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COMMENT

A DEEPER SHADE OF GREEN: THE EVOLUTION OF CUBAN ENVIRONMENTAL LAW AND POLICY

To live on the Earth is no more than a duty to make it well.
*José Martí*¹

I. INTRODUCTION

In July 1997, Cuban legislators made the most dramatic overhaul of environmental law in the country's history.² The enactment of the Law of the Environment marked the most significant legal step the revolution has taken to reverse the environmental damage of the past five centuries.³

1. JOSÉ MARTÍ, *ESPIRITU DE MARTÍ*, (La Habana, Cuba, 1946). José Martí was an orator, poet, and intellectual leader of Cuba's nineteenth century movement for liberation from Spanish rule. *Id.*

2. See Ley No. 81, Del Medio Ambiente [Law of the Environment], *Gaceta Oficial de la República de Cuba, Edición Extraordinaria*, July, 11, 1997. See also *infra* notes 114-132 and accompanying text.

3. See DEBRA EVENSON, *REVOLUTION IN THE BALANCE: LAW AND SOCIETY IN CONTEMPORARY CUBA* 8-11 (1994). See also generally JULES R. BENJAMIN, *THE UNITED STATES AND THE ORIGINS OF THE CUBAN REVOLUTION*, (1990). Spain ruled Cuba from 1493 until the Cubans won their independence in 1898. Between 1899 and 1902, the United States imposed a military government and effectively colonized the island. Periodic U.S. military intervention occurred until 1917. Military interference became unnecessary as Cuban trade grew dependent on the United States, which supported notoriously corrupt governments including the 25-year tenure of Fulgencio Batista. In January 1959, after overthrowing the Batista regime, Fidel Castro and his Rebel Army marched triumphantly into Havana. The revolution, premised on egalitarian and humanistic goals, had no clear ideological construct in its early years. In the 1970's, however, the leadership began to elaborate the revolution's legal basis to reflect its

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In adopting this new framework environmental law, Cuba is reaffirming its commitment to the protection and sustainable management of the island's natural resources.⁴

Cuba's urban air and water pollution problems are unmistakable; one cannot travel the streets of Havana without dizzying exposure to the exhaust of the city's vehicles,⁵ or walk alongside Havana Bay without noticing slugs of petroleum clinging to pylons and ship hulls.⁶ In the Cuban countryside, exploitation and abuse have inflicted more subtle ecological impairment, resulting in soil degradation,⁷ contamination of

principles and to direct the evolution of socialism in Cuba. See Evenson, *supra* note 3, at 2, 8-11.

See also REPÚBLICA DE CUBA, MINISTERIO DE CIENCIA, TECNOLOGÍA Y MEDIO AMBIENTE, [REPUBLIC OF CUBA, MINISTRY OF SCIENCE, TECHNOLOGY AND ENVIRONMENT], [hereinafter CITMA], *Taller: "Medio Ambiente y Desarrollo," Consulta Nacional Rio+5*. [Workshop: "Environment and Development," National Consultation Rio+5], [hereinafter Rio+5], January, 1997, at 6-7. Prior to Cuba's socialist revolution, economic development was primarily driven by aggressive agricultural production and extraction of natural resources with particularly intense devastation of forested areas. *Id.* The first decade of the revolution saw similar environmental abuses. See generally María Dolores Espino, *Environmental Protection and Deterioration in Socialist Cuba*, in ASSOCIATION FOR THE STUDY OF THE CUBAN ECONOMY, CUBA IN TRANSITION VOL. 2.

4. See *infra* notes 114-132 and accompanying text.

5. Interview with Jorge Ramon Cuevas, Vice President, Pro-Naturaleza, in Havana, Cuba (July 20, 1997). Alongside the Russian-made Lada and Moskovitch cars, Cuba's roads teem with vintage American cars from the 1950s. Since proper parts and tools are nearly impossible to secure, their functioning is a testament to Cuban ingenuity. These cars, however, as well as Cuban and Hungarian-made buses, lack proper emissions control devices and fill the country's air with noxious exhaust fumes. *Id.*

6. See Rolando Napoles, *Havana Bay, the Island's Most Polluted Ecosystem*, Inter Press Service May 30, 1996, available in Westlaw, Inter Press Service file. Havana Bay is one of the ten most polluted bays in the world. Experts claim the bay's environmental deterioration is due primarily to Havana's inefficient sewer system, designed early this century for a city of 600,000 residents that today houses more than two million. Additionally, an oil refinery, a gas plant, thermoelectric stations and 5,000 other industrial entities dump their toxic organic waste into the Havana Bay. Recent Cuban attempts to heal the bay have led to a gradual increase in dissolved oxygen levels and numbers of fish, although the fish are not fit for human consumption. *Id.*

7. See COMISIÓN NACIONAL PARA LA PROTECCIÓN DEL MEDIO AMBIENTE Y CONSERVACIÓN DE LOS RECURSOS NATURALES, [NATIONAL COMMISSION FOR ENVIRONMENTAL PROTECTION AND RATIONAL USE OF NATURAL RESOURCES], [hereinafter COMARNA], INFORME NACIONAL A LA CONFERENCIA DE NACIONES UNIDAS SOBRE MEDIO AMBIENTE Y DESARROLLO, BRAZIL 1992: RESUMEN EJECUTIVO, [NATIONAL REPORT FOR THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT], (1991). In 1991, the COMARNA estimated that 70% of all land surface (7.7 million hectares) had suffered some degree of erosion and about 15% of all agricultural land (1 million hectares) had been adversely affected by salinity. *Id.* Recent statistics show

rivers and groundwater supplies,⁸ and subsequent loss of biological diversity.⁹ Sincere post-revolution attempts to remedy environmental damage have been marred by insufficient environmental awareness, scarcity of material and financial resources, out-dated technologies, and ineffective legislation and regulation of development.¹⁰

Cuba's current economic crisis, triggered by the disintegration of the socialist bloc in 1990, is perhaps the country's largest obstacle to achieving its environmental goals.¹¹ Prior to 1990, the Soviet Union provided substantial economic support to Cuba and the socialist bloc accounted for eighty-five percent of the island's trading.¹² Particularly devastating to the econ-

that an additional 4 million hectares per year suffer erosion problems, 2.7 million hectares have drainage problems, and a total of 60% of the country's surface is damaged by a combination of these factors. CITMA, NATIONAL ENVIRONMENTAL STRATEGY 10 (1997).

8. Interview with Jorge Ramon Cuevas, *supra* note 5. For example, Cuba's aging sugar refineries have limited pollution control technology. They contribute acidic waters with high biochemical oxygen demand to the inland watercourses. Many sugar refineries rely solely on ineffective oxidation lagoons for effluent treatment. *Id.*

9. See CITMA, NATIONAL ENVIRONMENTAL STRATEGY 12, 16-17 (1997). There have been many causes of declining biodiversity including inadequate management of fragile ecosystems, habitat loss, intensive agricultural practices, poaching, overfishing, and delay in establishing the National System of Protected Areas. Cuba's National Environmental Strategy sets forth proposals to remedy these deficiencies and to ensure the conservation of existing biodiversity. *Id.*

Despite the gradual decline, Cuba still has the highest level of biodiversity in the West Indies and ranks unusually high when compared with nearby continental countries. Relative to the United States and Canada, Cuba has thirty-nine times as many bird species per hectare, thirty times as many amphibian and reptile species per hectare, and twenty-seven times as many plant species per hectare. UNITED NATIONS DEVELOPMENT PROGRAM, CUBA: PROTECTING BIODIVERSITY AND ESTABLISHING SUSTAINABLE DEVELOPMENT IN THE SABANA-CAMAGUEY ECOSYSTEM 2 (1993).

10. Interview with Jorge Ramon Cuevas, *supra* note 5. Interview with Dr. Eulalia Viamontes Guilbeaux, Profesora Titular, Derecho Laboral y Derecho Ambiental, Universidad de la Habana, in Havana, Cuba (January 7, 1997). Interview with Miriam Arcia, CITMA, Center for Environmental Management and Inspection, in Havana, Cuba (January 6, 1997). See generally CITMA, NATIONAL ENVIRONMENTAL STRATEGY (1997).

11. See CITMA, NATIONAL ENVIRONMENTAL STRATEGY 1 (1997). See also Press Conference by Carlos Lage Dávila, Vice President of the Council of State and Secretary of the Executive Committee of the Council of Ministers, July 23, 1996, reprinted in GRANMA INTERNATIONAL, August 7, 1996, at 5. Between 1990 and 1993 Cuba's gross domestic product (GDP) declined by 34.8%, imports dropped 75%, and the deficit reached 33% of GDP. The GDP has increased slowly but steadily since 1994. *Id.*

12. See Joy Gordon, *Cuba's Entrepreneurial Socialism*, ATLANTIC MONTHLY, January 1997, at 18.

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omy was the loss of subsidized Soviet oil imports.¹³ In 1989, ninety-three percent of all commercial energy consumed in Cuba came from imported sources.¹⁴ Loss of Soviet oil imports left the island in a severe energy crisis and scrambling for alternative sources.¹⁵ The period of economic adjustment, which began in 1990 and continues, is euphemistically called the "Special Period in a Time of Peace."¹⁶

The economic crisis has been amplified by the U.S. economic embargo of Cuba,¹⁷ and although the political and economic ramifications of the embargo have been extensively analyzed and debated, little effort has been made to understand the environmental effects of this policy.¹⁸ The United States and Cuba, separated by the Straits of Florida and merely ninety miles apart at their nearest point, are inextricably linked by natural resources,¹⁹ including fisheries, migrating bird species, and populations of coral reef organisms.²⁰ Air and water currents carry each country's resources, and pollution, to the other.²¹ Unfortunately, the adverse effects on these shared

13. See Espino, *supra* note 3, at 337.

14. See *id.*

15. See *id.* at 337-38. Alternative energy sources being explored by Cuba include peat burning for fuel and firewood, hydroelectric power projects and nuclear energy. *Id.* Increased use of bagasse (a by-product of the sugar industry) and solar energy projects are also being pursued as alternatives to oil. Interview with Dr. Raul J. Garrido Vázquez, Environmental Economics Specialist, CITMA, in Holguin, Cuba (July 16, 1997).

16. EVENSON, *supra* note 3, at 101. See also Espino, *supra* note 3, at 340.

17. See Sally Cole & Jorge Domínguez, *Cuba and the United States: Recommendations for building a Framework for Cooperation on Environmental Matters*, in INTER-AMERICAN DIALOGUE, A CONFERENCE REPORT 1 (1997). Interview with Gilberto Javier Cabrera Trimiño, Professor, Center of Demographic Studies, University of Havana, at La Vibora, Cuba (January 12, 1997). The economic blockade has limited Cuba's sources of external financing. Efforts to stimulate the economy have relied on short-term, high-interest loans. Much of the gains seen from these efforts are used to fulfill the loan commitments. Press Conference by Carlos Lage Dávila, *supra* note 11, at 5.

