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INDIGENOUS SHARED GOVERNANCE, INTERNATIONAL LAW, MIXED USE, AND PRESERVING RAINFOREST DURING THE COVID-19 PANDEMIC

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This article takes a transdisciplinary approach to examining a range of issues related to the topic of Indigenous shared governance. It examines concepts such as free prior informed consent and the role of international law in affecting local reality in the context of a specific illustrative example in South America in the Amazon biome: the Iwokrama Forest and its communities in Guyana. The role of international law in preserving biodiversity, climate, and rainforests is considered as well. The article also considers legal, ethical, and scientific perspectives on issues related to mixed uses of rainforests. These include shared stewardship of natural resources, ecotourism, the means of funding scientific research and use of rainforests for science, reduced impact logging and green commerce certifications, and whether benefits of a mixed-use approach to natural resources are shared with Indigenous people. Finally, the article describes the impacts of the COVID-19 pandemic and considers options for responding to the additional stresses of the pandemic, which include exacerbation of illegal mining and logging in protected areas. Besides describing difficult decisions and trade-offs that arise in reality and generalizable take-away observations, the reflections and opinions of local Indigenous representatives are included, and directions for future research are suggested.

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I. Introduction

This article answers calls for more transdisciplinary efforts in scholarship¹ and uses an illustrative example to examine developments at the complicated nexus between Indigenous governance, international law, and conservation.

The example of an initiative involving shared Indigenous governance and mixed use of an intact area of tropical rainforest is briefly summarized at the start of this article. It illustrates the relevance and role of international law in several issues. For example, did foreign entities and national leaders ask for consent of—or input from—local Indigenous people in establishing, governing, and running a sustainable use initiative? Did – or should – international law influence the decision to conserve rainforests? The article also examines issues in certified reduced impact logging in sustainable use areas of tourism and of taking money from an oil company for ecological research, and whether benefits of mixed use of preserved forest are fairly shared. This article also investigates options for protecting the forest from illegal mining and poaching when the COVID-19 pandemic shut-down legal activity, cutting-off the majority of legitimate revenues.

¹See Junguo Liu, Kamaljit S. Bawa, Thomas P. Seager, Ganquan Mao, Ding Ding, Janice Ser Huay Lee and Janet K. Swim, *On Knowledge Generation and Use for Sustainability*, 2 NATURE SUSTAINABILITY 80 (2019); Constance E. Bagley, Adam J. Sulkowski, Josephine Sandler Nelson, Sandra Waddock, and Paul Shrivastava, *A Path to Developing More Insightful Business School Graduates: A Systems-Based, Experimental Approach to Integrating Law, Strategy, and Sustainability*, 19 ACAD. MGT. LEARNING & ED. 541–68 (2020); Adam J. Sulkowski, Wojciech Kowalczyk, Bruce L. Ahrendsen, Robert Kowalski, and Edward Majewski, *Enhancing Sustainability Education Through Experiential Learning of Sustainability Reporting*, 21 INT'L J. SUST. HIGHER ED. 6, 1233–46 (2020); Adam Sulkowski, Danielle Blanch-Hartigan, Caren Goldberg, Amy Verbos, Maoliang Bu, and Remy Balarezo Nuñez, *Systems Theory, Surveillance Capitalism, and Law: Native Wisdom and Feedback Loops To Boost the Constructive Use of Big Data*, COL. TECH. L. J. (2021).

The study of international issues is indispensable to understanding modern challenges.² Yet there is a dearth of material dealing with the nexus of Indigenous rights, ecosystem conservation, and international law, even though these are burgeoning fields of study involving legal mechanisms that have recently proven themselves impactful.³ Moreover, given the existential challenge of climate change and its connection to all other phenomena, this research review also meets a critical and timely need.⁴

II. An Illustrative Example

At the threshold of the third decade of this millennium, humanity faces at least three urgent meta-crises temporarily overshadowed by the shorter-term crises of the COVID-19 pandemic and attendant economic perturbations: cultural extinction, mass extinction of species, and climate change. Yet all of these phenomena are intimately interconnected, especially in the tropics.

