

THE LEGACIES OF ENVIRONMENTAL COLONIALISM AND THE LEGAL PROTECTION OF FORESTS IN PUERTO RICO

ARTÍCULO

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INTRODUCTION

Colonialism has profoundly disrupted the relationship between humans and the environment.¹ The effects of that disruption in the livelihoods of colonial subjects are continuously being unveiled by different areas of social analysis. I focus my research on the effects this disruption has on law; particularly, the regulatory regime of environmental protection of forests in Puerto Rico. For this analysis, I build upon a social theory of law as a tool to shape behavior by analyzing the effects of the law, rather than its doctrinal content.² In Puerto Rico’s forestry law, environmental colonialism manifests

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¹ Sam Adelman, *Epistemologies of mastery*, in RESEARCH HANDBOOK ON HUMAN RIGHTS AND THE ENVIRONMENT 9, 14, 18 (2015).

² Efrén Rivera-Ramos, *The Legal Construction of American Colonialism: An Inquiry into the Constitutive Force of Law* (1994) (published Ph.D. dissertation, University College London) (on file with UCL Discovery).

itself in two distinct forms. The first form leaves the protection of the most important forest resources in the hands of the United States (U.S.) federal government as a colonial power, separating local Puerto Rican populations from the control of forest management and conservation.³ The second form allows American ideas of forestry and conservation values to permeate Puerto Rican forestry laws.⁴ These colonial dynamics have persisted up until the present day. As a result, forestry laws in Puerto Rico legitimize and reproduce colonialism by maintaining the protection of main forest lands in the hands of the colonial power and by sustaining legal values based on colonial foundations of control, exclusion, and extraction.

For this analysis, I adopt a theoretical approach based on an interpretation of law as a social shaping phenomenon.⁵ In this sense, I examine how law shapes society and society shapes the law –particularly, in its capacity as a tool for changing behavior and perception. I argue that the legitimation and reproduction of colonialism through the legal protection of forests continues to rupture the relationship between people and the natural environment, having consequences in the implementation of law and regulation as well as in the effective management and conservation of Puerto Rico’s environment. Taking into consideration the socio-historical context of colonialism, this ruptured relationship is problematic within the scope of environmental justice and requires that forestry laws be revised to represent the interests of Puerto Ricans. Environmental issues require questioning and confronting the limits of institutions and their frameworks in order to develop new ones. Existing analysis of Puerto Rico’s environmental framework have focused on the doctrinal implementation of laws, but few have questioned the effects of the colonial relationship in the legal values that construct these laws.⁶ Decolonial thinking provides a strong point of departure for this questioning in the current context of Puerto Rico as it permits, as Adelman has said, for “new socio-legal imaginaries commensurate with the scale and urgency of the climate and ecological crises.”⁷ Considering the colonial-historical setting of environmental laws in Puerto Rico, what does a decolonizing analysis reveal of the current environmental protection framework?

For this exercise, I explore how law affects relationships of power, creates structures of domination, and influences worldviews related to environmental issues within Puerto Rico’s society. In Section I, I review the historical context of the American colonial project in Puerto Rico, which I contend is an example of environmental colonialism, to identify the set of values that form the legal norms related to the particular socio-historical context of my analysis, and to address to what extent these values influence the project of environmental colonialism. In Section II, I review the origins of the regulatory regime of environmental protection in Puerto Rico and its intrinsic relationship to the colonial Americanization project on the island. In this way, I analyze these values based on the

3 See CARLOS M DOMÍNGUEZ CRISTÓBAL, *PANORAMA HISTÓRICO FORESTAL DE PUERTO RICO* (2000).

4 See Johnny Lugo Vega, *La transformación del manejo forestal estadounidense en el Puerto Rico del siglo XX (1917-1939)* (2017) (published Ph.D. dissertation, University of Puerto Rico) (on file with author).

5 Rivera-Ramos, *supra* note 2, at 17.

6 Lugo Vega, *supra* note 4, at 20-21.

7 Adelman, *supra* note 1, at 26.

colonial project's influence on the environmental law regime in Puerto Rico, particularly in the case of forestry law. In Section III, I assess how law constitutes, reproduces, and legitimizes environmental colonialism, and its present consequences, analyzing the effects that this colonial legal regime has on current issues of environmental justice. Finally, I address the question of whether environmental problems are properly addressed under the current legal framework of environmental law in Puerto Rico. I conclude that a mere skimming of the history of ecological colonialism and environmental justice in Puerto Rico appears to point to the contrary, suggesting that the environmental law regime must be revised to tackle issues of environmental justice.

I. AMERICAN ECOLOGICAL IMPERIALISM: HISTORICAL CONTEXT OF THE AMERICAN COLONIAL PROJECT IN PUERTO RICO

In this section, I establish the socio-historical context in which Puerto Rico's environmental laws were created –one of environmental colonialism. I define the concept and its different manifestations and explain its application in Puerto Rico, particularly, in forest management.

A. *Socio-historical context*

The colonial history of the archipelago of Puerto Rico was part of the larger European colonization of the Americas.⁸ In 1898, the Spanish-American war precipitated the changing of the flag of the Crown of Spain for the star-spangled banner of the United States of America.⁹ During the last 125 years, Puerto Rico has been profoundly transformed under a colonial relationship with the U.S. During the period that lasted up until the beginning of the Second World War, the island was governed as an extraction colony.¹⁰ This type of colonialism is defined as colonizers pushing away local inhabitants to extract resources, without it constituting permanent occupation.¹¹ The old Spanish institutions were converted and molded to the new American ideology. A new legal system was introduced, and the process of Americanization emerged to legitimize the colonial project.¹²

When the U.S. invaded Puerto Rico, it set out on a project of environmental colonialism.¹³ The Caribbean's rich climate and natural resources had been on the U.S. agenda since at

⁸ Rivera-Ramos, *supra* note 2, at 94.

⁹ *Id.* at 116.

¹⁰ Luis E. Rodríguez-Rivera, *Genesis of Puerto Rico's Environmental Law: Study of Early Puerto Rico Environmental Case Law (1900-1940)*, 67 REV. JUR. UPR 201, 208-10 (1998).

¹¹ Nancy Shoemaker, *A Typology of Colonialism*, THE NEWSMAGAZINE OF THE AMERICAN HISTORICAL ASSOCIATION: PERSPECTIVES ON HISTORY (October 1, 2015), <https://www.historians.org/research-and-publications/perspectives-on-history/october-2015/a-typology-of-colonialism#:~:text=A%20oslash%2Dand%2Dburn%20operation,%2C%20environmental%20knowledge%2C%20and%20labor>.

¹² EFRÉN RIVERA-RAMOS, *AMERICAN COLONIALISM IN PUERTO RICO: THE JUDICIAL AND SOCIAL LEGACY* (2007).