18. See Interview with Gilberto Javier Cabrera Trimiño, Professor, Center of Demographic Studies, University of Havana, at La Vibora, Cuba (January 12, 1997). See also Cole and Domínguez, *supra* note 17, at 1-2.

19. See Cole and Domínguez, *supra* note 17, at 1-2.

20. Michael Smith, *U.S.-Cuban Scientific Collaboration: Achieving Cooperation in an Atmosphere of Hostility*, in INTER-AMERICAN DIALOGUE, A CONFERENCE REPORT 18 (1997).

21. See *id.*

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natural resources, from political and economic measures against Cuba, have been disregarded.²²

The economic crisis has been a double-edged sword for Cuba's environment.²³ On the positive environmental side of the crisis, scarcity of goods has led to a dramatic reduction in importation and use of chemical fertilizers, pesticides, and herbicides.²⁴ It has also resulted in greater recycling efforts and reuse of commodities.²⁵ The negative side effects, however, are significant.²⁶ The lack of material and financial resources has impeded the nation's ability to attain higher levels of environmental protection.²⁷ For example, Cuba's energy crisis, and corollary resulting focus on short-run economic performance, has resulted in increased extraction and use of its national crude oil deposits.²⁸ The high sulfur content of this oil, coupled with outdated refining technologies and poor emissions control devices on stationary and mobile sources of combustion, have led to severe problems in air quality and acid deposition.²⁹ Cuba's insistence on developing nuclear energy sources may

22. See Interview with Gilberto Javier Cabrera Trimiño, *supra* note 18.

23. See *id.*

24. See Bill Weinberg, *Cuba's Reluctant Environmentalism*, THE AMICUS JOURNAL, Spring 1994. The Ministry of Agriculture has declared non-chemical pest control a national priority. Pesticide-free agricultural areas have expanded by 30% since 1990. *Id.*

25. See Espino, *supra* note 3, at 340. Holly Kaufman, *A Revolution of Necessity: Crisis Forces Conservation in Cuba*, EARTH ACTION NETWORK, INC., available in LEXIS, Nexis library, ASAP file, December 1993. Cuban officials estimate that expanding recycling enterprises provide approximately 250,000 jobs and save the country around \$100 million a year on imports. Dalia Acosta, *Environment-Cuba: Recycling Provides 250,000 jobs*, Inter Press Service October 3, 1996, available in Westlaw, Inter Press Service file.

26. See CITMA, NATIONAL ENVIRONMENTAL STRATEGY 1 (1997). Interview with Gilberto Javier Cabrera Trimiño, *supra* note 18.

27. See *id.*

28. See *id.* Oil imports from Russia fell from 13 million tons in 1989 to less than 7 million tons in 1992. Gordon, *supra* note 12, at 18.

29. See CITMA, *Rio+5*, *supra* note 3, at 65-67. The sulfur content of Cuba's crude oil is around seven percent. Despite Cuba's economic hurdles, recent advances in refining technologies and air pollution include the elimination of lead in gasoline, recovery of companion gas during oil extraction, more accurate regional assessments of atmospheric pollutants and acid deposition, and the development of early warning systems to avoid damage to crops from tropospheric ozone and other pollutants. *Id.*

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also be fueled by the crisis.³⁰ Other clear consequences of the economic crisis are greater exploitation of natural resources, such as overfishing, heightened timber harvesting,³¹ and soil degradation from increased agriculture demands.³²

Fortunately, the economic crisis has not defeated Cuba's will to reverse its history of environmental abuse and neglect.³³ During the past several years there has been a remarkable reformation of Cuba's environmental laws and regulatory structure, culminating in July 1997 with the enactment of a new framework environmental law.³⁴ This new law is perhaps Cuba's most significant step toward sustainable development and enforceable environmental protection.³⁵

This article provides a brief history and general overview of Cuba's environmental legal system describing the contemporary framework of environmental laws, and the governmental and non-governmental institutions responsible for its creation, implementation, and enforcement.³⁶ To illustrate how Cuba's environmental regulatory scheme is designed to operate, focus

30. See Cuban Liberty and Democratic Solidarity Act 22 U.S.C. § 6041(a). The 1996 "Helms-Burton" Act recognizes that Cuba lacks an adequate infrastructure to ensure safe operation and maintenance of their yet unfinished Juragua nuclear power plant. According to the National Oceanic and Atmospheric Administration, summer winds could transport radioactive pollutants from a nuclear accident at Juragua throughout all of Florida and the Gulf Coast states, and as far northeast as Virginia and Washington D.C.. The Helms-Burton Act, however, does not recognize that the statute itself might create the need or incentive for Cuba to complete the project. *Id.*

31. See CITMA, *Rio+5*, *supra* note 3, at 62-63. CITMA notes the revolution's considerable progress in the struggle against deforestation. The national forest area has increased from 14% in 1959 to 21% in 1996. CITMA also recognizes that there are ongoing problems with the narrow range of tree species used in reforestation efforts, the poor survival rate of plantations, and the dwindling biodiversity of forest flora. CITMA blames the current economic crisis for preventing higher achievements in reforestation of mined areas, and for budget cuts in fire protection and forest planning. *Id.*

32. See Espino, *supra* note 3 at 340. Adverse environmental consequences of the "Special Period" include increased demand for firewood, over-exploitation of fish and wildlife, and abandoned environmental investment projects including the City of Havana's much-needed new sewage system. *Id.*

33. See *infra* notes 217-219 and accompanying text.

34. See generally Ley No. 81, Del Medio Ambiente [Law of the Environment], *Gaceta Oficial de la República de Cuba, Edición Extraordinaria*, July, 11, 1997.

35. See *id.*

36. See *infra* sections II-V.

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is directed on environmental requirements of foreign investment projects and the related fields of environmental licensing, environmental impact assessment, state environmental inspection, and civil responsibility.³⁷

This article concludes that Cuba's new framework environmental law and revised institutional structure are significant expressions of the government's desire to protect the environment.³⁸ The recent changes in these laws have established a strong legal framework which, if fully implemented and enforced, should enhance and protect the island's natural resources.³⁹

II. ORIGINS OF CUBA'S SOCIALIST LEGAL SYSTEM

A full understanding of the disposition and role of Cuban environmental law requires some background about the current legal order and how it is used for environmental protection.⁴⁰

Once in power, Cuban revolutionaries moved swiftly to destroy what they perceived as the unjust laws of prior corrupt regimes and to construct a new legal order.⁴¹ Within a few years the leadership had almost completely dismantled the old economic, political, and legal order.⁴² A Fundamental Law was enacted in February 1959 which served as the constitution of the republic until a new constitution was adopted in 1976.⁴³ The Fundamental Law vested all legislative authority in a

37. See *infra* section VI.

38. See *infra* notes 274-276 and accompanying text.

39. See *id.*

40. See generally, EVENSON, *supra* note 3 for a comprehensive examination of contemporary law and society in Cuba. Although in its legislation, institutions and legal procedures, Cuba's legal system exhibits a distinct national imprint, it closely reflects Spanish law and the European civil law tradition. *Id.*

41. See *id.* at 8. The revolutionaries believed the necessary socialist transformation could not be accomplished within the strictures of the existing law, which had served to legitimize and maintain the previous corrupt system. Luis Salas, *The Judicial System of Postrevolutionary Cuba*, 8 NOVA LAW JOURNAL 43, 44 (1983).

42. See EVENSON, *supra* note 3, at 7-8.

43. See Ley Fundamental, art. 119, *Gaceta Oficial de la República de Cuba*, February 7, 1959. See also EVENSON, *supra* note 3, at 11.

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Council of Ministers,⁴⁴ ensuring the consolidation of power in the hands of the revolution's leader Fidel Castro and the Communist Party.⁴⁵

Prior to the revolution, law was among the preferred professions of the upper class and trained lawyers were abundant in Cuba.⁴⁶ This changed abruptly in 1959, however, because the revolution had seemingly little need or patience for lawyers.⁴⁷ The practice of law was considered unnecessary in the new utopian society where corruption, crime, and exploitation would disappear.⁴⁸ Lawyers were viewed as elitists and parasitic functionaries of capitalism.⁴⁹ Dishonest judges, and those who opposed the new regime, were purged,⁵⁰ and many fled to Miami, as did a large number of Cuban lawyers who had been in private practice.⁵¹ Most lawyers who stayed to support the revolution left their legal practices to fill administrative positions in the government.⁵² Subsequently, during most of the 1960's, the legal profession and legal education atrophied,⁵³ as the government shifted its limited academic resources to technical and agricultural training to meet the economic demands of the new society.⁵⁴

Against this background of anti-legalistic sentiment, however, between 1959 and 1963, the Council of Ministers enacted hundreds of new laws, creating a chaotic web of regulations

44. See EVENSON, *supra* note 3, at 11. See *infra* notes 172-74 and accompanying text.

45. See EVENSON, *supra* note 3, at 11.

46. See *id.* at 41-43. See also Salas, *supra* note 41, at 66-69.

47. See EVENSON, *supra* note 3, at 41.

48. See *id.*

49. See *id.*

50. See EVENSON, *supra* note 3, at 8.

51. See *id.*

52. See *id.*

53. See EVENSON, *supra* note 3, at 41-42. During this time the numbers of Cuban law students dwindled. In 1964-1965, no new law students enrolled in school. Between 1965 and 1980 the median annual number of graduates from full-time study was fewer than fifty. *Id.* In comparison, the number of law school graduates in the 1958-1959 school year was 2,853. Salas, *supra* note 41, at 66-67.

54. See Salas, *supra* note 41, at 66-67.

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and institutions.⁵⁵ By the mid-1960's, Cuban leaders recognized that the legal profession was not only relevant to the evolution of socialism, but was necessary to the process of institutionalization.⁵⁶ In 1965, the Communist Party responded to the disabling chaos in the legal system and established the Commission on Juridical Studies, whose purpose was to suggest a legal framework which would provide direction for the socialist state.⁵⁷ The Commission's work resulted in several fundamental bodies of legislation, including the 1973 Law on the Organization of the Judicial System,⁵⁸ and the 1976 Socialist Constitution.⁵⁹

The Law on the Organization of the Judicial System established a court system that provided four levels of jurisdiction: base, district, provincial, and national.⁶⁰ The National Court ("Supreme Court") was granted appellate review over all judicial proceedings.⁶¹ In 1991, partly responding to the growing number of foreign investment projects,⁶² the Council of State established economic chambers in the Supreme Court and in

55. See EVENSON, *supra* note 3, at 12.

56. See *id.* at 42.

57. See *id.* at 13.

58. See *id.* See also Ley No. 1250, Ley de la Organización del Sistema Judicial, [Law on the Organization of the Judicial System], *Gaceta Oficial de la República de Cuba*, June 23, 1973.