Guyana, long overlooked by mainstream media⁵ and scholars⁶ is recently drawing attention because of ExxonMobil extracting oil offshore,⁷ its unresolved presidential election,⁸ new awareness of its forests' critical role in climate patterns,⁹ and other issues.¹⁰ This country of less than 800,000 inhabitants, as a former British colony, is South America's only English-speaking country.¹¹ It is a common law jurisdiction, and culturally similar to the Caribbean region.¹²

² See Larry A. DiMatteo and Virginia G. Maurer, *Choosing Values: Public-Private Relationships in a Global Economy*, 32 J. LEGAL STUD. EDUC. 313, 313 (2015). See generally Stephen Kim Park and Gerlinde Berger-Wallisier, *A Firm-Driven Approach to Global Governance and Sustainability*, AM. BUS. L. J. 255 (2015).

³ There is a compelling argument that U.S. higher education should do more to address Indigenous peoples' issues, given that dispossession of Indigenous homelands directly funded many American universities. See Tristan Ahtone and Robert Lee, *Ask Who Paid for America's Universities*, N.Y. TIMES (May 7, 2020), <https://www.nytimes.com/2020/05/07/opinion/land-grant-universities-native-americans.html> (describing the Morrill Act of 1862).

⁴ NICHOLAS H. STERN, *THE ECONOMICS OF CLIMATE CHANGE: THE STERN REVIEW* (2006).

⁵ Frank Jacobs, *The Loneliness of the Guianas*, N.Y. TIMES (Jan. 16, 2012), <https://opinionator.blogs.nytimes.com/2012/01/16/the-loneliness-of-the-guianas/?mtref=www.google.com&gwh=4C8FC1FE5CA61476CAC9AAE3499DD1F5&gwt=pay&assetType=PA> YWALL.

⁶ See Rosemarijn Hoefte, Matthew Bishop, and Peter Clegg, *Still Lonely After All These Years? Contemporary Development in the 'Three Guianas'*, 43 CARIBBEAN STUD., July–Dec. 2015, at 83.

⁷ Anatoly Kurmanaev, *'It Changed So Fast': Oil is Making Guyana Wealthy but Intensifying Tensions*, N.Y. TIMES (April 7, 2020), <https://www.nytimes.com/2020/04/07/world/americas/guyana-oil.html>; Christopher M. Matthews and Kejal Vyas, *World's Biggest New Oil Find Turns Guyana Upside Down*, WALL ST. J. (Feb. 28, 2020), <https://www.wsj.com/articles/worlds-biggest-new-oil-find-turns-guyana-upside-down-11582909332>.

⁸ Gideon Long, *Guyana on Edge Following Disputed Presidential Vote*, FIN. TIMES (Mar. 16, 2020), <https://www.ft.com/content/3a2e6576-6533-11ea-b3f3-fe4680ea68b5>.

⁹ See C. Isabella C. Bovolo, Thomas Wagner, Geoff Parkin, David Hein-Griggs, Ryan Pereira, and Richard Jones, *The Guiana Shield Rainforests—Overlooked Guardians of South American Climate*, 13 ENV'T. RSCH. LETTERS, July 2018, at 1. Video abstract available at <https://iopscience.iop.org/article/10.1088/1748-9326/aacf60>.

¹⁰ This case will not deal with at least four other issues related to business, law, ethics, and international issues in the Guyanese context, including disputes over national boundaries on land (with Venezuela and Suriname), national waters (with Trinidad and Tobago), human trafficking, forced labor, mining, and the illicit drug trade.

¹¹ *Guyana*, CIA, *THE WORLD FACTBOOK*, 2022, <https://www.cia.gov/the-world-factbook/countries/guyana/>.

¹² See Lisa Benjamin and Michael Stevenson, *A Greener Future for Caribbean Constitutions? The Bahamas as a Case Study*, 21 WIDENER L. REV. 217, 221–22 (2015).

