the cleanup what exposure factors will apply and what approach should be applied to risk management. The bill does not allow the DEP to require more stringent target cleanup levels than the site-specific naturally occurring background concentration for that contaminant in both groundwater and soils.

If specific criteria are met in the risk-based cleanup, the bill provides that institutional controls are required. The bill provides for and expansion of the liability protections afforded to innocent third party purchasers, as well as the limitations applicable to a property owner whose land becomes polluted through the migration of contaminated materials from a designated brownfield area. The bill provides for the express authorization of the expedited permitting process (section 403.973, *Florida Statutes*) for projects within a designated brownfield area.

The bill provides that not only target industries (section 288.106(2)(o)*Florida Statutes*), be included in the eligibility criteria for

brownfield redevelopment bonus refunds, but also mixed-use business activities where the business shows a fixed capital investment of at least \$2 million. Mixed-use activities include multi-unit housing, commercial, retail, and industrial activities occurring in brownfield areas and who pay at least 80% of the average private sector wages in the county containing the brownfield area.

The bill amends section 376.051, *Florida Statutes* to grant authority to the DEP to use RBCA cleanup criteria on state university system lands. The bill adds language to section 376.303, *Florida Statutes* obliging local governments to create central repositories for the registration of Brownfield sites and to represent those sites on their land use maps.

The bill requires Enterprise Florida, Inc. to develop a comprehensive marketing plan for the redevelopment of brownfield areas and to apply 30% of the funds appropriated for Quick Response Training for enterprise zone and brownfield area businesses. The bill allows Community Development Districts to finance and undertake investigation and remediation of contamination within its boundaries.

HB 1999, 2001, 2403 Florida Forever Trust Fund
Chapter 2000-280, 2000-281, 2000-170, *Florida Statutes*

This is a Florida Forever “glitch” bill. The bill provides that the \$3 billion limit on issuing Florida Forever bonds does not apply to refunding bonds. The bill creates the Land Management Uniform Accounting Council (LMUAC) within the Department of Environmental Protection. The LMUAC is required to review current land management activities and needs, grouping them into categories by June 20, 2000. Once the LMUAC adopts the initial list of categories, the agencies that manage conservation or recreation lands must account for land management costs in accordance with the category into which the expenditure is assigned. The LMUAC must provide its adopted complete list of land management categories to the Governor, the Board of Trustees of the Internal Improvement Trust Fund, the President of the Senate, the Speaker of the House, and the Acquisition and Restoration Council by January 1, 2001. The LMUAC is required to report agencies’ expenditures pursuant to the adopted categories to the President of the Senate and the Speaker of the House beginning on July 1, 2001 and continuing annually.

Habitable structures located in water conservation areas two or three can be subject to reasonable conditions, consistent with existing laws and rules, by the South Florida Water Management District (SFWMD) or the DEP. The owners of habitable structures currently on these lands must inform the SFWMD of its existence and location. Failure to report subjects the structure to removal.

According to the bill, when the state acquires land without giving monetary compensation, the price of any land sold as surplus must not be greater than the fair market value of the land. Fair market value is to be determined by the average of two appraisals conducted by approved appraisers. Titles to land protection agreements and conservation agreements that were or will be acquired pursuant to section 380.0677, *Florida Statutes*, will be held by the Trustees.

CS/HB 1425 Solid Waste Collection/Recovered Materials/Citrus
Processing Air Permitting Chapter 2000-304, *Florida Statutes*

This bill deals with several environmental issues. The bill protects solid waste collection operations from local government annexation, merger or incorporation for a period of five years or through the expiration of their current contract terms, whichever is shorter. The bill amends section 403.087 and section 403.722, *Florida Statutes* to allow for the use of post-closure plans as alternatives to hazardous waste programs and caps the fee for post-closure programs at \$32,500.

The bill provides that recovered materials dealers may provide contractual services to commercial establishments without being required to obtain a franchise agreement from local governments. Additionally, local governments are statutorily limited to charging only their direct costs in the registration of recovered materials dealers.

The bill provides for an experimental new regulatory alternative, effective July 1, 2002, for twenty-six citrus juice processing facilities in Florida. The bill allows a statutory permit that deals with specific air emission requirements for sulfur, volatile organic compounds, nitrogen oxides, visible emissions, and particulate matter. The bill is dependent on EPA approval, which the DEP must apply for by February 1, 2001. If the EPA does not approve this new law within two years from the DEP application, the traditional permit requirements will apply. The DEP must prepare a report and present it to the Legislature by March 2004. The bill aids other major sources

of air pollution with provisions authorizing the separate processing of Title IV (acid rain) and Title V (new source) permit applications.