59. See *id.* at 21. The Constitution was drafted by the Commission and approved in a special national referendum on February 15, 1976. *Id.* See generally CONSTITUCIÓN DE LA REPÚBLICA DE CUBA, (1976). The 1976 Constitution declared Cuba a "socialist state" and provided that the economic system be based on the social ownership of the means of production. *Id.* at arts. 1, 14. See also EVENSON, *supra* note 3, at 22.

60. See Ley No. 1250, Law on the Organization of the Judicial System art. 2, *Gaceta Oficial de la República de Cuba*, June 23, 1973

61. See EVENSON, *supra* note 3, at 71. A new law of the courts makes the Court independent and autonomous - no longer under the supervision and administration of the Ministry of Justice. See Ley No. 82, Law on the Popular Courts, *Gazeta Oficial Ext.*, July 14, 1997. The Cuban courts do not have the power of constitutional review, only the National Assembly does. It is not uncommon, however, for the Cuban Supreme Court to be requested to submit an advisory opinion on the constitutionality of proposed legislation. *Id.* at 78-80.

EVENSON, *supra* note 3, at 78. See also *infra* notes 160-64 and accompanying text.

62. See *infra* notes 207-11 and accompanying text.

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the Provincial Courts.⁶³ The courts' economic chambers have jurisdiction over environmental disputes.⁶⁴

Another major result of the Law on the Organization of the Judicial System was the elimination of the private practice of law.⁶⁵ Legal services are now provided through *bufetes colectivos*, Cuba's collective law offices, originally organized and supervised by the Ministry of Justice.⁶⁶ In 1974, the National Organization of *Bufetes Colectivos* ("ONBC") was established.⁶⁷ The ONBC is now an autonomous, self-governed, and self-financed institution.⁶⁸ This autonomy was necessary because Cuban lawyers often represent citizens in actions challenging administrative decisions or against public officials, as is the case in many environmental disputes,⁶⁹ and the lawyer's independence would be compromised if his or her salary was paid by the State.⁷⁰

Over the past few decades, the legal profession has been recovering from the revolution's early neglect of lawyers and legal education.⁷¹ The government recognizes that there are ongoing environmental implications of past educational "shortcomings" and the "absence of a sufficiently integrated and coherent judicial system".⁷² Although there has been significant progress in these areas, the development of Cuba's environmental legal system has suffered from the deficit in quantity of

63. See Decreto-Ley No. 129 De Extinción del Systema de Arbitraje Estatal, [Extinction of the State Arbitration System], *Gaceta Oficial de la República de Cuba Edición Extraordinaria*, August 19, 1991. See also EVENSON, *supra* note 3, at 210-11.

64. See Law of the Environment, *supra* note 2, Disposiciones Especiales, Primera [Special Dispositions, No.1]. See also *infra* note 265.

65. See EVENSON, *supra* note 3, at 43.

66. See *id.* at 43 and 60, n.3. The Ministry of Justice administers the court system and regulates the practice of law. It also participates in drafting legislation, in both the initial and final stages of codification. *Id.*

67. See *id.*

68. See *id.* at 45. The ONBC controls lawyers' salaries which are paid out of the income from client fees. See *id.*

69. See *id.*

70. See *id.*

71. See *id.* at 42.

72. See CITMA, NATIONAL ENVIRONMENTAL STRATEGY 1 (1997).

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lawyers and judges and the quality of their legal education.⁷³ Moreover, the Cuban legal system is not fully prepared to deal with many new complex issues raised by the drastic legal reforms which began in 1992, in the areas of commercial, environmental, and other fields of law.⁷⁴

III. EVOLUTIONARY MISSION OF CUBAN ENVIRONMENTAL LAW

This section discusses the environmental provisions of the Cuban Constitution,⁷⁵ and their transformative goals in light of the theory of socialist legality.⁷⁶ It also describes the country's new environmental education system and its role in developing popular environmental consciousness.⁷⁷

A. CONSTITUTIONAL PROTECTION OF THE ENVIRONMENT

The Constitution is Cuba's principal legal instrument, embodying the juridical support of all legislation.⁷⁸ It is also a salient ideological document.⁷⁹ (It should be noted that the laws of civil code systems, like Cuba's, are usually more expressly derived from their constitutions than are the laws of common law systems.)⁸⁰ Cuban legal scholars, including Osvaldo Dórticos Torrado, who became Cuba's Minister of Justice in the late 1970's, argue that socialist constitutions act as dynamic agents in the evolution toward communism, a quality that differs from capitalist constitutions which preserve the

73. See EVENSON, *supra* note 3, at 42. Cuban Lawyers must also cope with material shortages in computers, paper and transportation. See *id.* at 59.

74. See Interview with Debra Evenson, at Berkeley, California (February 9, 1998). Since 1992, many reforms have been introduced in areas including foreign investment law, banking and commercial credit law, tax law, electoral law, criminal law, and agricultural property law. These reforms have not radically changed the socialist system, but are significant efforts to make necessary changes. See *id.*

75. See *infra* notes 78-87 and accompanying text.

76. See *infra* notes 88-95 and accompanying text.

77. See *infra* notes 96-110 and accompanying text.

78. See EVENSON, *supra* note 3, at 21.

79. See *id.*

80. See EVENSON, *supra* note 3, at 14-17.

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status quo.⁸¹ Dórticos asserts that while the Cuban Constitution is foremost a legal document that establishes the norms for law and legislation, it also assumes a transformative mission which makes it a “transcendental” political document.⁸²

Article 27 of the Cuban Constitution, first incorporated in July 1976, is the cornerstone of Cuban environmental law and policy.⁸³ Its original language required state agencies and citizens to be vigilant over environmental matters.⁸⁴ Inspired by his participation at the Earth Summit at Río de Janeiro, Brazil in 1992, President Fidel Castro called for modification of Article 27 to more clearly define the revolution’s environmental goals and to create a constitutional link between economic development and environmental protection.⁸⁵ Article 27 currently reads:

The State protects the environment and the natural resources of the nation. It recognizes its close relationship with sustainable economic and social development to make human life more rational and to ensure the survival, well-being and security of present and future gen-

81. See *id.* at 16. In 1980, Minister of Justice Osvaldo Dórticos Torrado commented on the fundamental role of the Cuban Socialist Constitution. He stated: “As a juridical instrument, a legal instrument, it is the principal form and source of expression of State law. In effect, the State creates all norms basing them in the Constitution, which is the juridical support for all legislation.” Osvaldo Dórticos Torrado, “*Discurso Pronunciado en el Acto Central por el V Aniversario de la Constitución de la República*,” *REVISTA CUBANA DE DERECHO*, NO. 16 (1980), at 6.

82. See *id.*

83. See CONSTITUCIÓN DE LA REPÚBLICA DE CUBA art. 27 (1992).

84. See *id.* Article 27 of the 1976 Constitution read: To assure the wellbeing of the citizens, the State and the society protect nature. It is incumbent on the competent state organs, and furthermore on each citizen, to be vigilant in order to maintain clean waters and air, and so that soils, flora and fauna are protected. CONSTITUCIÓN DE LA REPÚBLICA DE CUBA art. 27 (1992).

85. CITMA, NATIONAL ENVIRONMENTAL STRATEGY 2 (1997). See also Fidel Castro Ruz, *Mensaje de Fidel Castro Ruz, Presidente de los Consejos de Estado y de Ministros de la república de Cuba* (1992), reprinted in *PARA QUE NO SE PIERDA LA VIDA*, (Editora Política, La Habana, 1992). At the 1992 Rio Earth Summit, Cuba was one of only two countries worldwide to receive an A+ rating for implementation of sustainable development practices. Following the Summit, Cuban President Fidel Castro vowed Cuba would be the first country to constitutionally link these principles. Castro pressed for environmental protection in development to become a new world ideology. CHRISTOPHER P. BAKER, *CUBA HANDBOOK* 22 (1997).

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erations. It is the responsibility of the competent state organs to apply this policy.

It is the duty of the citizens to contribute to the protection of the water, the atmosphere, the conservation of the land, the plant life, the animal life and all the rich potential of nature.⁸⁶

Thus, the Cuban Constitution imposes an actual duty on the State to apply policies of sustainable economic and social development, as well as a duty on citizens to contribute to the protection of the environment.⁸⁷

B. SOCIALIST LEGALITY AND ENVIRONMENTAL CONSCIOUSNESS

Cuban environmental legislation must also be considered in the context of Cuba's jurisprudential theory of socialist legality.⁸⁸ In this distinct theory, law and government perform a positive, dynamic function in the creation of the socialist state.⁸⁹ The Cuban juridical order, and the Cuban Constitution in particular, are used to shape social behavior and to further the evolution of communist ideals.⁹⁰ By contrast, most civil law systems, and also the United States common law tradition, tend to resist change as a matter of principle.⁹¹ But Cuban law scholars argue that their legal system is dynamic and proactive, and that socialist legality exhibits the State's radical, post-revolutionary departure from the conservative Spanish civil law. The law in socialist Cuba has a dual objective; it is intended not only to regulate, but also to transform society.⁹²

Thus, adhering to the basic premise of socialist legality, a goal of Cuba's constitutional environmental provisions and environmental laws is to ultimately transform the socio-judicial

86. CONSTITUCIÓN DE LA REPÚBLICA DE CUBA art. 27, (1992).

87. *See id.*

88. *See* EVENSON, *supra* note 3, at 14-17.

89. *See id.*

90. *See id.*

91. *See* EVENSON, *supra* note 3, at 15. *See also* JOHN HENRY MERRYMAN, *THE CIVIL LAW TRADITION* 48 (1985).

92. *See* EVENSON, *supra* note 3, at 15.