The Guiana Shield is an unusual geographic region in northeast South America,¹³ home to some of the last large intact tracts of tropical rainforest on Earth,¹⁴ which play a key role in climate systems.¹⁵ In the middle of the Guiana Shield is Guyana,¹⁶ in the center of which is an unusual biodiversity hotspot,¹⁷ the Iwokrama Forest, bounded by Indigenous communities that have used the forests for millennia.¹⁸

In anticipation of the 1992 Rio Earth Summit,¹⁹ at the 1989 Commonwealth Heads of Government meeting in Malaysia,²⁰ the government of Guyana offered to dedicate a portion of this ecosystem for conservation and as a model of sustainable development. The Iwokrama International Centre for Rain Forest Conservation and Development (“Iwokrama”) was created by an Act of the Guyanese Parliament in 1996 (“the Iwokrama Act”).²¹ The Act includes the 1995 agreement between Guyana and the Commonwealth General Secretary in which the President of Guyana committed to setting aside the Iwokrama Forest,²² an area of about one million acres,²³ or 360,000 hectares of forest (1.6 percent of Guyana’s landmass and two percent of Guyanese

¹³ The Guiana Shield’s iconic sites are Angel Falls in Venezuela (the world’s longest single drop waterfall) and Kaieteur Falls in Guyana (the largest single drop waterfall by volume); both are a result of unusual high mesas known as *tepuis*. These are said to have inspired the landscape in the animated film *Up* (2009). Although reports of these features also may have inspired Sir Arthur Conan Doyle’s book, *THE LOST WORLD* (1912), it may be that the specific expedition that inspired Doyle was actually to the border of Bolivia and Brazil. PERCY H. FAWCETT, *EXPLORATION FAWCETT 122* (Brian Fawcett, ed., 1953).

¹⁴ See DAVID S. HAMMOND, ED., *TROPICAL FORESTS OF THE GUIANA SHIELD: ANCIENT FORESTS IN A MODERN WORLD* (David S. Hammond ed., 2005).

¹⁵ See Bovolo et al., *supra* note 9.

¹⁶ For a useful compilation of economic statistics, see *Guyana Indicators*, TRADING ECON., <https://tradingeconomics.com/guyana/indicators> (last visited Feb. 23, 2022).

¹⁷ Central Guyana has one of the world’s highest concentrations of fish species. Graham Watkins, William Saul, Erling Holm, Cynthia Watson, Deokie Arjoon, and Jake Bicknell, *The Fish Fauna of the Iwokrama Forest*, 154 *PROC. OF ACAD. NAT. SCI. PHILA.* 39, 41 (2005).

¹⁸ Guyanese territory has been used by humans, including the Arawak and Caribs, for several millennia. Mark G. Plew, *The Archaeology of Iwokrama and the North Rupununi*, 154 *PROC. ACAD. NAT. SCI. PHILA.* 7 (2005). The populations of these villages identify almost exclusively as Indigenous, part of the roughly nine percent of the Guyanese population that are estimated to be Indigenous in 2020. See *Guyana Population*, *WORLD POPULATION REV.*, <https://worldpopulationreview.com/countries/guyana-population/> (last visited Feb. 23, 2022). The remaining demographic groups of Guyana are the living legacy of the legal and business history of the British Empire, with slavery and then its replacement—indentured servitude—explaining a population that is mostly of African or South Asian descent. See Mark Harvey, *Slavery, Indenture and the Development of British Industrial Capitalism*, 88 *HIST. WORKSHOP J.*, Fall 2019, at 66. Besides highlighting how the evolution of law and commerce shaped societies and the world as we know it, demographics help understand present day Guyanese politics. Jason S. Calder, *Ethnic Conflict Threatens Democracy in Guyana*, *FOREIGN POL'Y* (Mar. 26, 2020), <https://foreignpolicy.com/2020/03/26/ethnic-conflict-democracy-guyana/>.

¹⁹ U.N. Conference on Environment and Development, *Rio Declaration on Environment and Development*, U.N. Doc. A/CONF.151/26 (Vol. I), annex I (Aug. 12, 1992).

²⁰ For information on the Commonwealth association of 54 countries with a combined population of 2.4 billion people, see *THE COMMONWEALTH*, <https://thecommonwealth.org/> (last visited Feb. 23, 2022).

²¹ Iwokrama International Centre for Rain Forest Conservation and Development Act, ch. 20:04 (1995) (Guy.), <https://mola.gov.gy/sites/default/files/Cap.%2020.04%20Iwokrama>. The bill as introduced in parliament: http://parliament.gov.gy/documents/bills/6865-bill_no._22_of_1995.pdf.