¹³ Rodríguez-Rivera, *supra* note 10, at 205; José M. Atilés-Osoria, *Colonialismo ambiental, criminalización y resistencias: Las movilizaciones puertorriqueñas por la justicia ambiental en el siglo XXI*, 100 Revista Crítica de Ciências Sociais 131, 136 (2013).

least the early 19th century.¹⁴ The colonial project regarded the Island's natural resources as commodities that had "a profound impact" on the Island's environment.¹⁵ The extraction activities that followed are the source of many of the current environmental justice issues on the Island.¹⁶ In the transfer of sovereignty, the U.S. government assumed legal possession of all of the island's natural resources,¹⁷ including forest lands.¹⁸ American rule saw vast forests felled for the expansion of sugar monoculture and urban development, almost to the point of complete deforestation.¹⁹ This has had continuing effects on the relationship between people and the natural environment, affecting both urban planning and decision-making, while leaving the land and the people who live in it scarred.²⁰

The drive towards acquiring Puerto Rico as a colony was part of the historic process of expansion that led the U.S. to exploit the rich natural resources in the Caribbean.²¹ In Puerto Rico, the United States established a system of monoculture around sugarcane plantations.²² The sugarcane economic complex became the central activity in the development of the colony. A major part of the agricultural lands of Puerto Rico were acquired by U.S. absentee companies, and local crops were substituted for sugarcane.²³ This system was sustained by the creation of a class of indentured workers; the rural population was exploited while profits were extracted back to the continent.²⁴ These American objectives were based on Puerto Rico's environmental and human resources and its strategic military position.²⁵

In 1952, the U.S. Congress approved the constitution that created the Commonwealth of Puerto Rico, authorizing the current political regime based on local government, but under the jurisdiction of the federal government.²⁶ This constitution provides that "[i]t shall be public policy of the Commonwealth to conserve, develop[,] and use its natural resources in the most efficient manner possible for the general welfare of the community."²⁷ A series of local environmental laws ensued based on this policy, including forestry laws. How influenced is this current legal regime by the pre-constitutional laws and institutions created to sustain the colonial system based on the extraction of resources for the colonial power? As I discuss, the values and interests surrounding the colonial regime are still

14 DAVID HEALY, *DRIVE TO HEGEMONY: THE UNITED STATES IN THE CARIBBEAN 1898-1917* 268 (1988).

15 Rodríguez-Rivera, *supra* note 10, at 210.

16 Atilés-Osoria, *supra* note 12, at 136.

17 Treaty of Peace Between the United States and Spain, U.S.-Spain, art. II, Dec. 10, 1898, 1 L.P.R.A. 16 (2023).

18 DOMÍNGUEZ-CRISTÓBAL, *supra* note 3, at 45.

19 Neftalí García-Martínez et al., *Puerto Rico Economic And Environmental Overview*, in *BEYOND SUN AND SAND CARIBBEAN ENVIRONMENTALISMS* 76 (Sherrie L. Baver & Barbara Deutsch Lynch, eds., 2006).

20 Alexis Massol González et al., *Bosque del Pueblo, Puerto Rico: How a fight to stop a mine ended up changing forest policy from the bottom up*, in *POLICY THAT WORKS FOR FOREST AND PEOPLE* NO. 12, 4-5 (James Mayers, ed., 2006).

21 HEALY, *supra* note 13.

22 Rodríguez-Rivera, *supra* note 10, at 205.

23 *Id.* at 206.

24 HEALY, *supra* note 13, at 267-68.

25 Atilés-Osoria, *supra* note 12, at 133.

26 Rivera-Ramos, *supra* note 2, at 372.

27 P.R. CONST. art. VI, § 19.

perpetuated by environmental law. An exploration of the current environmental issues in Puerto Rico might shed light on these questions based on a social enquiry of the law.

B. Environmental colonialism and ecological imperialism

Crosby uses the term ecological imperialism to explain the consequences of European imperial expansion on the natural environment.²⁸ This term can help us frame the effects of American imperialism on the natural environment of Puerto Rico. Although they are sometimes used interchangeably, I use “environmental colonialism” more specifically, as it has been employed to analyze the effects of colonialism as a manifestation of imperial expansion on environmental issues. This is based on the distinction Said makes of colonialism as one particular form of acquiring imperialist domination.²⁹ Furthermore, colonialism best describes the territorial relationship of political and legal subjugation of Puerto Rico to the U.S. Atilés-Osoria frames social mobilization in Puerto Rico as struggles for environmental justice in a context of environmental colonialism.³⁰ Although, according to the author, “most of the movements do not consider themselves to be environmental justice movements,” they are part of a decolonizing struggle against environmental colonialism.³¹ Framing decolonization and environmental justice as struggles against environmental colonialism can aid in understanding the profound and multifaceted effects colonialism still has on Puerto Rico. Understanding environmental issues in Puerto Rico requires understanding the colonial context under which these issues have arisen and still exist today.

Environmental colonialism can be manifested in both exploitation and conservation practices. Its first common element is the commodification and the monetization of natural resources.³² Many social values fall outside of the market valorization of capitalism.³³ Manifestations of environmental colonialism tend to impose two repeating elements based on the same ideas of market value: exploitation of resources for the benefit of the colonizer and the imposition of ecological values that do not consider local interests.³⁴ On the one hand, extractive activities require managing natural resources with a rational exploitation objective which bases decisions on economic efficiency to maximize profit for the benefit of the colonizer.³⁵ On the other, colonialism imposes ideas of environmentalism that overlook non-monetary values of nature and do not consider the communities dependent on the environment for their livelihoods as well as their lore and cultural activities.³⁶

28 ALFRED W. CROSBY, *ECOLOGICAL IMPERIALISM: THE BIOLOGICAL EXPANSION OF EUROPE, 900 - 1900* 105 (2009).

29 EDWARD W. SAID, *CULTURE AND IMPERIALISM* 8 (1994).

30 Atilés-Osoria, *supra* note 12, at 132.

31 *Id.* (translation provided by author).

32 Atilés-Osoria, *supra* note 12, at 132.

33 JOAN MARTÍNEZ-ALIER, *THE ENVIRONMENTALISM OF THE POOR: A STUDY OF ECOLOGICAL CONFLICTS AND VALUATION* 21-23 (2002).

34 Atilés-Osoria, *supra* note 12, at 132.

35 MARTÍNEZ-ALIER, *supra* note 32, at 215.

36 *Id.* at 128.

In terms of environmental values, Driessen uses the term “eco-imperialism” to describe the imposition of Western environmentalist ideals and ethics upon colonial subjects.³⁷ In a critique against what he calls the *radical* environmental movement he argues in favor of the developing world’s right to develop against Global North ideas of environmentalism and human development.³⁸ Although the underlying rationale behind his critique should and has been questioned,³⁹ Driessen frames one of the current manifestations of environmental colonialism as the imposition of environmental views and ethics from the Global North that do not consider the particular socio-historical contexts of the Global South.⁴⁰ Eco-imperialist views fail to consider, and in circumstances make invisible, the needs of marginalized people, placing the well-being of nature over these populations that are not part of the ruling elite. Both extractivist and conservationist ideological manifestations are focused on preserving nature, although for distinct purposes, and both tend to overlook the necessities of the human populations that are part of that natural environment.⁴¹

Adelman also examines values promoted by colonialism, focused on the relationship between humans and nature from an epistemological perspective.⁴² Adelman proposed the idea of epistemologies of mastery, which consists of “the false assumption that humanity can exercise dominion over nature,” characterizing it as a form of colonialism.⁴³ It has been established that one of the main manifestations of colonialism is the exploitation of natural resources, the extraction of riches, and the plunder of material, cultural and environmental goods of the colonized territory.⁴⁴ Thus, the exploitation of natural resources has been central to the history of colonialism, in what has been described as a type of “bio-political apprehension of nature.”⁴⁵ In a rather grim way, the functionality of colonialism depends on the destruction of the environment, and in many ways, on the destruction of life. Under this ideology, finding solutions to environmental issues “is impeded by ideologies that fetishize growth and technology, such as developmentalism, *extractivism* and neoliberalism.”⁴⁶

Environmental justice movements in the Global South have campaigned against a “one-sided approach of wilderness protection” seeking to integrate conservation with local livelihoods.⁴⁷ Martínez-Alier notes the importance of distinguishing a current of *environmentalism of the poor* against a “cult of wilderness” and the “gospel of eco-efficiency.”⁴⁸ In this *current*, marginalized and poor communities will mobilize against

37 PAUL K. DRIESSEN, *ECO-IMPERIALISM: GREEN POWER, BLACK DEATH* iii (2003).

38 *Id.*

39 See for example STEPHEN D. DOUBLEDEE, *THE INVERSION OF ECOLOGICAL IMPERIALISM* (2005).

40 Anja Nygren, *Eco-imperialism and environmental justice*, *ROUTLEDGE INTERNATIONAL HANDBOOK OF SOCIAL AND ENVIRONMENTAL CHANGE* 58, 59 (2013).