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culture.⁹³ Cuba strives to create the “new” citizen who is environmentally conscious, who acts to preserve the value of nature and biological diversity, and who understands and embraces the goal of sustainable development and all other environmental norms reflected in the legislation.⁹⁴ The principal means for cultivating environmental consciousness are the environmental education program and the development of codes of environmental behavior.⁹⁵

C. ENVIRONMENTAL EDUCATION AND CODES OF BEHAVIOR

Conforming with the ideals of socialist legality, Cuban law and policy describe environmental education as a continuous and permanent process of reorienting economic, social, and cultural practices toward sustainable development.⁹⁶

The 1997 Law of the Environment requires the Cuban Ministry of Science, Technology and Environment (“CITMA”), along with the Ministry of Education and the Ministry of Higher Education, to develop and implement the State’s environmental education program.⁹⁷ CITMA has delegated this responsibility to its Center for Environmental Information, Dissemination and Education.⁹⁸ The program seeks to heighten environmental consciousness by increasing citizens’ under-

93. See Salas, *supra* note 41, at 62.

94. See CITMA, NATIONAL ENVIRONMENTAL STRATEGY 20-21, (1997). The importance of Cuba’s environmental law in shaping its citizens’ consciousness is recognized in the National Environmental Strategy, which states:

The legislation is effective when it successfully regulates behaviors. . . . The legislation is efficient when it attains an effective social compliance. It is particularly important for the environmental legislation to be efficient, inasmuch as it intends to transform behaviors, which are undesirable and deep rooted. Thus environmental legislation is a source of the environmental policy, as well as an instrument of its implementation.

Id.

Revolutionary leader Ernesto “Ché” Guevarra projected that the socialist revolution would create the “new man.” EVENSON, *supra* note 3, at 2.

95. See CITMA, NATIONAL ENVIRONMENTAL STRATEGY 7 (1997).

96. See *id.* at 24.

97. See Law of the Environment, *supra* note 2, at tit. III, chap. VII, art. 46.

98. See CITMA, *Rio+5*, *supra* note 3, at 68.

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standing of the environment; it stresses the themes of protection and sustainable use of natural resources.⁹⁹

The environmental education program spans all sectors of the economy and public services, social groups, non-governmental organizations, and the general population.¹⁰⁰ All of the state organs and institutions have some responsibility to further this strategy.¹⁰¹ For example, the institutions responsible for worker education, such as the national and provincial trade unions and work-related mass organizations,¹⁰² are responsible for developing codes of environmental behavior.¹⁰³ These institutions must incorporate environmental education in their training programs and must emphasize the relationship that the particular activity or service has with the environment.¹⁰⁴ They must also adopt measures to ensure environmental protection and the health of their employees.¹⁰⁵

Cuban mass media also plays a significant role in the environmental education strategy.¹⁰⁶ The Law of the Environment requires incorporation of environmental themes into radio and television programs and newsprint to explain the "complex, positive interrelationship" between economic development and environmental protection.¹⁰⁷ At least one environmental public service advertisement has aired on television since the enactment of the Law of the Environment.¹⁰⁸ It shows a young man sitting at the *Malecon*, Havana's oceanside drive, throwing a soda can toward the ocean.¹⁰⁹ The can flies back and hits him

99. See CITMA, NATIONAL ENVIRONMENTAL STRATEGY 24-25 (1997).

100. See Law of the Environment, *supra* note 2, at tit. III, chap. VII, art. 47.

101. See *id.*

102. See *infra* notes 190-92 and accompanying text.

103. See CITMA, NATIONAL ENVIRONMENTAL STRATEGY 7 (1997).

104. See Law of the Environment, *supra* note 2, at tit. III, chap. VII, art. 47.

105. See Law of the Environment, *supra* note 2, at tit. III, chap. VII art. 55; tit. XIV, arts. 158-163.

106. See *id.* at tit. III, chap. VII, art. 53.

107. See *id.*

108. See Anita Snow, *Cuba is Finally trying to Clean Up Environment*, ROCKY MOUNTAIN NEWS, September 14, 1997.

109. See *id.*

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in the head as a message reads: "nature is very skillful," implying that nature will retaliate if treated with disrespect.¹¹⁰

IV. CUBA'S THREE-TIERED SYSTEM OF ENVIRONMENTAL LAW

Under the ultimate authority of the Cuban Constitution, there is essentially a three-tiered system of environmental law. The first tier is Cuba's 1997 framework Law of the Environment.¹¹¹ The second tier is comprised of numerous sector-specific environmental laws issued by the Council of State or the National Assembly,¹¹² and the third tier embodies the regulations and technical standards prescribed by CITMA.¹¹³

A. THE 1997 LAW OF THE ENVIRONMENT

The Law of the Environment is designed to actualize the Constitution's environmental objectives and to provide a comprehensive framework from which more detailed environmental regulations will be established.¹¹⁴ The 1997 Law revoked and replaced Law 33, entitled "Protection of the Environment and the Rational Use of Natural Resources."¹¹⁵ Law 33, passed by the National Assembly in February 1981, was one of the pioneer environmental laws in Latin America,¹¹⁶ and was the previous foundation for all specific environmental

110. *Id.*

111. See generally Law of the Environment, *supra* note 2. See also *infra* notes 114-132 and accompanying text.

112. See *infra* notes 133-42 and accompanying text.

113. See *infra* notes 143-53 and accompanying text.

114. See Law of the Environment, *supra* note 2. See also *Una Ley Transcendente para el Bienestar de la Sociedad*, [A Transcendental Law for the Well-being of Society], published in GRANMA, July 12, 1997.

115. See Ley No. 33 (Ley De Protección Del Medio Ambiente y Del Uso Racional De Los Recursos Naturales), [Protection of the Environment and Rational Use of Natural resources], *Gaceta Oficial de la República de Cuba, Edición Ordinaria*, February 12, 1981. See also Law of the Environment, *supra* note 2, at Disposiciones Finales, Segunda, [Final Disposition, No.2].

116. See CITMA, *Rio+ 5*, *supra* note 3, at 58.

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regulations in Cuba.¹¹⁷ It was based on the premise that the environment is of fundamental good to society and that its protection and conservation is vital to the State.¹¹⁸ The preamble to Law 33 extols socialist society where “the good of man is paramount, and where the social character of property facilitates environmental protection and the rational use of natural resources.”¹¹⁹ The Law insists that on environmental matters, socialism contrasts with capitalist regimes, where the interests of private property contradict the general interests of society.¹²⁰

Law 33 was Cuba’s first attempt to establish basic principles of environmental conservation and protection.¹²¹ It was intended that the country’s politics and economy would incorporate these principles, with the purpose of optimally using the nation’s resources and their productive potential.¹²² The law also set forth broad policy statements in nine spheres of environmental protection.¹²³

The 1997 Law of the Environment is based upon the same philosophical principles as Law 33, but differs in several substantive ways. First, the Law of the Environment more clearly defines the roles of state administrative agencies, particularly CITMA.¹²⁴ Second, the new law stresses the goal of sustainable development and requires that environmental matters be considered in all land use planning decisions.¹²⁵ This is expressed

117. See Ley No. 33 (Ley De Protección Del Medio Ambiente y Del Uso Racional De Los Recursos Naturales), *Gaceta Oficial de la República de Cuba, Edición Ordinaria*, February 12, 1981.

118. See *id.*

119. See *id.*

120. See Ley No. 33 (Ley De Protección Del Medio Ambiente y Del Uso Racional De Los Recursos Naturales), *Gaceta Oficial de la República de Cuba, Edición Ordinaria*, February 12, 1981.

121. See *id.* chap. 1, art. 1.

122. See *id.*

123. See Ley No. 33 (Ley De Protección Del Medio Ambiente y Del Uso Racional De Los Recursos Naturales), *Gaceta Oficial de la República de Cuba, Edición Ordinaria*, February 12, 1981. The nine spheres are: chap. 2, sec.1, (Inland waters); chap. 2, sec. 2, (soils); chap. 2, sec. 3, (mineral resources); chap. 2, sec. 4, (marine resources); chap. 2, sec. 5, (flora and fauna); chap. 2, sec. 6, (atmosphere); chap. 2, sec. 7, (farming); chap. 2, sec. 8 (human settlements); and chap. 2, sec. 9, (landscape and tourist resources). *Id.*

124. See *infra* notes 174-88 and accompanying text.

125. See Law of the Environment, *supra* note 2, tit. III, chap. II.

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in the theory of “environmental ordering” which, according to Cuban environmental law scholars, includes not only the physical, social, and economic dimensions of the environment, but also includes cultural and ethical dimensions.¹²⁶ The Law of the Environment includes new mechanisms for achieving sustainable development, including environmental licenses,¹²⁷ environmental impact assessment,¹²⁸ and state environmental inspections.¹²⁹ Third, the Law of the Environment includes enforcement provisions such as the system of civil responsibility,¹³⁰ and the development of clearly defined administrative sanctions.¹³¹ Finally, as previously mentioned, the Law of the Environment contains provisions intended to develop an environmental consciousness among Cuban citizens.¹³²

B. SECTOR-SPECIFIC ENVIRONMENTAL LAWS

Although it is comprehensive, the Law of the Environment did not repeal the numerous sector-specific laws, which form the second tier of Cuba’s environmental legal system.¹³³ Most of these sector-specific laws are decree-laws, adopted by the Council of State while the National Assembly is in recess.¹³⁴ The decree-laws take effect upon adoption by the Council, however, they are later presented to the National Assembly for approval, modification, or rejection.¹³⁵

Law 33 required the National Commission for Environmental Protection and Rational Use of Natural Resources (“COMARNA”)¹³⁶ to prepare more specific regulations in the nine specific spheres of environmental regulation, including

126. See *id.* Letter from Dr. Orlando Rey Santos, Environmental Legislation Specialist, CITMA, (February 10, 1998) (on file with author).

127. See *infra* notes 224-30 and accompanying text.

128. See *infra* notes 231-45 and accompanying text.

129. See *infra* notes 246-57 and accompanying text.

130. See *infra* notes 263-73 and accompanying text.

131. See Law of the Environment, *supra* note 2, at tit. III, chap. XI.

132. See *id.* at tit. III, chap. VII.

133. See *id.* at Disposiciones Transitorias.

134. See EVENSON, *supra* note 3, at 172, fn 36.

135. See *id.*

136. See *infra* notes 175-79 and accompanying text.

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penalties for violations.¹³⁷ It took more than a decade for COMARNA to complete this task and even then the regulations were too general and unenforceable.¹³⁸

CITMA is currently analyzing many of these sector-specific laws and is revising or redrafting them to make them more precise and effective.¹³⁹ The revision of legislation on inland waters and soils is expected to occur this year,¹⁴⁰ and the agency has recently drafted three proposed decree-laws, on the subjects of protected areas, biosafety, and administrative enforcement and penalties.¹⁴¹ CITMA expects these proposed regulations will also be signed into law in 1998.¹⁴²

C. REGULATIONS AND TECHNICAL STANDARDS

Encompassed within the third tier of Cuba's environmental laws are regulations and technical standards issued by CITMA.¹⁴³ These cover general topics such as Environmental Impact Assessment ("EIA"),¹⁴⁴ environmental inspections,¹⁴⁵

137. See Interview with Professor Vivian Hernandez-Torres, Director of Legislation, Ministry of Justice and Professor Angel Fernandez-Rubio, Doctor of Juridical Sciences, in Havana, Cuba (January 8, 1997).