²² The name means “place of refuge” in the language of the Makushi people.

²³ 3,710 square kilometers.

forests—roughly the size of the U.S. state of Rhode Island or the size of Greater London in the U.K.)²⁴ for conservation and research into sustainable uses.²⁵

In 1996, after the mutual realization of the government and local communities that the Iwokrama Forest could only be preserved with the cooperation of the Indigenous people who had been using it,²⁶ the North Rupununi District Development Board (NRDDB)²⁷ was established to represent Indigenous communities in and around Iwokrama. In 2001, the first Indigenous representative joined the board of Iwokrama and the forest was zoned into Sustainable Use Areas (SUA) and Wilderness Preserve (WP), as shown in the maps in Appendices A, C, and D). SUA areas total 49.6 percent and WP areas total 50.4 percent of Iwokrama territory. In 2006, the inhabitants of Fair View received title to their land. It is one of several villages represented by the NRDDB, and the only one in the Iwokrama forest.²⁸

The NRDDB and the Iwokrama Centre entered into a Memorandum of Understanding (MOU) and Collective Management Agreement (CMA) in 2006. Both were renewed in 2016, with the CMA being the most detailed and specific document. The CMA recites Section 6 of the 1996 Act, allowing for both traditional uses and experiments into the impacts of further uses of Iwokrama forest.

Consistent with this goal, between the 1990s and early 2000s, two eco-tourism lodging facilities and a forest canopy walkway were built, attracting about 1,000 to 1,600 visitors in a typical year. The first lodge also serves as a base for scientific research.

In addition to gaining Charles, Prince of Wales, as a patron,²⁹ and working with dozens of international partner institutions on a range of issues,³⁰ including cultural preservation and local training and education, authorities on ecosystem research call the opportunities for science at Iwokrama “unique.”³¹ The fact that it is both protected and isolated (getting to Iwokrama entails either an eight hour trip from Guyana’s capital on an unpaved road³² or chartering a plane to land at Fair View airstrip) means that it has been relatively spared from the global pandemic of destructive human activity. As one U.K.-based scientist explained:

Iwokrama is a truly unique place for integrated research on climate, forest, biodiversity and ecosystem services—we need baseline studies of relatively

²⁴ For comparison, the official size of the U.S. state of Rhode Island is 3,144 square kilometers and London Metropolitan Region in the U.K. is 3,900 square kilometers.

²⁵ See ch. 20:04 at ss. 2,13.

²⁶ E-mail from Sydney Allicock, Vice President and Minister, Indigenous Affs. of Guyana, to Adam J. Sulkowski, Associate Professor, Babson College (May 30, 2020, 13:20 EDT) (on file with author). See IWOKRAMA, IWOKRAMA: A UNIQUE PLACE, A SPECIAL PEOPLE, AN EXCEPTIONAL MISSION (June 2016), https://iwokrama.org/wp-content/uploads/2017/05/Iwokrama_Overview_Profile.pdf.

²⁷ N. RUPUNUNI DIST. DEV. BD., <https://nrddb.org/> (last visited Feb. 23, 2022).

²⁸ It bears mention that Fair View was a stopping point on a cattle trail and home to only a few dozen people as of the 1990s, and that the total number of nearby villages was 12. Between 1996 and 2020, Fair View has grown to a population of about 250 inhabitants and surrounding communities now number 20. See Allicock, *supra* note 26.

²⁹ To see Charles, Prince of Wales, explain his support for Iwokrama, see Mark Green, *Prince Charles-IWOKRAMA “The UNTOLD STORY”- Mark Green marknws*, YOUTUBE (Apr. 21, 2011), <https://www.youtube.com/watch?v=1V0hGhgpHrg>.

³⁰ See IWOKRAMA, IWOKRAMA ANNUAL REPORT 2018, www.iwokrama.org.

³¹ *Iwokrama Experiment Unique—Renowned Conservationist*, STABROEK NEWS (June 11, 2017), <https://www.stabroeknews.com/2017/06/11/news/guyana/iwokrama-experiment-unique-renowned-conservationist/> (quoting conservationist Dr. Kamal Bawa).