41 *Id.* at 60.

42 Adelman, *supra* note 1, at 10.

43 *Id.* at 9.

44 UGO MATTEI & LAURA NADER, *PLUNDER: WHEN THE RULE OF LAW IS ILLEGAL* 28 (2008).

45 Atilés-Osoria, *supra* note 12, at 135 (translation provided).

46 Adelman, *supra* note 1, at 9 (emphasis added).

47 Nygren, *supra* note 39, at 4.

48 MARTÍNEZ-ALIER, *supra* note 32, at 5.

environmental damage based on an existential threat to their livelihoods.⁴⁹ Martínez-Alier explains that the “poor and largely rural populations of the South are more connected to the environment, and thus have a more intimate understanding of what is at stake by not managing it carefully.”⁵⁰ He frames this as “languages of valuation”, where different values are often not translatable into one another creating conflict between economic and non-monetary values such as livelihoods, human rights to life, health, and sacredness of lands.⁵¹

i. Environmental Colonialism in Puerto Rico

Environmental colonialism in Puerto Rico is manifested by the exploitation of resources and its impact on the environment and by the implementation of conservation values. Environmental colonialism in Puerto Rico did not begin with the Americans. The plantation economy was established by the Spanish colonization, which was dependent on forced labor provided by the Atlantic slave trade.⁵² Although slavery was abolished in Puerto Rico in 1873, the same exploitation dynamics continued with indentured labor.⁵³ The Americans arrived at this economic system to exponentiate it with their agro-industrial models, converting Puerto Rico into their plantation colony.

In the first decades of American colonization, the livelihoods of Puerto Ricans were transformed by displacement, the acquisition of productive lands, and the establishment of a regime of indentured labor where employment depended mainly on the seasonal jobs of the sugar industry.⁵⁴ A process of material dependency that continues to this day began with the dispossession of the means of production and employment to the hands of the colonizer. The colonized were deprived of their traditional means of subsistence and relegated to a state of absolute dependence on the colonizer’s goods and capital. This established an economic model that transformed the environment of Puerto Rico, pushing against people and space and creating exclusion zones that perpetuated environmental colonialism. After the sugar industry waned, petrochemical corporations moved into the former sugar plantations and built big refineries.⁵⁵ When the petrochemicals left, pharmaceutical corporations took their place.⁵⁶ The economic influx brought development and constrained the locals to live around the city, distancing the people from the natural environment.⁵⁷

49 *Id.* at 10.

50 Joan Martínez-Alier, *The environmentalism of the poor*, 54 *GEOFORUM* 239, 240 (2014).

51 *Id.* at 241.

52 DAVID M. STARK, *SLAVE FAMILIES AND THE HATO ECONOMY IN PUERTO RICO* 5 (2008).

53 Diego C. Ayala, *The Transition to Free Labour in Puerto Rico: Class, Race and Politics in a Nineteenth-Century Colony*, 55(2) *JOURNAL OF LATIN AMERICAN STUDIES* 191, 194 (2023).

54 Atilés-Osoria, *supra* note 12, at 133.

55 *Id.*

56 Carmen M. Concepción, *Environment and industrialization in Puerto Rico: disenfranchising the people*, 36 *JOURNAL OF ENVIRONMENTAL PLANNING AND MANAGEMENT* 269, 270,272 (1992).

57 *Id.* at 272.

ii. Imperial forestry

These manifestations of environmental colonialism are present in the forest regime of Puerto Rico. We shall delve into its evident form of exploitation of natural resources as well as its implementation of environmentalist values and practices. Deforestation as an environmental issue came with the expansion of the mono-culture economic model.⁵⁸ The first three centuries of European colonialism in Puerto Rico saw a very unstable population that did not have a significant impact on the Island's forest coverage.⁵⁹ An accelerated population growth that began at the end of the 18th century created enormous pressures on the forests, mainly because of sugarcane and tobacco plantations.⁶⁰ With the American occupation, the agricultural economy was exploited in unprecedented ways. As part of the colonial project, American absentee corporations acquired almost half of the cultivable lands that were then deforested for planting sugar cane.⁶¹ Other activities that caused deforestation were urban development, mining extraction, and wood production.⁶² Estimates put forest coverage reaching a low of six percent in the 1930s.⁶³

The American colonial project of economic extraction also brought the implementation of American ideals and institutions for conservation. At first glance, it is evident that the initial institutional background for forest protection in Puerto Rico was an application of the U.S. government policies for wood extraction.⁶⁴ Forestry in the U.S. has been historically centered on the conservation of woodlands for the exploitation of nature.⁶⁵ Nonetheless, little has been written on the relationship between the development of forestry in the U.S. and forest conservation in Puerto Rico, particularly from the perspective of environmental colonialism.⁶⁶

The promotion of racist and imperialist ideals drove U.S. expansion in North America and abroad.⁶⁷ Authors have highlighted how the first subjects of the U.S. ecological imperialist drive were Native American people.⁶⁸ U.S. expansionism created the concept of wilderness, classifying North America's vast and environmentally rich lands as a wild state, discarding the millennial presence of native populations in those areas.⁶⁹ Furthermore,

58 García-Martínez, *supra* note 18, at 76.

59 Carlos Domínguez Cristóbal, *The Early Centuries: 1508 to 1823*, in *PASSING THE BATON FROM THE TAÍNOS TO TOMORROW: FOREST CONSERVATION IN PUERTO RICO* 33 (Kathryn Robinson, Jerry Bauer & Ariel E. Lugo, eds., 2014).

60 *Id.* at 42.

61 Frank H. Wadsworth, *Managing the Forests: 1918 to 1952*, in *PASSING THE BATON FROM THE TAÍNOS TO TOMORROW: FOREST CONSERVATION IN PUERTO RICO* 70 (Kathryn Robinson, Jerry Bauer & Ariel E. Lugo, eds., 2014).

62 *Id.* at 70.

63 García-Martínez, *supra* note 18, at 76.

64 Lugo Vega, *supra* note 4, at 58.

65 *Id.*

66 *Id.*; ALEXIS MASSOL GONZÁLEZ & TALLER DE ARTE Y CULTURA, *PLAN 2020 Y LA EXPLOTACIÓN MINERA: RIESGO A LA SOBREVIVENCIA DE PUERTO RICO* 8 (2019), https://issuu.com/coleccionpuertorriquena/docs/plan_2020-_taller_arte_y_cultura_adjuntas.

67 Paul A. Kramer, *How Not to Write the History of U.S. Empire*, 42 *DIPLOMATIC HISTORY* 911, 911-12 (2018).

68 DORCETA E. TAYLOR, *THE RISE OF THE AMERICAN CONSERVATION MOVEMENT: POWER, PRIVILEGE AND ENVIRONMENTAL PROTECTION* 10 (2016).