See also Decreto-Ley 136, (Del Patrimonio Forestal y Fauna Silvestre y Sus Contravenciones) [Forest Patrimony and Wild Fauna], *Gaceta Oficial de la República de Cuba, Edición Extraordinaria*, March 5, 1993; Decreto-Ley 138, (De las Aguas Terrestres) [Inland Waters], *Gaceta Oficial de la República de Cuba, Edición Ordinaria*, July 2, 1993; Decreto-Ley 164, (Reglamento de Pesca) [Fishing Regulations], *Gaceta Oficial de la República de Cuba, Edición Ordinaria*, July 22, 1996; Decreto-Ley 179, (Proteccion, Uso y Conservacion de los Suelos, y sus Contravenciones) [Protection, Use and Conservation of Soils], *Gaceta Oficial de la República de Cuba, Edición Ordinaria*, February 26, 1993, (for examples of sector-specific decree-laws).

138. See Interview with Dr. Eulalia Viamontes Guilbeaux, *supra* note 10.

139. See Letter from Dr. Orlando Rey Santos, Environmental Legislation Specialist, CITMA (February 10, 1998) (on file with author).

140. See *id.*

141. See *id.*

142. See *id.*

143. See Interview with Miriam Arcia, *supra* note 10.

144. See Resolución No. 168/95, Reglamento para la Realizacion y Aprobacion de las Evaluaciones de Impacto Ambiental y el Otorgamiento de las Licencias Ambientales [Regulations for the Execution and Approval of Environmental Impact Evaluations and the Granting of Environmental Licenses], *Gaceta Oficial de la República de Cuba*, September 15, 1995.

145. Resolución No. 130/95, Reglamento para la Inspeccion Ambiental Estatal [Regulations for State Environmental Inspection], *Gaceta Oficial de la República de Cuba*, June 1, 1995.

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and hazardous waste management.¹⁴⁶ For example, in 1995, CITMA promulgated Resolution No. 168, which set forth the specific requirements and procedures for conducting EIAs, as well as instructions for environmental license applications, and procedures for agency review.¹⁴⁷

In contrast to the general scope of the regulations, the technical standards tend to be either industry-wide or project-specific.¹⁴⁸ These standards frequently take the form of mitigation measures, as well as monitoring and inspection programs required by a project's environmental license.¹⁴⁹ A license may also include particular administrative, civil, and penal sanctions for violations.¹⁵⁰

Because Cuba's legal strategy for environmental protection is still in its developing stages, regulations must still be promulgated for many of Cuba's environmental spheres.¹⁵¹ CITMA has made the preparation of these regulations a priority and it expects to complete a regulation on biodiversity in 1998.¹⁵² Similarly, since environmental licenses have only recently been required, the retroactive application of technical standards, particularly mitigation measures and monitoring require-

146. See Resolución No. 15/96, Regulaciones para el Ejercicio de las Funciones de Autoridad Nacional y Punto de Contacto del Convenio de Basilea Sobre el Control de los Movimientos Transfronterizos de Desechos Peligrosos y su Eliminación y Otras Disposiciones para la Gestión Ambientalmente Racional de Estos Desechos [Regulations for the Exercise of the Functions of National Authority and Point of Contact of the Basel Agreement on Control of the Transboundary Movements of Hazardous Waste and Their Disposal and Other Dispositions for the Rational Environmental Management of Waste], *Gaceta Oficial de la República de Cuba*, February 13, 1996.

147. See Resolución No. 168/95, *supra* note 144. See also *infra* notes 224-45 and accompanying text.

148. See Interview with Miriam Arcia, *supra* note 10. For instance, industry-wide standards may generally regulate emissions from sugar refineries or petroleum-fired power plants. Project-specific regulations may impose particular mitigation measures to control contaminated stormwater runoff from a nickel mine. The mine would likely be required to monitor for all potential contaminants. *Id.*

149. See *id.* See also *infra* notes 224-30 and accompanying text.

150. See Law of the Environment, *supra* note 2, at tit. III, chap. III, art. 25.

151. See Interview with Miriam Arcia, *supra* note 10.

152. See Letter from Dr. Orlando Rey Santos, Environmental Legislation Specialist, CITMA (February 10, 1998) (on file with author).

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ments, is needed for many of the island's industries and projects.¹⁵³

V. INSTITUTIONS OF CUBAN ENVIRONMENTAL LAW AND POLICY

Cuban environmental law and policy involves various agencies and procedures.¹⁵⁴ This section describes the environmental roles of the popular organs of socialist democracy,¹⁵⁵ the Council of Ministers,¹⁵⁶ the Ministry of Science Technology and Environment,¹⁵⁷ mass organizations and non-governmental organizations.¹⁵⁸

A. POPULAR ASSEMBLIES

The 1976 Constitution established Popular Assemblies at the national, provincial, and municipal levels.¹⁵⁹ In 1992, Cuba took a transformative step toward socialist democracy, by amending the Constitution and electoral laws to give Cuban citizens an opportunity to vote directly for national and provincial representatives.¹⁶⁰ The electoral process, however, does not provide for contested elections and only candidates nomi-

153. See Interview with Miriam Arcia, *supra* note 10. For example, Prior to the passage of Resolution 168/95 construction began on a golf course, funded by foreign capital, in Cuba's resort town of Varadero. The modification of surface drainage and use of pesticides and herbicides has resulted in severe environmental concerns, including potential contamination of drinking water supplies. CITMA has proposed mitigation measures for the project which will cost the investor an additional 12 million dollars. All of the golf courses that have been proposed after September 1995, have been required to obtain an environmental license and technical standards are imposed prior to their construction. *Id.*

154. See generally *infra* section V.

155. See *infra* notes 159-70 and accompanying text.

156. See *infra* notes 171-73 and accompanying text.

157. See *infra* notes 174-88 and accompanying text.

158. See *infra* notes 189-204 and accompanying text.

159. See EVENSON, *supra* note 3, at 14. See also CONSTITUCIÓN DE LA REPÚBLICA DE CUBA chaps. 10, 12 (1992). Members of the National Assembly and the 14 Provincial Assemblies are chosen in general elections. All Cuban citizens, age sixteen or older, may vote. *Elections in Cuba - Candidates are Chosen by the People*, GRANMA INTERNATIONAL, October 5, 1997, at 8.

160. See EVENSON, *supra* note 3, at 26-27.

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nated by a national commission can be elected.¹⁶¹ Legislative power is vested solely in the National Assembly.¹⁶² Thus, the National Assembly is responsible for legislating Cuba's environmental laws as well as creating the administrative agencies to implement them.¹⁶³

Provincial and municipal assemblies also play an important role in Cuban environmental policy.¹⁶⁴ They are responsible for evaluating and prioritizing the local environmental problems and for making territorial management decisions.¹⁶⁵ The 1997 Law of the Environment requires that, when making territorial management decisions, the local assemblies consider potential environmental effects and their connection with economic, demographic, and social factors.¹⁶⁶ Article 21 of the Law of the Environment, entitled "Environmental Ordering", lists specific factors which must be considered in this holistic approach to land-use planning.¹⁶⁷ These factors include the nature and existing health of the affected ecosystems and the environmental impacts of human settlements, infrastructural works, and all "related activities."¹⁶⁸ During the planning process, the local assemblies work closely with territorial representatives of CITMA, and with representatives of the affected communities.¹⁶⁹

Subsequently, the local assemblies have significant authority regarding the use and protection of natural resources within their jurisdiction, including the creation of parks and protected areas, the maintenance of drinking water sources, and other

161. *See id.*

162. *See* CONSTITUCIÓN DE LA REPÚBLICA DE CUBA chap. 10, art. 70 (1992).

163. *See id.*

164. *See* Law of the Environment, *supra* note 2, tit. II, art. 15.

165. *See id.*

166. *See* Law of the Environment, *supra* note 2, tit. III, chap. II, art. 21. *See also* CITMA, NATIONAL ENVIRONMENTAL STRATEGY 7, 20 (1997).

167. *See id.*

168. *Id.*

169. *See* CITMA, NATIONAL ENVIRONMENTAL STRATEGY 7 (1997).

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environmental issues related to human settlements and communal services.¹⁷⁰

B. COUNCIL OF MINISTERS

The Council of Ministers, the administrative branch of the Cuban government, has several environmental roles.¹⁷¹ It approves and evaluates the National Environmental Strategy, and the National Program of Environment and Development.¹⁷² It also designates environmentally protected areas and buffer zones, and mediates conflicts between governmental bodies over the objectives of the new Law of the Environment.¹⁷³

C. MINISTRY OF SCIENCE, TECHNOLOGY AND ENVIRONMENT

One of the primary goals of Cuba's Law of the Environment is creating and empowering government bodies and agencies, with the necessary authority and accountability to ensure compliance with the Law.¹⁷⁴ Toward this end, in 1994, the Ministry of Science, Technology and Environment replaced COMARNA as the central administrative agency for environmental protection.¹⁷⁵

170. See Law of the Environment, *supra* note 2, tit. III, chap. II, art. 21. See also CITMA, NATIONAL ENVIRONMENTAL STRATEGY 7, 20 (1997).

171. See Interview with Debra Evenson, at Berkeley, California (February 9, 1998). See also CONSTITUCIÓN DE LA REPÚBLICA DE CUBA arts. 95-100 (1992).

172. See Law of the Environment, *supra* note 2, tit. II, art. 17.

173. See *id.*

174. See Interview with Dr. Eulalia Viamontes Guilbeaux, *supra* note 10. See also Law of the Environment, *supra* note 2, tit. II arts. 11, 12.

175. See Decree-Law 147, De la Reorganizacion de los Organismos de la Administracion Central del Estado [Reorganization of the Central State Administrative Agencies], *Gaceta Oficial de la República de Cuba*, April 21, 1994. Although CITMA acts as lead environmental agency, various other organizations and agencies such as the Ministry of Public Health, the Ministry of Tourism, the Ministry of Fishing Industries, and territorial agencies, among others, are involved with formulation and enforcement of environmental legislation. These organizations and agencies, however, carry out their environmental work in accordance with the policies, strategies, and framework defined by CITMA. Roberto Acosta Moreno & Orlando Rey Santos, *Frameworks for Cooperation: From the Realm of the Possible to Action*, in INTER-AMERICAN DIALOGUE, A CONFERENCE REPORT 23, 28-29 (1997).