³² Rain turns the laterite road into mud, making it impassable by conventional car. Author’s observations (Jan. 14, 2020).

unspoiled tropical forests to better understand and quantify the consequences of environmental degradation from land use and climate change, and these are increasingly difficult to find.³³

Since conception, one of the planned foci for research was on impacts of reduced impact logging (RIL),³⁴ which has been allowed since 2007 in roughly 29.2 percent of Iwokrama,³⁵ and at a rate of roughly 0.5 percent of total area per year.³⁶ A policy on intellectual property rights and benefit-sharing covering traditional knowledge and new discoveries were also agreed upon. In 2017,³⁷ and again in 2019,³⁸ Exxon Mobil donated \$300,000 to support science related to Iwokrama; it was part of a wider campaign of sponsorship³⁹ as it starts to exploit oil in Guyanese territorial waters in the Atlantic Ocean—the largest crude oil discovery in the world during recent years.⁴⁰

In early 2020, COVID-19 became a pandemic. Tourism to Iwokrama stopped completely in March and logging activity also paused. While residents of cities noted wildlife reappearing in their streets⁴¹ a pandemic of criminal poaching, logging, and mining in the world's poorer regions and biologically richer ecosystems spread, thanks to distracted governments, criminal entities, and desperate unemployed people.⁴² Iwokrama was not entirely immune to the threat.⁴³

As this case was being written, at least two of the people who provided their perspectives for this story were working with rangers and police to halt illegal mining and to establish camera traps and drone surveillance to aid in deterring and/or apprehending those attempting to illegally use the Iwokrama forest.⁴⁴

³³ E-mail from Thomas Wagner, Professor in Earth System Science, Heriot-Watt University, to Adam J. Sulkowski, Associate Professor, Babson College (May 26, 2020, 16:49 EDT) (on file with author).

³⁴ Reduced impact logging (RIL), as the name suggests, involves steps to selectively remove trees so that the forest ecosystem remains functional—in contrast to clear-cutting.

³⁵ IWOKRAMA, HCVS IN THE IWOKRAMA FOREST 4 (2018), <https://iwokrama.org/our-work/sustainable-forestry/>.

³⁶ *Id.* at 17.

³⁷ *ExxonMobil US \$300,000 Support Kick Starts Iwokrama Science Programme*, OILNOW (Feb. 20, 2018), <https://oilnow.gy/featured/exxonmobil-us300000-support-kick-starts-iwokrama-science-programme/>.

³⁸ *ExxonMobil Support for Iwokrama Science Programme Will Hit Almost 1 million USD This Year*, OILNOW (Jan. 20, 2020), <https://oilnow.gy/featured/exxonmobil-support-for-iwokrama-science-programme-will-hit-almost-1-million-usd-this-year/>.

³⁹ *ExxonMobil Foundation Invests US \$10 million in Guyana for Research, Sustainable Employment and Conservation*, EXXONMOBIL (July 2, 2018), https://corporate.exxonmobil.com/News/Newsroom/News-releases/2018/0702_ExxonMobil-Foundation-Invests-US10-Million-in-Guyana-for-Research-Sustainable-Employment.

⁴⁰ Dylan Baddour, *Massive Guyana Oil Find Continues To Grow With Fresh Exxon Discovery*, FORBES (January 27, 2020), <https://www.forbes.com/sites/dylanbaddour/2020/01/27/massive-guyana-oil-find-continues-to-grow-with-fresh-exxon-discovery/#2805a12c2781>.

⁴¹ Harry Kretchmer, *These Locked-Down Cities are Being Reclaimed by Animals*, WORLD ECON. FORUM (April 17, 2020), <https://www.weforum.org/agenda/2020/04/covid-19-cities-lockdown-animals-goats-boar-monkeys-zoo/>.

⁴² *COVID-19 está devastando a las comunidades indígenas del mundo y no solo se trata de la salud [COVID-19 is Devastating the World's Indigenous Communities and it is not only about Health]*, INT'L INDIAN TREATY COUNCIL (May 19, 2020), <https://www.iitc.org/covid-19-esta-devastando-a-las-comunidades-indigenas-del-mundo-y-no-solo-se-trata-de-la-salud/>.

⁴³ *Illegal Operations Discovered at Protected Iwokrama Rainforest*, GUYANA TIMES (May 15, 2020), <https://guyanatimesgy.com/illegal-operations-discovered-at-protected-iwokrama-rainforest/>.