69 *Id.*

this exclusionist conservation practice also removed access to adjacent poor populations that relied on its resources for their livelihoods.⁷⁰ The U.S. Forest Service was founded in line with ideals towards rational management of forests.⁷¹ This was developed based on a utilitarian conservation ethic, where the management of natural resources was centralized, and its utilization was determined by scientific ideas of efficiency to sustain the capitalist economy.⁷²

Gifford Pinchot was the key figure in establishing U.S. forestry. He created and directed the U.S. Forest Service, expanding the institution into a prominent department of the federal government and acquiring millions of acres as Federal lands.⁷³ Pinchot spearheaded an environmentalist vision based on utilitarian values. Pinchot believed that in the U.S. “there never would be national forestry until forestry could demonstrate its advantages in the private market.”⁷⁴ One of the key characteristics of this forestry model was its close link to the wood production industry.⁷⁵

Preservation of forests constituted an early phase of environmentalism “even when those lands were set aside only for issues of timber supply and revenue.”⁷⁶ The underlying assumption was based on an imperialist idea of ownership. Locke believed that use defined ownership, not conquest or violence.⁷⁷ Cultivation and enclosure, as manifestations of use, guaranteed ownership. This justified taking lands from native populations who had semi-agricultural or hunter-gatherer lifestyles.⁷⁸ This idea of use eventually was extended to the public ownership of land.⁷⁹ Management became central to better handling public interests. The Lockean position is still “the operating assumption of environmental legislation today in most parts of the world.”⁸⁰

Modernity brought the notion of “human-engendered catastrophes” on forestry issues such as timber exploitation, soil erosion, flooding, and rainfall.⁸¹ These issues prompted government intervention. Forestry became a manifestation of the *great interference* of imperialism in an environmentalist form, “[a]rmed with a western conception of law and a formula of absolute property rights for both the individual and the state,”⁸² prompting “paternalistic, radical, and previously untried” interventions.⁸³ This forestry model commenced in British India and made its way across the British Empire to North

70 *Id.* at 36.

71 Lugo Vega, *supra* note 4, at 58.

72 *Id.* at 52-58.

73 *Id.* at 57-58.

74 BRIAN BALOGH, *THE ASSOCIATIONAL STATE: AMERICAN GOVERNANCE IN TWENTIETH CENTURY* 58 (2015).

75 Lugo Vega, *supra* note 4, at 58.

76 GREGORY A. BARTON, *EMPIRE FORESTRY AND THE ORIGINS OF ENVIRONMENTALISM* 10 (2002).

77 *Id.* at 21.

78 *Id.*

79 *Id.*

80 *Id.*

81 *Id.* at 28.

82 *Id.* at 37.

83 *Id.*

America, from where it was enforced by colonialism to Puerto Rico.⁸⁴ *Imperialist* forestry claimed lands for the state, declared them natural protected areas, and invaded them with “fireguards, rangers, and administrators.”⁸⁵

II. COLONIAL FORESTRY IN PUERTO RICO

Forest management in Puerto Rico has been centered on the colonial power. During the Spanish regime, a forestry management corps was created.⁸⁶ In the late 19th century, the first forest reserve was designated when the King of Spain set out 10,000 acres in the Luquillo mountains, in what is known today as El Yunque National Forest.⁸⁷ Immediately after the American invasion, the new colonial power established a forestry management regime.⁸⁸ The first natural reserves were created by Presidential decree in 1903, envisioning the island “covered with timber” and thus “setting apart” said lands for promoting the “public good.”⁸⁹ Not coincidentally, a rapid focus on forestry management was part of the colonial agenda backed by President Theodore Roosevelt and Gifford Pinchot’s utilitarian conservation doctrine.⁹⁰ During Pinchot’s tenure, the U.S. acquired Puerto Rico as a territory. Were these ideas of utilitarianism transplanted to Puerto Rico’s forest management laws and institutions?

The U.S. Forest Service and its local institution, the Institute of Tropical Forestry, established the creation, protection, and management of forests in Puerto Rico.⁹¹ Timber mining has always been part of the institutional objectives. Timbering was heavily practiced during the early years of the colony.⁹² Although there are gaps in how much timber was produced during the first decades of the colony, little knowledge of tropical forestry led the newly arrived managers to vastly impact the forest landscape around El Yunque.⁹³ In 1986, a controversy erupted in Puerto Rico that highlights these extractivist objectives even after the establishment of the Commonwealth, when administrators of El Yunque adopted a Forest Plan that included provisions to establish one fifth of the National Forest for timber mining, home to precious native woods such as Tabonuco and Ausubo.⁹⁴ The opposition was stark and the proposals presented a threat of habitat loss for the endangered Puerto Rican parrot, which had a critically low population at that time.⁹⁵

84 *Id.*

85 *Id.*

86 Grizelle González, *El Servicio Forestal en Puerto Rico*, 8 CORRIENTE VERDE 12 (2017).

87 *Id.*

88 *Id.*

89 Proclamation No. 495 (Jan. 17, 1903), <https://www.presidency.ucsb.edu/node/206161>.

90 Lugo Vega, *supra* note 4, at 65-66.

91 About the Institute, US FOREST SERVICE (last visited January 19, 2024), <https://www.fs.usda.gov/main/iitf/about>.

92 Jess K. Zimmerman et al., *Disturbance and resilience in the Luquillo Experimental Forest*, 253 BIOLOGICAL CONSERVATION 1, 2 (2021).

93 *Id.*

94 Philip Shabecoff, *Cutting into National Forests*, THE N.Y. TIMES (September 28, 1986), <https://www.nytimes.com/1986/09/28/weekinreview/cutting-into-national-forests.html>.

95 *Id.*

Environmental, religious, and community groups, as well as the then Governor Rafael Hernández Colón, and other high-level Puerto Rican politicians, opposed the Forest Plan,⁹⁶ which led to its eventual abandonment.⁹⁷ However, despite the clear opposition of local groups, in accordance with the U.S. Forest Service objectives, timber mining did not go away entirely. The 1997 revision of El Yunque Forest Plan addressed “sustainable timber production” as the first issue.⁹⁸ Although the revisions recognized that most of the Forest is not suited for timber production, it also argued that secondary forests had valuable timber products for sustainable economic development.⁹⁹

Another example of environmental colonialism was the use of the Forest for military activities. In the 1960s, during the course of the Vietnam War and other United States military operations throughout the Cold War, the U.S. Army occupied parts of El Yunque for biological warfare experiments.¹⁰⁰ El Yunque became a testing-site for the infamous Agent Orange.¹⁰¹ These practices were known and protested by environmental and anticolonial groups such as the organization Casa Pueblo,¹⁰² which would eventually establish the first model for a community-managed forest in Puerto Rico.¹⁰³ A report published by Taller de Arte y Cultura showed that between 1962 and 1968 the Department of Defense experimented with sixteen different herbicides, including Agent Orange, spraying it in certain parts of El Yunque for the purpose of exploring its uses in warfare as a defoliant in similar vegetation to that of South East Asia.¹⁰⁴ Furthermore, during this same period, the U.S. Army conducted a series of radiation experiments in El Yunque to assess the exfoliation rate of certain species of trees.¹⁰⁵

These scenarios merit questioning the interests behind those in charge of administering the Forest that led to these inconceivable decisions.¹⁰⁶ Deforestation and its subsequent consequences in Puerto Rico have been intrinsically linked to the dynamics of control and power particularly exercised by the United States’ military and economic policies.¹⁰⁷ This is another manifestation of the environmental destruction caused by Puerto Rico’s colonial administrators, and its outcome of distancing the population from its natural resources. There is an issue of conservation ethics, which, as Bijoy explains, is circumscribed to the

96 Edward J. Gaulin, *Puerto Rico Controversy: Logging May Harm Endangered Species*, L.A. TIMES (November 9, 1986), <https://www.latimes.com/archives/la-xpm-1986-11-09-mn-24443-story.html>.

97 U.S. DEPARTMENT OF AGRICULTURE, REVISED LAND AND RESOURCE MANAGEMENT PLAN: CARIBBEAN NATIONAL FOREST LUQUILLO EXPERIMENTAL FOREST 3-2 (1997).