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One reason for this restructuring was to remedy conflicts within COMARNA,¹⁷⁶ in particular, the stagnation that resulted because those responsible for enforcing environmental regulations were also responsible for production goals and the State's economic advancement.¹⁷⁷ Since there were no clear lines of authority in the agency, disputes over environmental regulation often ended in stalemate.¹⁷⁸ CITMA, an independent, lead environmental agency, is intended to cure these problems.¹⁷⁹

CITMA assists the Council of Ministers in developing the National Environmental Strategy and devises the nation's environmental laws.¹⁸⁰ CITMA also helps organize the environmental actions and policies of other state agencies, and mediates inter-agency disputes on environmental matters.¹⁸¹

The principal environmental divisions of CITMA include the Board of Environmental Policy, which oversees the comprehensive design of Cuban environmental policy and its legal underpinnings, and the Environmental Agency, which implements and enforces the environmental policies and legislation.¹⁸² CITMA's Environmental Agency is itself composed of various

176. See Espino, *supra* note 3, at 339. Founded in 1977, COMARNA consisted of representatives of 21 administrative agencies, presidents of the fourteen provincial environmental commissions, and representatives of the mass organizations. *Id.*

177. See *id.* Interview with Dr. Eulalia Viamontes Guilbeaux, *supra* note 10.

178. See Interview with Dr. Eulalia Viamontes Guilbeaux, *supra* note 10. People often joke in Cuba that "if you don't want to find a solution, appoint a commission." *Id.*

179. See *id.*

180. See Law of the Environment, *supra* note 2, at tit. II, arts. 12, 17. See also CITMA, *Rio+5*, *supra* note 3, at 74.

181. See Law of the Environment, *supra* note 2, at tit. II, arts. 12, 17. All of the state administrative agencies must incorporate and comply with environmental protection measures designed to guarantee sustainable development and adequate levels of environmental quality. The agencies must incorporate all regional, national, and international environmental strategies into their policies. *Id.* at tit. II, art. 13.

182. See Moreno and Santos, *supra* note 175, at 27-28. CITMA has also established offices in each of Cuba's 14 provinces. These offices, called "Environmental Units," house officials who run provincial environmental programs. Some of these units contain environmental research and natural science groups. *Id.*

Cuba's fourteen provinces are: Pinar del Río, La Habana, Isla de la Juventud, Matanzas, Villa Clara, Cienfuegos, Sancti Spiritus, Ciego de Avila, Camagüey, Las Tunas, Granma, Holguín, Santiago de Cuba and Guantánamo. ACADEMIA DE CIENCIAS DE CUBA, ATLAS NACIONAL DE CUBA (1992).

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centers and institutions.¹⁸³ Of particular importance to the enforcement of environmental legislation is the Center for Environmental Management and Inspection ("CGIA").¹⁸⁴ CGIA is responsible for granting environmental licenses and for performing environmental inspections at licensed facilities.¹⁸⁵

Another important institution within the Agency is the Center for Environmental Information, Dissemination and Education ("CIDEA") which promotes the system of environmental education and advances public awareness of environmental issues.¹⁸⁶ One of CIDEA's primary responsibilities is developing the National System of Environmental Information which was designed to gather and disseminate all the information "necessary for rational environmental decisions."¹⁸⁷ CITMA is required to establish the mechanisms and procedures for public access to this system and, without disregarding Cuba's intellectual property laws, it must ensure the periodic dissemination of the system's environmental information.¹⁸⁸

D. MASS ORGANIZATIONS AND ENVIRONMENTAL NON-GOVERNMENTAL ORGANIZATIONS

Cuba's mass organizations are expressly recognized by the Constitution, which stresses their importance in carrying out state policy.¹⁸⁹ They are particularly essential to Cuba's goal of

183. See Moreno and Santos, *supra* note 175, at 27-28. The Environmental Agency is comprised of: the Center for Environmental Management and Inspection; the Center for Environmental Information, Dissemination and Education; the Center for Protected Areas; the Institute of Meteorology; the Institute of Oceanology; the Institute of Ecology and Systematics; the Institute of Geography; the Institute of Geophysics and Astronomy; the National Zoo; the National Aquarium; and the National Museum of Natural History. *Id.*

184. See *id.*

185. See Resolución No. 168/95, *supra* note 144 at chap. II, art. 9. CGIA also provides guidance to and controls the actions of the environmental units of CITMA's provincial delegations. Moreno and Santos, *supra* note 175, at 27-28. See also *infra* notes 224-257 and accompanying text.

186. See Moreno and Santos, *supra* note 175, at 28. See also *supra* notes 96-110 and accompanying text.

187. Law of the Environment, *supra* note 2, tit. 3, chap. 5.

188. See *id.* tit. III, chap. V, art. 37

189. See EVENSON, *supra* note 3, at 23. Cuba's mass organizations include: the Central Organization of Cuban Trade Unions (CTC), the Committees for the Defense of

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developing environmental consciousness.¹⁹⁰ These organizations, such as the Committees for the Defense of the Revolution and the Union of Young Communists, incorporate environmental themes in their community meetings and educational programs.¹⁹¹

Similarly, the environmental Non-Governmental Organizations ("NGO") actively promote environmental awareness campaigns and participate in all aspects of environmental law making and enforcement.¹⁹² For example, Pro-Naturaleza, Cuba's largest environmental NGO,¹⁹³ participated in the drafting and legislative processes of the Law of the Environment.¹⁹⁴ Pro-Naturaleza was founded in 1992 and has over 5,000 members located throughout the island with chapters in each of the provinces.¹⁹⁵ The organization receives no governmental funding and is supported completely by individual contributions.¹⁹⁶ Among other activities, the organization's members participate in regional planning processes and review en-

the Revolution (CDR), the Federation of Cuban Women (FMC), the Union of Young Communists (UJC), the National Association of Small Farmers (ANAP), the Federation of University Students (FEU), and the Federation of Students of Intermediate Education (FEEM). *Id.* at 23, 36.

190. *See id.*

191. *See* Interview with Jorge Ramon Cuevas, *supra* note 5. The Committees for the Defense of the Revolution [hereinafter CDR] were first organized in 1960. They were set up on every block, building or factory as a system of national vigilance to combat counterrevolutionary activity. Their role has since been expanded to serve as a primary grassroots political organization. Salas, *supra* note 41, at n.26. One of the environmental responsibilities of the CDRs is collecting recyclable materials (bottles, cans, paper, and carton) from their neighborhoods. Interview with Debra Evenson, at Berkeley, California (February 9, 1998).

192. *See* Interview with Jorge Ramon Cuevas, *supra* note 5. Other Cuban environmentally related NGOs include: the Man and Nature Foundation, the "Thomas Roig" Scientific Society, the Félix Varela Center, Cuba-Solar, the Society of Ocean Sciences, the Cuban Society of Sanitary Engineering, the Geography Society, the Zoology Society, the Meteorology Society, the Eco-Iure Group of the Society of Constitutional Law, the Cuban Speleological Society, and the OIKOS Group of the Cuban Society of International Law. *See* Moreno and Santos, *supra* note 175, at 26.

193. *See* Interview with Jorge Ramon Cuevas, *supra* note 5.

194. *See id.* CITMA solicited comments on drafts of the framework law from various environmental NGOs including Pro-Naturaleza, the Nature and Man Foundation and the Félix Varela Center. These groups also participated in the legislative process by submitting comments to the National Assembly. *Id.*

195. *See id.*

196. *See id.*

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vironmental impacts of proposed projects.¹⁹⁷ Pro-Naturaleza's "watchdog" members are often the first to notice problems of environmental degradation.¹⁹⁸ They generally report environmental problems to local representatives of CITMA or the Municipal or Provincial Assemblies.¹⁹⁹ In cases that might constitute a crime, such as the illegal dumping of hazardous waste, they report the situation or behavior to the *Fiscalia*, Cuba's Attorney General's office.²⁰⁰

By participating in the environmental impact assessment of proposed projects, Pro-Naturaleza's members have frequently succeeded in forcing environmental mitigation measures and have even permanently halted projects.²⁰¹ For example, Pro-Naturaleza's members fought for three years to stop a proposed hydroelectric dam in the Toa-Duaba region of eastern Cuba.²⁰² The dam would have flooded large portions of the forested region.²⁰³ By participating in the EIA process, the environmentalists proved that the costs of losing the forest outweighed the benefits of the dam and the project was subsequently canceled.²⁰⁴

VI. IMPLEMENTATION AND ENFORCEMENT OF CUBAN ENVIRONMENTAL LAW

To illustrate how Cuba's environmental laws are intended to operate, this section discusses the environmental regulation of foreign investment projects, including environmental licensing requirements and the related issues of environmental

197. See Interview with Jorge Ramon Cuevas, *supra* note 5. Generally, the CITMA delivers summaries of new project proposals to Pro-Naturaleza to be circulated among its members for comments. On several occasions these comments have resulted in substantial project changes and environmental mitigations. *Id.*

198. See *id.*

199. See *id.*

200. See *id.* See also EVENSON, *supra* note 3 at 60 n.3. The *Fiscalia*, headed by the *Procurator General*, is authorized to uphold the law in all branches of public and private life. *Id.*

201. See Interview with Jorge Ramon Cuevas, *supra* note 5.

202. See *id.*

203. See *id.*

204. See *id.*

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impact assessment, and state inspection.²⁰⁵ This section also describes proposed economic measures for controlling environmental behavior, and discusses Cuba's system of civil responsibility.²⁰⁶

A. FOREIGN INVESTMENT PROJECTS

Beginning in 1989, with the disintegration of the Socialist Bloc, and ossification of the U.S. economic blockade,²⁰⁷ attracting foreign capital has become increasingly important for the Cuban economy.²⁰⁸ To replace the petroleum and other financial and material support it had previously received from the Soviet Union, Cuba began actively seeking new trading partners.²⁰⁹ Despite the escalation of the blockade, Cuba has successfully solicited numerous joint ventures and foreign-investment projects with firms across the globe.²¹⁰ Most current joint ventures and foreign investments are in the areas of tourism, mining, oil exploration, communications and biotechnology.²¹¹

To assure the security of foreign investments, the Cuban Constitution was modified, in 1992, to recognize "mixed" enterprises.²¹² Three years later, to further encourage overseas in-

205. See *infra* notes 207-57 and accompanying text.

206. See *infra* notes 258-73 and accompanying text.

207. See Cuban Liberty and Democratic Solidarity Act, 22 USC § 6001 *et seq.*

208. See *Economía Cubana. La Luz al Final del Túnel* [Cuban Economy: The Light at the End of the Tunnel], CÁMARA DE COMERCIO DE LA REPÚBLICA DE CUBA [CHAMBER OF COMMERCE OF THE REPUBLIC OF CUBA], 2 CUBA FOREIGN TRADE 16-18, (February 1995).