⁴⁴ E-mail from Raquel Thomas, Director, Resource Management and Training at Iwokrama, to Adam J. Sulkowski, Associate Professor, Babson College (May 27, 2020, 13:26 EDT) (on file with author).

Guyana is still roughly four-fifths covered by forests, with a low rate of deforestation compared to other countries.⁴⁵ Yet it stands at a crossroads at the start of 2022, complicated by uncertainty about the value and distribution of the windfall from oil extraction offshore.

III. Transdisciplinary Examination of the Issues

As observers of attempts at sustainable development have noted, “there are no right answers, just difficult trade-offs.”⁴⁶ Conversely, some may disagree and insist that some duties are non-negotiable and some things should not be commoditized. When it comes to conservation, we can be passionate and opinionated: even celebrated lifelong ambassadors of the natural world have come under intense public criticism for not doing enough.⁴⁷

Iwokrama has garnered praise. As mentioned, Prince Charles is a patron,⁴⁸ and internationally known scientists⁴⁹ and independent Indigenous and conservation consultants in the region also confirm it is seen as a model of success.⁵⁰ Yet it also presents an opportunity for discussing challenges in the arenas of shared governance, Indigenous rights, conservation, and international law and business.

At the outset, it is important to acknowledge two perennial observations about international law that may come up in discussing this aspect of the case. First, that expressions of principles (in declarations, resolutions, treaties, etc.) are often not binding nor enforceable or respected by private or public sector entities.⁵¹ However, over time, they can be applied in court cases and international tribunals, leading to impacts in the real world.⁵² Even if they were never considered by a judge, the value of resolutions and statements of principles are a rich topic for debate for both students and scholars of law and business.

A. Shared Indigenous Governance and the Relevance of International Law

The key issue with regard to guidance on the treatment of Indigenous communities under international law is free prior informed consent.⁵³ Since World War II, and especially since 2000, the movement in favor of Indigenous rights in international law has acquired momentum.⁵⁴

⁴⁵ Lucas Foglia, *How to Make Money off Rainforests Without Cutting Them Down*, BLOOMBERG BUSINESSWEEK (May 16, 2019), <https://www.bloomberg.com/news/features/2019-05-16/guyana-is-making-money-off-rainforests-without-cutting-them-down>.

⁴⁶ Author’s conversation with Elizabeth Losos (May 29, 2020).

⁴⁷ Leslie Hook, *David Attenborough, Nature’s Defender Comes Under Attack*, *Fin. Times* (Nov. 9, 2018), <https://www.ft.com/content/1e11b36c-e37e-11e8-8e70-5e22a430c1ad>.

⁴⁸ *Iwokrama International Centre for Rain Forest Conservation and Development*, THE PRINCE OF WALES AND DUCHESS OF CORNWALL, <https://www.princeofwales.gov.uk/patronage/iwokrama-international-centre-rain-forest-conservation-and-development> (last visited Feb. 24, 2022).

⁴⁹ Author’s conversation with Kamaljit Bawa, Distinguished Professor Emeritus, University of Massachusetts Boston (May 27, 2020).

⁵⁰ Author’s conversation with Katia Delvoye, Independent Consultant of 25 years in the Guianas on Environment and Indigenous Support, Amazon Conservation Team, Suriname (May 25, 2020).

⁵¹ For a primer on sources and operation of international law, see Aaron Judson Lodge, *Globalization: Panacea for the World or Conquistador of International Law and Statehood?*, 7 OR. REV. INT’L L. 224, 286–92 (2005).

⁵² See *id.*

⁵³ See LORIE M. GRAHAM & AMY VAN ZYL-CHAVARRO, EDUCATION, MEDIA, AND THE U.N. DECLARATION ON THE RIGHTS OF INDIGENOUS PEOPLES (2018).

⁵⁴ CHER WEIXIA CHEN, INDIGENOUS RIGHTS IN INTERNATIONAL LAW (2014).