CS/CS/SB 714 Waste Exchange/
Hazardous Waste Transfer

This bill continues state funding for the Southern Waste Information Exchange (SWIX) to provide continuing solid and hazardous waste management assistance to Florida. The DEP will evaluate SWIX future funding needs and determine what funding SWIX will receive in comparison to other funding demands of the DEP's Solid Waste Management Trust Fund. SWIX is a non-profit organization formed to assist with Florida's waste management needs in both the public and private sectors. SWIX has operated as a clearinghouse for information on waste recycling use and reuse opportunities for Florida waste generators. The same regulations that apply to other hazardous waste facilities, as well as permitting requirements, will apply to management or storage of hazardous waste at a transfer facility.

The bill codifies the definition of "hazardous waste transfer facility" in Chapter 403, *Florida Statutes* to include places where manifested shipments of hazardous wastes are stored or held for more than 24 hours, but less than 10 days.

HB 2071 Water Management District General Permit Delegation
Chapter 2000-319, *Florida Statutes*

This bill specifically authorizes the water management district rules that allow the governing boards to delegate the duty to review and issue general permits to their executive directors. The district executive directors may then execute the delegated authority through designated staff. This bill validates existing ERP and consumptive use general permit rules that allowed a staff-issued general permit process for projects with minimal water resource impact.

Most water management districts had listed these delegation rules as lacking sufficient statutory authority in 1999 under section 120.536, *Florida Statutes*. During the 2000 legislative session, much broader delegation authority was granted to the water management districts by CS/CS HB 2365. This bill, along with CS/CS HB 2365, requires the district governing boards to provide a process for referring any denial of an ERP or consumptive use permit application to the governing board for final action.

CS/SB 772 Motor Vehicle Inspection Program Elimination
Chapter 2000-266, *Florida Statutes*

This bill eliminates the Motor Vehicle Inspection Program (MVIP) statewide effective July 1, 2000. Because the MVIP is contained in Florida's State Implementation Plan (SIP), the EPA must approve the elimination of it since the SIP implements some of Florida's obligations under the federal Clean Air Act. While the EPA has proposed a rule to eliminate the MVIP from Southeast Florida and Jacksonville due to improved air quality in those areas, it has not done so for Tampa Bay.

CS/SB 186 Environmental Reorganization
Chapter 2000-197, *Florida Statutes*

This bill provides for internal organization requirements for the DEP and the Fish and Wildlife Conservation Commission (FWCC) and continues the reorganization of the FWCC as well as the various duties and responsibilities transferred from the DEP to the FWCC. This bill clarifies the FWCC's obligation to follow the provisions of Chapter 120, *Florida Statutes* when adopting rules in performance of its statutory duties. The DEP is reorganized creating an Office of the Chief of Staff, eliminating the Executive Coordinator for Ecosystem Management, and increases to three the number of deputy secretaries. Several other smaller riders were attached to this bill.

CS/CS/SB 1646 Water Pollution Control
Chapter 2000-271, *Florida Statutes*

This bill expands the reasons for which the DEP may make loans under the federal Sewage Treatment Revolving Loan Fund. The bill also provides a full range of financing options to take advantage of market conditions and expand the funding capabilities of the fund. The Clean Water Act was amended by Congress to allow these funds to be used for projects such as stormwater management systems, non-point source pollution control, and estuary conservation and management projects. This bill expands the types of projects that may be funded to include activity eligible for funding under § 603 of the Federal Water Pollution Control Act, Pub. L. No. 92-500.

The bill requires the DEP to create rules to prioritize projects for funding. The bill lists factors that the DEP shall consider in giving

priority such as whether the project will eliminate public health hazards, assist in the implementation of total maximum daily loads under section 403.067, *Florida Statutes*, promote reclaimed water reuse, and eliminate failing onsite sewage treatment systems that are causing environmental damage.