98 *Id.* at 2-2.

99 *Id.* at 2-4.

100 MASSOL GONZÁLEZ & TALLER DE ARTE Y CULTURA, *supra* note 66, at 12.

101 *Id.*

102 *Bosque del Pueblo*, CASA PUEBLO (last visited January 19, 2024), <https://casapueblo.org/proyectos/bosque-del-pueblo/>.

103 *Id.*

104 MASSOL GONZÁLEZ & TALLER DE ARTE Y CULTURA, *supra* note 66, at 12.

105 Warner Ithier-Guzman & Ashanti J. Pyrtle, *Determining the Presence of Anthropogenic Radionuclides in Puerto Rico: Preliminary Results*, PROCEEDINGS OF OCEANS 2005 MTS/IEEE 2 (2005).

106 See Massol González et al., *supra* note 19, at 4.

107 Lugo Vega, *supra* note 4, at 46.

utility and value given to the natural resource.¹⁰⁸ For the colonial administrator, the forest exists to be exploited for profit,¹⁰⁹ or for furthering national interests such as national defense.¹¹⁰ As well as having enormous environmental value, El Yunque is profoundly, culturally and historically important to Puerto Ricans.¹¹¹ Although there has been a progressive transfer of other conservation lands to the local government,¹¹² the fact remains that this forest is still owned and administered by the U.S.

In sum, this section reviewed the process of environmental colonialism that imposed American forestry views and values over Puerto Rico. Colonial objectives such as timber mining, conducting military experiments, and alienating local administrators, encompassed forest management in Puerto Rico. This socio-historical context will serve to understand the legitimatization and reproduction of colonialism in United States forestry law, which is addressed in the next two sections.

III. THE REGULATORY REGIME OF ENVIRONMENTAL PROTECTION IN PUERTO RICO AND ITS INTRINSIC RELATIONSHIP TO THE COLONIAL AMERICANIZATION PROJECT ON THE ISLAND

The role that forestry law played in the environmental colonial project must be analyzed to understand the current dynamics that still permeate colonialism and render ineffective the legal protections of Puerto Rico's forests. As a territory of the United States, two levels of regulations apply in Puerto Rico: federal and local "state" regulations. At the local level, Puerto Rico has its own environmental regime that includes a legal regime for the management of forests. These laws apply to all public forests in Puerto Rico created by the state government and for the people of Puerto Rico, and to all private lands that fall under the corresponding forest designation.¹¹³ At the federal level, various federal agencies are involved with the environmental governance of forests. Pertaining to natural protected areas, the federal government has jurisdiction in Puerto Rico over the lands managed by the U.S. Fish and Wildlife Service under the U.S. Department of the Interior and by the U.S. Forest Service under the U.S. Department of Agriculture.¹¹⁴ These lands are owned by the U.S. federal government and not by the people of Puerto Rico. These 217 square kilometers of land account for around 13% of the conservation lands in Puerto Rico, the rest being

¹⁰⁸ CR Bijoy, *Conservation and livelihoods: conflicts or convergence?*, in RESEARCH HANDBOOK ON LAW, ENVIRONMENT AND THE GLOBAL SOUTH 286 (Philippe Cullet & Sujith Koonan eds., 2019).

¹⁰⁹ *Id.* at 287.

¹¹⁰ Antoni Pigrau, *Colonialism, Environmental Injustice, and Sustainable Development: Nuclear Testing in the Marshall Islands*, in THE CAMBRIDGE HANDBOOK OF ENVIRONMENTAL JUSTICE AND SUSTAINABLE DEVELOPMENT (Sumudu A. Atapattu, Carmen G. Gonzalez & Sara L. Seck eds., 2021).

¹¹¹ Marta María Maldonado et al., *Owning and Contesting El Yunque: Forest Resources, Politics, and Culture in Puerto Rico*, 44 BERKELEY J. SOCIOLOG. 82, 85-86 (1999).

¹¹² See NATIONAL PARK SERVICE, *Puerto Rico* (last visited January 19, 2014), <https://www.nps.gov/state/pr/index.htm?program=all>.

¹¹³ JESSICA CASTRO PRIETO ET AL., U.S. DEPARTMENT OF AGRICULTURE, FOREST SERVICE, A COMPREHENSIVE INVENTORY OF PROTECTED AREAS AND OTHER LAND CONSERVATION MECHANISMS IN PUERTO RICO 26 (2019), https://data.fs.usda.gov/research/pubs/iitf/iitf_gtr_50_eng.pdf.

¹¹⁴ *Id.* at 34.

predominantly state and privately owned.¹¹⁵ This figure may seem small compared to other amounts of federal lands owned by the U.S., but its significance in Puerto Rico and the colonial relationship have important weight.

The U.S. Forest Service manages 154 National Forests across the nation.¹¹⁶ El Yunque National Forest is the only rainforest in this network and the only National Forest in Puerto Rico.¹¹⁷ As such, its main governing law is the National Forest Management Act (NFMA) of 1974, which sets the standards for resource management of federal forests.¹¹⁸ The NFMA was adopted to counter the previous advancements of the timber industry and the high demand of wood for housing after the Second World War, in line with a rational form of resource management.¹¹⁹ The NFMA mandated the U.S. Forest Service to adopt management plans for all National Forests.¹²⁰ The act establishes provisions prohibiting clearcuts, requiring soil and water protections, and ensuring to foster reforestation.¹²¹ Additionally, it consolidated the policy adopted by Congress in the Multiple Use Sustained Yield Act,¹²² which calls for ‘multiple use’ objectives in forests to obtain a sustained yield of their various products and services.¹²³ The NFMA did not alter the U.S. Forest Service’s emphasis on timber production.¹²⁴

Forest Plans are adopted in accordance with the public policy established in NFMA. It is relevant, as this public policy governs El Yunque. The NFMA set forth that forest plans must include provisions for timber and harvesting.¹²⁵ Although some of the provisions of this policy relate to conservation, its ends and means do not reflect local interests. An example of this inconsistency occurred in 2017 during the aftermath of Category 5 Hurricane Maria, which ravaged Puerto Rico and thousands of trees felled. The lack of regulation and the legal obstacles for rescuing the timber from these trees, on an island at risk of being battered by annual storms and hurricanes, proves the existence of a regime where the local interests are not at the top of the public policy agenda.¹²⁶ The first Forest Plan for El Yunque was adopted in 1987 and revised in 1997 and in 2018.¹²⁷ Following U.S. Forest Service policy, El Yunque’s first plan was controversially focused on timber logging, as previously discussed.

¹¹⁵ *Id.* at 77.

¹¹⁶ *About the U.S. Forest Service*, FOREST SERVICE (last visited January 21, 2024), <https://www.fs.usda.gov/detail/elyunque/about-forest/?cid=FSEPRD693356>.

¹¹⁷ Shabecoff, *supra* note 94.

¹¹⁸ Jack Tuholske & Beth Brennan, *The National Forest Management Act: Judicial Interpretation of a Substantive Environmental Statute* 15 PUBLIC LAND L. REV. 53, 54 (1994).

¹¹⁹ *Id.* at 58-59.

¹²⁰ National Forest Management Act, 16 U.S.C. § 1604(a) (2018).

¹²¹ Tuholske & Brennan, *supra* note 118, at 62, 66.

¹²² 16 U.S.C. §§ 528-531.

¹²³ Tuholske & Brennan, *supra* note 118, at 59-60.

¹²⁴ *Id.* at 60.

¹²⁵ See 16 U.S.C. § 1604(f)(2) (2018).