209. See Address delivered by Mr. Ricardo Cabrisas Ruíz, Cuban Minister of Foreign Trade, at the opening of the 1995 International Caribbean Trade Fair. Santiago de Cuba, June 26th, 1995, reprinted in CÁMARA DE COMERCIO DE LA REPÚBLICA DE CUBA [CHAMBER OF COMMERCE OF THE REPUBLIC OF CUBA], 2 CUBA FOREIGN TRADE 7-10, (February 1995). In May, 1995 there were 212 reported economic associations involving investors from fifty-eight countries. *Id.*

210. See *id.*

211. See *id.*

212. See CONSTITUCIÓN DE LA REPÚBLICA DE CUBA art. 23 (1992). See also 21 I.L.M. 1106, Decree Law No. 50 (Legislative Decree on Economic Association Between Cuban and foreign Entities), February 15, 1982. Mixed enterprises, also called economic associations or joint ventures, were first recognized by Cuba in 1982 to expand exports and international tourism. At that time, except in rare circumstances, foreign partners could hold no more than a 49% share of an enterprise. *Id.*

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vestors, the National Assembly enacted the Foreign Investment Act.²¹³ Foreign investors are now guaranteed full protection of their assets and may remove profits in hard currency.²¹⁴ In many instances, foreign investors are now allowed to fully own an enterprise and may own or acquire usufructuary rights to Cuban real estate.²¹⁵

From an environmental perspective, this law is particularly notable for incorporating the concept of “sustainable development,” and the “polluter pays” principle into the realm of foreign investment.²¹⁶ In the face of continuing economic crisis, Cuba’s attempts to attract foreign capital without making environmental tradeoffs represents a remarkably laudable strategy.²¹⁷ Cuban economists believe that the State’s strict environmental vigilance will actually increase the interest of foreign investors.²¹⁸ They believe that foreign investors, particularly in the tourism industry, will take comfort in the assurances that their projects will not be compromised by environmental problems, such as oil spills.²¹⁹

To establish a joint venture in Cuba, the foreign investor, in conjunction with the Cuban entity, must first present its request to the Ministry of Foreign Investment and Economic Cooperation.²²⁰ The request is then circulated for review among

213. See generally Ley No. 77, Ley de la Inversión Extranjera [Foreign Investment Law], Chapter XVI, Article 54, reprinted in CÁMARA DE COMERCIO DE LA REPÚBLICA DE CUBA [CHAMBER OF COMMERCE OF THE REPUBLIC OF CUBA], 1 CUBA FOREIGN TRADE 40-60 (1996).

214. See Foreign Investment Act, *supra* note 225, at chap. III, arts. 3, 6.

215. See Foreign Investment Act, *supra* note 225, at chap. V, art. 15. Foreign investors may not develop residential property for Cuban nationals, nor may they invest in health services, education or the armed forces. *Id.* at chap. IV, art. 10.

216. See Foreign Investment Act, *supra* note 225, at chap. I, art. 1. See also *Id.* at chap. XVI, art. 54 which states: “Foreign investment is conceived and stimulated in the context of the country’s sustainable development, which implies that during the course of the investment, environmental conservation and the rational use of natural resources are carefully undertaken.” *Id.* Article 56(2) states: “The person or company responsible for the damage or harm is obliged to reestablish the previous environmental situation, repair the material damage and indemnify the injured parties.” *Id.*

217. See Gordon, *supra* note 12, at 21-22.

218. See *id.*

219. See *id.*

220. See Foreign Investment Act, *supra* note 225, at chap. VIII, art. 23.

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all relevant agencies and institutions.²²¹ In most cases, the investment proposal is forwarded to CITMA for an evaluation of environmental suitability.²²² CITMA will determine whether an EIA is required, and will consider the need for an environmental license and the establishment of a control and inspection program.²²³

B. ENVIRONMENTAL LICENSE REQUIREMENTS

The proponent of any activity or project that might have significant environmental effects is required to obtain an environmental license.²²⁴ The first step in the licensing process requires the project proponent to submit an application to CGIA, in compliance with the provisions of Resolution 168/95.²²⁵

Once CGIA determines that the application contains all necessary information, it registers the application.²²⁶ It then has 30 days to notify the applicant of its intent to approve, deny, or condition the license on further environmental review.²²⁷ As mentioned in the previous subsection, however, by the time an investor submits its license application, the foreign investment proposal has likely been reviewed and ap-

221. See Foreign Investment Act, *supra* note 225, at chap. VIII, art. 23(4),(5),(6). After the relevant agencies and institutions are consulted, the Ministry of Foreign Investment and Economic Cooperation refers the application and all supporting documentation to the Executive Committee of the Council of Ministers for a final decision. The decision is rendered within 60 days from the date the request is submitted. *Id.*

222. See Foreign Investment Act, *supra* note 225, chap. XVI, art. 55.

223. See *id.*

224. See Law of the Environment, *supra* note 2, at tit. III, chap. IV, art. 24. In addition to new projects, an EIA will also be required when expanding or modifying an existing project. An existing, ongoing project may also be required to complete an EIA if it generates a significant environmental impact. *Id.* at tit. III, chap. IV, art. 29.

225. See Resolución 168/95, *supra* note 144, at chap.2. Interview with Miriam Arcia, *supra* note 10. Application information required by CGIA can also be found in its document entitled "Modelo de Solicitud de Licencia Ambiental" [Model Environmental License Application] (on file with author). Information required in the license application includes: name; nationality; project location and description; characterization of the existing state of air, soils and water; quantification of water and other resource consumption; identification of environmental impacts; anticipated environmental mitigation measures; and accident prevention and contingency plans. *Id.*

226. See Interview with Miriam Arcia, *supra* note 10.

227. See *id.* See also Resolución 168/95, *supra* note 144, at chap. 2.

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proved by CITMA for its general environmental suitability.²²⁸ It is thus unlikely that an environmental license application will be denied.²²⁹ It is probable, however, that the licensing process will require an EIA and will result in environmental mitigation measures.²³⁰

C. ENVIRONMENTAL IMPACT ASSESSMENT

Depending on the project type, CGIA may require an EIA.²³¹ If one is required, the applicant must hire a state-authorized "institute" to perform the assessment and to prepare the EIA.²³² Generally, the applicant is responsible for the costs of the environmental assessment, monitoring, and mitigations.²³³ With approval of the Ministry of Finance and Prices, however, costs of certain projects may be assumed by the State budget.²³⁴

228. See *supra* notes 220-22 and accompanying text.

229. See Interview with Miriam Arcia, *supra* note 10. It is particularly unlikely that CGIA will deny a license after they have required and the investor has prepared an EIA. *Id.* It should also be noted that holding an environmental license does not release the licensee from any general obligations to protect the environment, nor does the license insulate the licensee from administrative, civil, or penal sanctions. Law of the Environment, *supra* note 2, at tit. III, chap. III, art. 25.

230. See Interview with Miriam Arcia, *supra* note 10. Confusingly, Environmental Impact Assessments are interchangeably called Environmental Impact Studies or Environmental Impact Evaluations. *Id.* EIAs are required for all projects in the areas of hydraulics, communication transport, oil and gas refineries, electric generation, tourism, timber harvesting, mining, biotechnology, sugar industry, fisheries, dairies, housing developments, and all other activities which may adversely affect the local flora or fauna. These regulations apply equally to Cuban government projects except those where information is confidential for state security reasons. The Cuban military has its own internal system of environmental impact assessment. See Law of the Environment, *supra* note 2, at tit. III, chap. IV; CITMA Resolution 168/95, *supra* note 144 at art. 5.

231. See *id.*

232. See Interview with Miriam Arcia, *supra* note 10. Cuba required State authorization to ensure that the institute performing an EIA has sufficient scientific, technical and material capabilities. *Id.* For example, CESIGMA, a Spanish corporation, and Cuba created a joint venture called GEOTECH. It is the largest institute licensed to perform Environmental Impact Assessments in Cuba. GEOTECH currently performs 95% of all EIAs. Most of GEOTECH's clients are in the mining, tourism and agriculture industries. Interview with Dr. Luiz R. Diaz Cisneros, General Manager, CESIGMA Division America, in Havana Cuba (January, 5, 1997).

233. See Law of the Environment, *supra* note 2, tit. III, chap. IV, art. 30.

234. See Law of the Environment, *supra* note 2, tit. III, chap. IV, art. 30. This provision implies that costs of certain joint ventures may be deemed necessary to the state economy. *Id.*

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The information that must be included in each EIA is set forth in Resolution 168/95.²³⁵ GEOTECH,²³⁶ Cuba's largest authorized institute, claims that it prepares EIAs to "American" standards.²³⁷ The institute includes the following chapters in its EIAs: Project Description, Baseline Information (the existing natural and socio-cultural environment), Pertinent Legislation and Regulations, Potential Environmental Impacts, Project Alternatives, Implementation (including environmental mitigation measures), Monitoring and Reporting, and Results of Consultations with Local Authorities and Residents.²³⁸

Once an EIA is submitted to CGIA, the agency assigns a lead specialist who is familiar with the type of project and its potential impacts.²³⁹ The specialist then calls together a group of experts to analyze the EIA and to evaluate whether the proposed mitigation measures are appropriate.²⁴⁰ The experts also evaluate or propose a monitoring program.²⁴¹ After the evaluations are completed, each expert prepares a written opinion.²⁴² The lead specialist gathers the opinions and drafts a report summarizing the experts' findings.²⁴³ If there are problems with the EIA, the license applicant and the institution that prepared the EIA are notified and generally a meeting is held to discuss and clarify the problems.²⁴⁴ A project may not pro-

235. See Resolution 168/95, *supra* note 144, at chap. 3. Interview with Miriam Arcia, *supra* note 10. Information to be included in EIAs is also published in a CGIA document entitled "Lineamientos Basicos para la Realizacion de los Estudios de Impacto Ambiental" [Basic Outline for the Execution of Environmental Impact Studies](on file with author). Required information includes: Project description; baseline environmental information; identification and evaluation of environmental impacts; socio-economic and cultural characterization; corrective and mitigative measures; plans for monitoring during construction and operation; and results of consultations with local authorities and residents. *Id.*