HB 2055 Florida Keys Rules for Coordinated Agency Permit Review
Chapter 2000-283, *Florida Statutes*

This bill permits state and regional agencies to implement rules to employ coordinated agency review of permit applications for the Florida Keys Area of Critical State Concern. The adoption of this bill fills the gap in the statutory authorization of coordinated review bringing the existing agency rules into compliance with section 120.536, *Florida Statutes*, which holds that agencies may only adopt those rules which implement or interpret specific powers and duties conferred by statute. Florida Water Management Rule 40E-1.615, Florida Administrative Code (F.A.C.), coordinates environmental resource, surface water management, and water use permits for the Florida Keys Area of Critical Concern, had been adopted by reference in Rule 62-330.200(4)(a), F.A.C. But, section 380.051, *Florida Statutes*, did not contain any specific authority for state and regional agencies to adopt such rules for review. HB 2055 cures this apparent problem.

CS/CS/HB 1005 Beach Management and Funding
Chapter 2000-346, *Florida Statutes*

This bill clarifies and expands Chapter 161, *Florida Statutes*, which sets the criteria for selection of beach management projects for state funding. For a project to receive public funds it must allow adequate public access and protect natural resources and endangered species. This bill also authorizes the DEP to enter into cooperative agreements with local governments for inlet management projects and to cost-share parts of inlet management projects that minimize the erosive effects of inlets or provide for the placement of beach quality material on adjacent eroded beaches.

HB 1529 Sham Recycling
Chapter 2000-221, *Florida Statutes*

HB 1529, while acknowledging that small quantities of solid waste can exist in the flow of recyclable materials, addresses when material in a waste collection container changes from a “recyclable” material to a “solid waste” material. The bill assists local governments in identifying “sham recyclers,” who are waste collectors that claim they are hauling recyclables but are really hauling solid waste combined with recyclable materials, and avoiding local government franchise agreements. The bill provides that when there are more than two types of recyclable materials in a collection container, and 10% or more of that material is solid waste, the entire container is deemed to be solid waste.

CS/CS/SB 1114 Right to Farm
Chapter 2000-308, *Florida Statutes*

This bill prohibits local governments from adopting laws to regulate farm operations that occur on duly classified agricultural lands when the activity is already being regulated by either the DEP, the Department of Agriculture and Consumer Services (DACS), or the water management district pursuant to rules adopted under Chapter 120, *Florida Statutes*. Local government may regulate the activity under exceptions granted to local ordinances related to pesticide application, well-field protection, and emergency situations.

The DACS, in consultation with the DEP, may develop rules to address statewide decontamination to prevent and limit the spread of citrus canker disease. The bill prevents the DEP from initiating legal proceedings for costs, damages, or remedial relief associated with soil contamination where the contamination is associated with efforts to limit the spread of citrus canker under DACS regulations. The bill also prohibits the DEP from initiating legal proceedings for costs, damages, or remedial relief associated with pesticide contamination as long as the pesticides are applied according to applicable laws and label requirements, and as long as certain records are kept and provided on request. This pesticide provision applies retroactively. The DACS may adopt rules, in consultation with the DEP, setting the record retention requirements.

IV OTHER RECENT DEVELOPMENTS OF PARTICULAR IMPORTANCE

In October, the United States House of Representatives gave final approval to a bill that will help Florida's Everglades Restoration project.¹³⁹ The bill includes a \$1.4 billion first installment for Everglades Restoration.¹⁴⁰ The Senate has already passed its version of the bill and President Clinton has stated that he will sign the final compromised version.¹⁴¹

Talbot (Sandy) D'Alemberte, President of The Florida State University, was named mediator to the Apalachicola-Chattahoochee-Flint (ACF) River Basin negotiations.¹⁴² The ACF commission was put together by Florida, Alabama and Georgia to negotiate a formula for the equitable allocation of waters in the ACF Basin.¹⁴³ The parties have until December 30, 2000 to reach an agreement or extend the negotiations.¹⁴⁴

139. See David B. Struhs, *Everglades Restoration Receives Final Congressional Approval*, Florida Department of Environmental Protection Press Release, November 3, 2000 (visited Feb. 7, 2001) <<http://www.dep.state.fl.us/comm/releases/2000/00-114.htm>>.

140. See *id.*

141. See *id.*

142. See *Florida State University President Sandy D'Alemberte named Apalachicola-Chattahoochee-Flint River Basin Mediator*, Florida Governor's Press Release, October 31, 2000 (visited Feb. 7, 2001) <http://sun6.dms.state.fl.us/eog_new/eog/library/releases/20.../mediator_dalemberte10-31-00.html>. See also Dustin S. Stephenson, *The Tri-State Compact: Falling Waters and Fading Opportunities*, 16 J. LAND USE & ENVTL. L. 83, 105 (2000).

143. See *id.*

144. See *id.*