¹²⁶ See USDA Caribbean Climate Hub, *Salvaging Wood From Fallen Trees After Hurricanes Irma and Maria* (December 2017), https://caribbeanclimatehub.org/wp-content/uploads/2019/04/USDA-CCH_WoodWorkshopSalvagingWoodDec2017.pdf.

¹²⁷ USDA FOREST SERVICE, REVISED LAND MANAGEMENT PLAN EL YUNQUE NATIONAL RAINFOREST 1 (2018).

At the regulatory local level, Puerto Rico adopted its forestry regime based on the management model established by the colonial government. Current forest law was adopted in 1975,¹²⁸ and kept the overarching idea of forests “managed rationally” based on the traditional conservation rationale of the U.S. Forest Service.¹²⁹ The law carried on the authority of the local government to establish and manage reserves for the “development of the maximum and continuous yield of any forest product, service and utility.”¹³⁰ Puerto Rican politicians accepted this conservation paradigm, dodging alternative forms of management based on traditional uses and a sustainable relationship based on local integration and participation. I believe this perspective on conservation resulted in the people’s continuing alienation and separation from natural resources. Although some authors sustain that Puerto Rico has an “extensive” environmental law regime,¹³¹ most laws attempt to solve environmental issues instead of avoiding them.¹³² Extensive implementation issues permit the reproduction of many of the same colonial dynamics that existed during the American colonialist time. Understanding the lack of effective implementation of law and regulation in Puerto Rico requires considering the colonial origins of environmental law, and the dynamics it perpetuated. I will now review how the law legitimizes these colonial dynamics.

IV. LEGITIMIZATION OF ENVIRONMENTAL COLONIALISM THROUGH LAW

In this final section, I review ideas of colonialism legitimacy and reproduction through the law to analyze how forest law legitimizes and reproduces colonialism. Finally, I relate environmental colonialism to current environmental justice problems in Puerto Rico.

A. *Legitimacy and Reproduction of Colonialism through Law*

The law legitimized, reproduced, and consolidated the colonial regime during the environmental colonialist project.¹³³ The expansion, domination and exploitation strategies surrounding the American colonial project in Puerto Rico required a normative structure. Rivera-Ramos explained how the law was instrumental for the United States in developing hegemony over Puerto Rico.¹³⁴ Natural resource exploitation was part of these hegemonic practices. Colonization strategies in the early period of the American colony manifested environmental legislation and case law.¹³⁵ A newly created legal regime

¹²⁸ Forest Act of Puerto Rico, 12 L.P.R.A. §§ 191-203(c) (2022).

¹²⁹ *Id.* § 192(c).

¹³⁰ *Id.* § 196(d)(1).

¹³¹ Diana López-Feliciano, *El desarrollo sostenible en el milenio: leyes ambientales vis a vis la educación ambiental (la experiencia en Puerto Rico)* 1, 5 (last visited January 21, 2024), http://aceer.uprm.edu/pdfs/leyes_ambientales_en_PR.pdf.

¹³² *Id.*

¹³³ Rivera-Ramos, *supra* note 2, at 2.

¹³⁴ RIVERA-RAMOS, *supra* note 12, at 69-70.

¹³⁵ Rodríguez-Rivera, *supra* note 10, at 208.

treated environmental resources as commodities and its protection concerned protecting individual property rights.¹³⁶ By maintaining the management and conservation of principal forest lands in the hands of the colonial power and by sustaining unquestioned legal values based on colonial foundations of control, exclusion and extraction, forest protection in Puerto Rico legitimizes the colonial project.

To clarify how law can legitimize and reproduce colonialism, I draw upon a theoretical approach that views “law [. . .] as constitutive of the social world.”¹³⁷ Law influences the construction of reality because it constitutes social consciousness and helps structure routine life practices.¹³⁸ In this process, socio-economic relations are “created, defined, and sustained by law.”¹³⁹ Therefore, a social theory of law for understanding power relationships as colonialism is helpful. Nonetheless, social processes also influence the creation of law itself. In a Marxist approach, the law must be studied “as the ‘synthesis of many determinations.’”¹⁴⁰ A detailed historical examination is required to identify these determinants.¹⁴¹ Understanding law from a social theory perspective requires identifying views and values, relating them to socio-historical processes, and inquiring how they influence other actors and processes.¹⁴² Inquiring how these views and values constitute, legitimize, and reproduce certain “social relations and practices,” such as colonial domination is relevant to this analytical exercise.¹⁴³

Applying this theoretical frame to the socio-historical context of Puerto Rico, Rivera-Ramos demonstrates how law, particularly the jurisprudential doctrines known as the Insular Cases, constituted, legitimized, and reproduced colonialism.¹⁴⁴ The law was fundamental for the U.S. imperialist project in the Caribbean.¹⁴⁵ Legal doctrine had to be re-examined, modified and reinterpreted to sustain imperialism and the acquisition of new territories under the U.S. Constitution.¹⁴⁶ Located in “insular” areas far away from the continental United States, these new territories had populations, languages, and cultures that were starkly different from the white Anglo-Saxon culture of the ruling elite then. The Insular Cases established the regime of territorial administration of colonies by the government of the United States, giving legal legitimacy to colonialism and sanctioning a selective application of the U.S. Constitution over the acquired territories.¹⁴⁷ In Rivera-Ramos’ words, “the Insular Cases put the U.S. Constitution at the service of colonialism.”¹⁴⁸

¹³⁶ *Id.* at 211.

¹³⁷ Rivera-Ramos, *supra* note 2, at 2.

¹³⁸ *Id.* at 24.

¹³⁹ *Id.* at 25.

¹⁴⁰ *Id.* at 32.

¹⁴¹ *Id.* at 32-33.

¹⁴² *Id.* at 36.

¹⁴³ *Id.*

¹⁴⁴ *See Id.*, at 2.

¹⁴⁵ For an overview of the consequences of U.S. hegemonic project in the Caribbean, *see* HEALY, *supra* note 13, at 260-274.

¹⁴⁶ *See* RIVERA-RAMOS, *supra* note 134, at 73.

¹⁴⁷ *Id.* at 74.

¹⁴⁸ Efrén Rivera-Ramos, *The Insular Cases: What is there to Reconsider?* in RECONSIDERING THE INSULAR CASES: THE PAST AND FUTURE OF THE AMERICAN EMPIRE 35 (Gerald L. Neuman & Tomiko Brown-Nagin, eds., 2015).

The effects were the establishment of hegemony and absolute control by the U.S. Congress over the distant territories aimed to maintaining them for extraction and strategic military purposes.¹⁴⁹

On these territories, the imposed laws served as a tool to establish hegemony and control. In this process, Congress and the local colonial institutions passed laws governing the colonies, consolidating American authority and securing its interests. Immediately after Spain transferred its sovereignty over the island to the U.S., the new sovereign revised and transformed all Spanish and local laws in Puerto Rico with notions of Anglo-American common law doctrine.¹⁵⁰ The U.S. Congress adopted two organic acts ruling the territory of Puerto Rico that served as the basis for legislating specific issues in the day-to-day management of the colony.¹⁵¹ The legal system was one of the areas most influenced by Americanization.¹⁵² The Insular Cases and the organic acts adopted by Congress were the foundations of the colonial project conditioning “a significant dimension of Puerto Rican reality.”¹⁵³ This legal colonial regime constituted Puerto Rico as a “legal and political subject” for the federal government to exercise power.¹⁵⁴

B. Colonialism in Environmental Law

Environmental law was part of this process of building hegemony in Puerto Rico. To achieve the project of environmental colonialism in Puerto Rico, which I described in this article, the U.S. federal government required establishing a legal regime that gave it control over natural resources. In this process, the law had a political and economic objective for establishing the conditions to exploit Puerto Rico’s natural, human and spatial resources. The extraction activities and the imposition of values and ideals of conservation on the Puerto Rican people manifested ecological colonialism. Whether this was an active objective of the colonial project or a by-product of hegemony has yet to be seen.