236. See *supra* note 232.

237. See Interview with Dr. Luiz R. Diaz Cisneros, *supra* note 232.

238. See *id.*

239. See Interview with Miriam Arcia, *supra* note 10.

240. See *id.* The experts may be drawn from within CITMA or from other state agencies, universities, armed forces, or superior technical institutes. *Id.*

241. See *id.*

242. See *id.*

243. See *id.*

244. See Interview with Miriam Arcia, *supra* note 10.

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ceed until the EIA is accepted and an environmental licence is issued.²⁴⁵

D. STATE ENVIRONMENTAL INSPECTION SYSTEM

The Law of the Environment requires CITMA to develop a state environmental inspection system²⁴⁶ which is intended as a preventive mechanism by making environmentally destructive actions punishable by law.²⁴⁷

CITMA has the authority and responsibility to conduct environmental inspections,²⁴⁸ and has delegated this duty to its Environmental Agency's Center for Environmental Management and Inspection.²⁴⁹ CITMA may also call on other organizations, associations, or institutions that are recognized by law or by the general public to be "suitable popular inspectors," to help with environmental inspections.²⁵⁰ Any person or entity subject to environmental inspection must allow the authorities full access to its project sites and must furnish all requested environmental information.²⁵¹ Access to such information, however, may be restricted if the information is legally recognized as confidential.²⁵²

Based on the results of environmental inspections, CITMA notifies the operator if they must adopt corrective measures to comply with the appropriate regulations, and the agency will set a time period for conformance.²⁵³ Failure to obtain or com-

245. *See id.*

246. *See* Law of the Environment, *supra* note 2, at tit. III, chap. V. "State environmental inspection" is defined as "the activity of controlling, monitoring and supervising the fulfillment of standing legal ordinances and norms in matters of environmental protection, and to evaluate and to adopt pertinent measures for guaranteeing their fulfillment." *Id.* at tit. I, chap. II, art. 8.

247. *See* CITMA, NATIONAL ENVIRONMENTAL STRATEGY 22-23 (1997).

248. *See* Law of the Environment, *supra* note 2, at tit. III, chap. VI, art. 39.

249. *See* Interview with Miriam Arcia, *supra* note 10.

250. *See* Law of the Environment, *supra* note 2, at tit. 3, chap. 6, art. 45. Experts from NGOs such as Pro-Naturaleza may participate in environmental inspections in developing environmental compliance strategies. Interview with Jorge Ramon Cuevas, *supra* note 5.

251. *See* Law of the Environment, *supra* note 2, at tit. III, chap. VI, art. 41.

252. *See id.*

253. *See id.* at tit. III, chap. VI, art. 42.

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ply with the requirements of an environmental license may result in temporary or permanent suspension of the project.²⁵⁴ CITMA may also require the removal of hazardous wastes, the partial or total closure of facilities, or any other measures necessary to resolve the detected situation.²⁵⁵ CITMA's power also includes the ability to require rehabilitation of the conditions as they existed prior to the danger or environmental damage.²⁵⁶ Finally, if CITMA discovers any act which appears to violate a criminal provision, it will notify the *Fiscalia* and request an investigation.²⁵⁷

E. ECONOMIC INSTRUMENTS OF ENVIRONMENTAL REGULATION

Cuba's National Environmental Strategy suggests using economic instruments as both direct and indirect means for achieving environmental goals.²⁵⁸ Although they have not yet been fully implemented, the instruments proposed by the strategy, and later set forth in the Law of the Environment, include specific duties and differentiated taxes.²⁵⁹

The Ministry of Finances and Prices ("MFP"), along with CITMA and other pertinent agencies, is responsible for determining specific duties on the import of environmentally detrimental products and for establishing taxes to be used for environmental protection.²⁶⁰ Similarly, the MFP may promulgate regulations that reduce or exempt from duties or taxes the importation of technology, equipment, or materials used for environmental protection.²⁶¹ The Law of the Environment also permits the MFP, in exceptional cases, to authorize the accel-

254. See *id.* at tit. III, chap. III, art. 26.

255. See Law of the Environment, *supra* note 2, at tit. III, chap. VI, art. 43.

256. See *id.*

257. See *id.* at tit. III, chap. VI, art. 42.

258. See *id.* at tit. III, chap. IX, art. 61. See also CITMA, NATIONAL ENVIRONMENTAL STRATEGY 25 (1997).

259. See *id.*

260. See Law of the Environment, *supra* note 2, at tit. III, chap. IX, art. 62. Apparently, these taxes will be applied to a National Environmental Fund that is earmarked for environmental protection projects. *Id.* at tit. III, chap. X, art. 65. See also CITMA, NATIONAL ENVIRONMENTAL STRATEGY 25 (1997).

261. See Law of the Environment, *supra* note 2, at tit. III, chap. IX, art. 63.

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erated depreciation of investments or other economic benefits for purchases or installation of equipment, technology, or processes used for environmental protection.²⁶²

F. SYSTEM OF CIVIL RESPONSIBILITY

The Law of the Environment requires any person or company, whose illicit or unauthorized acts or omissions damage the environment, to immediately cease the conduct and to repair only damage.²⁶³ The faculties authorized to seek reparation and indemnification of environmental harms are CITMA, the *Fiscalia*, and individuals who have "personally suffered" from the damage or harm.²⁶⁴ Currently, however, there are no clearly defined norms to govern citizen suits under the Law of the Environment.²⁶⁵ Particularly, there is current debate over

262. See Law of the Environment, *supra* note 2, at tit. III, chap. IX, art. 63.

263. See Law of the Environment, *supra* note 2, at tit. III, chap. XII, art. 70. See also Ley No. 59, Código Civil [Civil Code], chap. IV, arts. 95-96, *Gaceta Oficial de la República de Cuba Edición Extraordinario*, October 15, 1987 and, Ley No. 77, Ley de la Inversión Extranjera [Foreign Investment Law], Chapter XVI, Article 54, reprinted in CÁMARA DE COMERCIO DE LA REPÚBLICA DE CUBA [CHAMBER OF COMMERCE, OF THE REPUBLIC OF CUBA], 1 CUBA FOREIGN TRADE 40-60 (1996).

264. See Law of the Environment, *supra* note 2, at tit. III, chap. XII, art. 71.

265. See Interview by Debra Evenson with Narciso Cobo Roura, Professor of Law, University of Havana, in Havana, Cuba (March 9, 1998). No significant cases over environmental harm have been brought before the courts. *Id.* Until 1991, such cases were handled by the state arbitration system, which was replaced by the economic chambers of the courts. See EVENSON, *supra* note 3, at 206-11. Although the arbitration system handled cases of economic impacts to industries from environmental damage, individuals did not have standing to bring claims. See Letter from Debra Evenson (March 10, 1998) (on file with author).

Few cases were brought in the early years of the economic chambers. This is partly because of the economic crisis - many industries were shut down during this time and it was very difficult for anyone to fulfill contracts, much less judgments - and partly due to unfamiliarity with the procedure of bringing cases to the new chambers. *Id.* The case load of the economic chambers has increased enormously, however, demonstrating that the court will play an increasing role in economic and, eventually, environmental disputes. *Id.* One reason for the courts' increased activity is Cuba's current process of decentralizing its economy. Decentralization and greater autonomy for state enterprises, as well as new "autonomous" enterprises, require changes in dispute resolution mechanisms to protect the interests of these various actors. *Id.* See also *infra* notes 219-227 and accompanying text.

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whether the statute requires actual, concrete harm, or whether showing risk of harm will provide citizens with standing.²⁶⁶

Pursuant to Article 71 of the Law of the Environment, only CITMA and the *Fiscalia* may act to defend the social interests in environmental protection.²⁶⁷ This provision represents a substantial evisceration of the citizen enforcement concepts proposed by CITMA in an earlier draft of the Law.²⁶⁸ The language of the earlier draft, published in October 1996, would have allowed any person to seek reparation for environmental damage if they demonstrated to the Court the legitimacy of their interest in exercising the right to a healthy environment.²⁶⁹ The earlier draft would have permitted such persons to bring a civil, class action type suit, including actions for indemnification, to defend the interests of everyone who may have been affected by the damage.²⁷⁰ Another provision of the proposed law that was not incorporated in the new Law of the Environment apparently intended to create joint liability for environmental damage.²⁷¹

As it stands, the civil liability provisions of the Law of the Environment, particularly those regarding citizen enforcement, are ambiguous and probably impracticable until clearer regulations are enacted.²⁷² The National Assembly was apparently unhappy with the system of civil liability originally conceived by CITMA, but was equally aware that the current system needs more guidance. Accordingly, the National Assembly has

266. See Interview by Debra Evenson with Narciso Cobo Roura, Professor of Law, University of Havana, in Havana, Cuba (March 9, 1998).

267. See Law of the Environment, *supra* note 2, at tit. III, chap. XII, art. 71

268. See Ley del Medio Ambiente (Proyecto) [Proposed Law of the Environment], tit. III, chap. 12, arts. 78-85, October, 1996.

269. See *id.* at tit. III, chap. 12, art.80.

270. See *id.*

271. See *id.* at tit. III, chap. 12, art. 79. Article 79 of the proposed law stated that if two or more persons (natural or legal) participate in the commission of an environmentally damaging act, they can be held jointly responsible for the total reparation, without prejudice to the right of recuperation against each other according to the degree of responsibility. *Id.*

272. See Interview by Debra Evenson with Narciso Cobo Roura, Professor of Law, University of Havana, in Havana, Cuba (March 9, 1998). See also Letter from Orlando Rey Santos, *supra* note 126.

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required the Council of Ministers, in consultation with CITMA and the Ministry of Finances and Prices, to dictate the regulations necessary to establish a secure system of environmental liability.²⁷³

VII. CONCLUSION

The adoption of the Law of the Environment and the creation of CITMA are two significant steps toward curing past deficiencies of Cuba's environmental legal system.²⁷⁴ Although it is too soon after these events to determine their effects, they clearly demonstrate the government's dedication to environmental protection and to the use of law for achieving environmental goals.²⁷⁵ As the legal system continues to evolve and mature, environmental laws will play a more prevalent role in protecting and repairing the island's natural resources.²⁷⁶ Cuba's commitment and approach to ecologically sound development, while instilling popular environmental consciousness, merits continued attention by those interested in environmental protection strategies.²⁷⁷

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273. See Law of the Environment, *supra* note 2, at tit. III, chap. XII, art. 74.

274. See *supra* notes 114-132, 175-189 and accompanying text.

275. See CITMA, NATIONAL ENVIRONMENTAL STRATEGY 20-21 (1997).

276. See *id.*

277. See *supra* notes 78-110, 114-53, 207-73 and accompanying text.

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