C. Colonialism in Forest Law

In forest law, these dynamics legitimized the colonial project by maintaining the protection of principal forest lands in the hands of the colonial power and by sustaining legal values based on colonial foundations of control, exclusion, and extraction. The fact that the U.S. federal government controls the main natural protected areas in Puerto Rico, including El Yunque, is a manifestation of environmental colonialism. As we have seen, El Yunque National Forest, as officially denominated, is under federal jurisdiction, regulated by U.S. federal forestry laws and thus managed with the objectives that forward the *national*

¹⁴⁹ *Id.* at 35-36.

¹⁵⁰ RIVERA-RAMOS, *supra* note 134, at 69-70.

¹⁵¹ These organic acts were the Foraker Act “[a]n Act Temporarily to provide revenues and a civil government for Porto Rico, and for other purposes” (31 Stat. 77 (1900)), and the Jones-Shafroth Act “[a]n Act To provide a civil government for Porto Rico, and for other purposes” (Pub. No. 368, 39 Stat. 951 (1917)).

¹⁵² RIVERA-RAMOS, *supra* note 134, at 69-70.

¹⁵³ Rivera-Ramos, *supra* note 2, at 159.

¹⁵⁴ *Id.* at 158.

interests. This mere legal fact gives legitimacy to the continuation of environmental colonialism in one of Puerto Rico's most important environmental resources. As previously outlined, the extractionist, military and conservationist values of the United States served historically as a framework for managing El Yunque. While this article does not explore the environmental values held by Puerto Ricans and the communities around El Yunque, such examination is indispensable for fully understanding the sociological and anthropological consequences of this manifestation of environmental colonialism.

Nonetheless, I believe that the administration of natural resources in Puerto Rico follows the interests and agenda of the colonial manager. Thus, a question of legitimacy inevitably arises. A clash of interests exists when the local values and views are not at the core of environmental policy and governance.

At the territorial government level, we see how modern forestry arrived in Puerto Rico in hand with Pinchot's utilitarian ideals of forestry. These ideas were translated into Puerto Rico's first forestry law in 1917.¹⁵⁵ The low viability of a timber industry rendered the utilitarian model ineffective, and the government decided to try an agro-forest model of forestry based on small scale plantations for agriculture and subsistence.¹⁵⁶ The agro-forest model was short-lived during the New Deal policies, marking an end of any further real attempt to address a forest policy adapted to Puerto Rico's conditions and necessities.¹⁵⁷ A process of state guided industrialization followed in the 1940s and 1950s which precipitated much of the environmental problems exacerbated today. The result has been a succession of legal norms adopted to regulate forestry in Puerto Rico based on the centrality of economic development, and the forestry model imported by the U.S. in the early days of the colony, that reproduce colonial dynamics and sustain issues of environmental justice.

V. EFFECTS ON ENVIRONMENTAL JUSTICE

Many of Puerto Rico's current socio-economic issues can be analyzed as environmental justice issues. The destruction of environmental resources has been detrimental to both the economic activities that generate the resources and the maintenance of life in Puerto Rico.¹⁵⁸ Valdés Pizzini describes the various processes that have been the source of issues in relation to environmental injustices.¹⁵⁹ Industrialization, land dispossession, high impact development of coastal lands, transformations in crop production, military expansion, urban sprawl, and gentrification, have all affected Puerto Rico's environment.¹⁶⁰ Poverty and inequality

¹⁵⁵ Lugo Vega, *supra* note 4, at 66.

¹⁵⁶ *Id.* at 74.

¹⁵⁷ *Id.* at 66.

¹⁵⁸ See Carmen Milagros Concepción, *Acción social, ambiente y democracia en Puerto Rico*, 75 REV. JUR. UPR 453, 462 (2006).

¹⁵⁹ Manuel Valdés Pizzini, *Historical Contentions and Future Trends in the Coastal Zones: The Environmental Movement in Puerto Rico*, in BEYOND SUN AND SAND CARIBBEAN ENVIRONMENTALISMS 46 (Sherrie L. Bayer & Barbara Deutsch Lynch, eds., 2006).

¹⁶⁰ *Id.*

are exacerbated by climate change and biodiversity loss.¹⁶¹ These have all been reproduced by institutions of government and economic elites of the U.S. and Puerto Rico. Furthermore, focus on economic development at the expense of sustainability has been central to these environmental issues.¹⁶²

The forestry model includes both the ideological foundations of conservationism based on exclusion of people from the natural resource and the legal ownership and management of the most significant forest lands. Law produces consent, and consent to this conservation model represents the acceptance of power through the acceptance of the validity of those power institutions.¹⁶³ As Rivera Ramos points out, these dynamics legitimize colonial domination and “created a discursive universe that included categories, concepts, approaches, justifications, and understandings that have controlled, even to this day, the nation’s and the territories’ ways of thinking, analyzing, and imagining solutions.”¹⁶⁴ The colonial environmental project was legitimized by the law by the acceptance of federal forest governance institutions and forestry values based on American conservation ideology.

The adoption of Puerto Rico’s Constitution paved way for a local regime of conservation laws. The environmental movement in Puerto Rico grew simultaneously and was highly influenced by institutional environmentalism in the U.S.¹⁶⁵ Whether the influence of the U.S. environmental movement had the effects of perpetuating colonial dynamics in Puerto Rico must be studied. Nonetheless, there are clear manifestations of how ecological colonialism continues to be reproduced in Puerto Rico’s environmental law. By remaining unchallenged, environmental law perpetuates the environmental issues that come with it.

Environmental colonialism is also manifested by other federal conservation agencies in Puerto Rico. One example is the island of Vieques which was occupied by the U.S. Navy in 1941 and until 2003 served as a naval training ground.¹⁶⁶ During the course of six decades, the U.S. Navy dropped countless pounds of explosives in the Eastern part of the 52 square miles island.¹⁶⁷ As a consequence of this occupation, more than half of the island of Vieques is inaccessible due to the presence of explosives and many health issues have been identified among the population, including a twenty seven percent higher cancer rate than on mainland Puerto Rico.¹⁶⁸ After years of protests led by local fishermen, the Navy training operations finally came to an end in 2003.¹⁶⁹ Instead of returning the lands to the

¹⁶¹ *Id.* at 44.

¹⁶² Luis E Rodríguez Rivera, *Hacia Un desarrollo sostenible: Análisis de legislación ambiental aprobada durante los años naturales de 2003 y 2004*, 74 REV. JUR. UPR 909, 965 (2005).

¹⁶³ Rivera Ramos, *supra* note 2, at 55.

¹⁶⁴ RIVERA RAMOS, *supra* note 148, at 36.

¹⁶⁵ Valdés Pizzini, *supra* note 159, at 46.

¹⁶⁶ Atilés Osoria, *supra* note 12, at 134.

¹⁶⁷ Valeria Pelet, *Puerto Rico’s Invisible Health Crisis*, THE ATLANTIC (September 3, 2016), <https://www.theatlantic.com/politics/archive/2016/09/vieques-invisible-health-crisis/498428/>.

¹⁶⁸ *Id.*

¹⁶⁹ Ronald Ávila Claudio, *Vieques: el oscuro episodio de los bombardeos sobre Puerto Rico que el ejército de EE.UU. realizó durante décadas*, BBC News Mundo (July 8, 2023), <https://www.bbc.com/mundo/noticias-america-latina-65630176>.

people of Puerto Rico, however, the Navy passed them on to the U.S. Fish and Wildlife Service, a federal agency under the Department of Interior; thus, reproducing under the guise of conservationism another example of colonial exclusion of local management of environmental resources.¹⁷⁰

The federal conservation regime in Puerto Rico reproduces a colonial system that alienates local and environmental resources, from the “notion of place” by way of law.¹⁷¹ This process, analyzed by Maldonado, Valdés-Pizzini and Latoni in an important ethnographic study, neglects “the contextual specificities of forests as contested places imbued with historical and cultural meanings.”¹⁷² In El Yunque these conceptions are constituted, legitimized, and reproduced by U.S. forestry laws. El Yunque’s expansion of its initial protected territory consisted of land donated by the Puerto Rican government, and the systematic purchase of land from local owners that reduced non-federal property inside the forest to an insignificant amount.¹⁷³ The vast majority of lands in El Yunque are federal property, a fact that has raised little to no questioning within public policy discourse. Naming constitutes another blunt manifestation of alienation. Traditionally known by the Spanish name of El Yunque, the forest is located in the mountains of Luquillo, a Taíno-Arawak toponym.¹⁷⁴ Under the American administration, the forest was called the Caribbean National Forest, presumably for reasons of tourism.¹⁷⁵ In 2007 it was changed to El Yunque National Forest, maintaining *national* as a stark reminder of who owns the forest and for whom it is managed.

A study on the relationship of geographical space and ownership in the context of El Yunque concluded that the “rational” management of El Yunque is far away from the significance of El Yunque in Puerto Rican reality.¹⁷⁶ The authors point that there is a divide between the “symbolic appropriation” of El Yunque in Puerto Rican identity and lore, and the reality of exclusion management by the U.S. Forest Service.¹⁷⁷ This process transformed the relationship between local communities that worked with the forest as sharecroppers and rural workers, pushing them out and eliminating their source of livelihoods.¹⁷⁸ With this distancing process, folk knowledge regarding the forest was progressively removed and replaced with forestry laws based on rational forestry practices with “values associated with the rational, scientific, and hegemonic view.”¹⁷⁹ Almost all Puerto Rican ties were eliminated, and the forest became relegated for the local to the status of folklore. Today, Puerto Ricans are still not the owners of the forest and thus it is not in their inventory of actions. Colonialism creates an ironic predicament where El Yunque is central to patriotic and identity manifestations, yet foreign in all its legal existence and structure.

¹⁷⁰ Atilés Osoria, *supra* note 12, at 144.

¹⁷¹ Maldonado et al., *supra* note 111, at 82.

¹⁷² *Id.* at 83.

¹⁷³ *Id.* at 84.

¹⁷⁴ El Yunque Inns, *Fit for a God: A Brief History of the El Yunque National Forest*, EL YUNQUE: ITS HISTORY (last visited January 22, 2024), <https://www.elyunqueinns.com/el-yunque-its-history>.

¹⁷⁵ Maldonado et al., *supra* note 111, at 90.

¹⁷⁶ *Id.* at 97.

¹⁷⁷ *Id.* at 94.

¹⁷⁸ *Id.* at 90.

¹⁷⁹ *Id.* at 83.

Finally, there is legitimation of environmental colonialism in the influence of colonial conservation ideology on Puerto Rican forestry law. Puerto Rico forestry law is based on the same model of control and exclusion provided in U.S. forestry law, based on extraction activities. One manifestation of the management of environmental resources in this extractive form is the requirement of yielding some type of economic activity from the natural resource. In both local and federal law, it has given way to the recreational vision for northern tourists which permeates current forestry management policy and is another mode of the commodification of nature.¹⁸⁰ This is linked to the idea of control derived from the utilitarian ethic of conservation.¹⁸¹ Management of the natural area is centralized on the state, which controls who has access, who can use its resources, and limits the relationship of people as one of mere visitors who come, take part of a very limited exposure, and leave.

The recreational vision eliminates a sense of belonging from the environmental resource which can give explanation to unsustainable interactions with the natural environment such as deforestation and an idea of development at the cost of the environment. As Rodríguez Rivera points out, the executive and legislative branches in Puerto Rico have not shown much respect towards environmental law and its policy. The prevailing attitude is that addressing environmentalist matters is an obstacle to economic development.¹⁸² Recent deforestation by foreign companies in natural protected areas is a clear manifestation of these colonial dynamics in local law,¹⁸³ as broad problems of “corruption and collusion with private enterprises” can be seen as symptoms of the colonial relationship with the U.S.¹⁸⁴ Basic needs such as water and land for food crops, have been “sacrificed to the logics of capital extraction.”¹⁸⁵ This has been identified in many postcolonial states in the Global South.¹⁸⁶

Another manifestation of colonialism is through deforestation caused by individuals, homeowners, and local developers. Although this could be linked to the more complex issue of environmental consciousness, the effects of colonialism over environmental consciousness have been theorized. Latinx populations in the U.S. have been portrayed as “lacking a conservation ethic and destroying the environment.”¹⁸⁷ This same portrayal can be seen extended to people in Puerto Rico. An effective analysis of the failures of environmental policy in Puerto Rico would require countering this approach and questioning this simplification.

¹⁸⁰ NYGREN, *supra* note 38, at 60.

¹⁸¹ Lugo Vega, *supra* note 4, at 46.

¹⁸² Luis E Rodríguez Rivera, *Derecho Ambiental*, 69 REV. JUR. UPR 497, 530-31 (2000).

¹⁸³ Amador Fuxench v. Departamento de Recreación y Deportes, Civil No. BY2020CV03148 (TPI, Bayamón, 3 de noviembre de 2023).

¹⁸⁴ Hilda Lloréns & Maritza Stanchich, *Water is life, but the colony is a necropolis: Environmental terrains of struggle in Puerto Rico*, 31 CULTURAL DYNAMICS 81, 84 (2019).

¹⁸⁵ *Id.* at 81.

¹⁸⁶ Joana Setzer & Lisa Benjamin, *Climate Litigation in the Global South: Constraints and Innovations*, TRANSNATIONAL ENVIRONMENTAL LAW 1, 5 (2019).

¹⁸⁷ Lloréns & Stanchich, *supra* note 185, at 83.

CONCLUSION

Throughout the course of this article the effects of colonialism in the legal protection of forests in Puerto Rico have been analyzed. It is notable that the results of environmental colonialism in Puerto Rico are manifested in many aspects of its legal regime, including its environmental laws. Forest protection is regulated by two levels of jurisdiction, the federal government and the local Puerto Rican government, both legitimizing and enforcing colonial rule. Federal forestry protection owns and controls El Yunque, the most important forest resource of the island. This is a clear example of perpetuation of environmental colonialism through law. Puerto Rican forest laws are influenced by U.S. forestry based on a conservationist ideology that centers utilitarian uses of resources for development. These dynamics have vast effects on issues of environmental justice. Maintaining forest lands in control of the colonial power relegates local interests to the “national” interests of the U.S. and perpetuates colonialism.

The legitimation and reproduction of colonialism through the legal protection of forests continues to rupture the relationship between people and the environment. In turn, this has proven to have consequences in the implementation of law and regulation and the effective management and conservation of Puerto Rico’s environment. This sustains issues of environmental justice and requires that forest laws be revised to represent the interests of Puerto Ricans, taking into consideration the socio-historical context of colonialism. Nonetheless, other factors must also be looked at to understand the complexity of the influence of colonialism in environmental law, such as cultural, political, and anthropological perspectives. Even if law is generally constitutive of social life, it is not necessarily determinative of other social phenomena, thus in many instances, law possesses a “limiting or conditioning capacity, but not the power of absolute determination.”¹⁸⁸

¹⁸⁸ Rivera-Ramos, *supra* note 2, at 33.