However, this case illustrates some of the challenges to Indigenous self-determination in the 21st Century.⁵⁵ The key applicable principle in international law is “free, prior, and informed consent,”⁵⁶ as stated in the U.N. Declaration of the Rights of Indigenous Peoples dealing with resource extraction.⁵⁷ The non-binding text was adopted in 2007 with 143 nations, including Guyana, voting in favor and four nations (Australia, Canada, New Zealand, United States) voting against it.⁵⁸ Guyana is a signatory and had already updated its laws a year earlier with its Amerindian Law of 2006.⁵⁹

Regardless of the non-binding nature of certain documents, expressions of principle—such as the idea of free, prior, and informed consent (“FPIC”)—over time, may be used by courts in deciding disputes.⁶⁰ Lately, failure to seek FPIC has led to national courts and international tribunals halting projects that would impact the natural environment in the vicinity of Indigenous peoples in Central and South America.⁶¹

Ethically speaking, there may at first seem to be little ambiguity or room for disagreement about the merits of a principle such as free prior informed consent. However, as Raquel Thomas explains, “these concepts did not exist in 1989—now folks there [in the North Rupununi] are very clued into their FPIC, the Amerindian Act of 2006, etcetera.”⁶² This illustrates how principles—as first articulated by idealists, activists, declarations, and treaties—can affect perceptions of rights in a society, even in a relatively secluded corner of the world.

The only potential argument for assuming a privilege to make decisions on behalf of someone else—as we find in relationships based on guardianship or fiduciary duty—is a presumption that someone has superior experience, judgment, or knowledge, and should therefore exercise it in furtherance of the interests of another party.⁶³ And yet, it bears pointing out that from Australia to Canada, this logic was used until fairly recently to justify brutal family separations

⁵⁵ See Tekau Frere, Clement Yow Mulalap, and Tearinaki Tanielu, *Climate Change and Challenges to Self-Determination: Case Studies from French Polynesia and the Republic of Kiribati*, in 129 YALE L.J. FORUM, CHALLENGES TO SELF-DETERMINATION IN THE TWENTY-FIRST CENTURY 648 (2020).

⁵⁶ See James S. Phillips, *The Rights of Indigenous Peoples Under International Law*, 26 GLOB. BIOETHICS 120, 121 (2015) (quoting G.A. Res. 61/295, Declaration on the Rights of Indigenous Peoples (Sept. 13, 2007)).

⁵⁷ G.A. Res. 61/295, *supra* note 56, art. 32(2) For the official collection of related history and documents, see <https://www.un.org/development/desa/indigenouspeoples/declaration-on-the-rights-of-indigenouseoples.html>. The treaty built upon the ideals found in the International Covenant on Civil and Political Rights (see G.A. Res. 2200A (XXI) (Dec. 16, 1986), <https://www.ohchr.org/en/professionalinterest/pages/ccpr.aspx>, and ILO Convention 169 (1989), https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312314:NO. For an interactive map displaying how many (out of eighteen) human rights treaties each country has ratified, see *Status of Ratification Interactive Dashboard*, UNITED NATIONS HUM. RTS. OFF. OF THE HIGH COMM’R, <https://indicators.ohchr.org/> (last visited Feb. 24, 2022).

⁵⁸ Press Release, General Assembly, General Assembly Adopts Declaration on Rights of Indigenous Peoples; ‘Major Step Forward’ Towards Human Rights for All, Says President, U.N. Press Release GA/10612 (Sept. 13, 2007), <https://www.un.org/press/en/2007/ga10612.doc.htm>.

⁵⁹ Amerindian Act 2006, Act No. 6 of 2006 (Guy.), <https://moaa.gov.gy/legislation-the-amerindian-act/> [hereinafter Amerindian Act].

⁶⁰ See Phillips, *supra* note 56.

⁶¹ See *id.* See also Kristen A. Carpenter and Angela R. Riley, *Indigenous Peoples and the Jurisgenerative Moment in Human Rights*, 102 CAL. L. REV. 173 (2014).

⁶² E-mail from Raquel Thomas, Director, Resource Management and Training at Iwokrama, to Adam J. Sulkowski, Associate Professor, Babson College (May 27, 2020, 13:26 EDT) (on file with author).

⁶³ For an excellent and up-to-date review of the history and implications of the business judgment rule, see generally Thomas Belcastro, Note, *Getting on Board with Robots: How the Business Judgment Rule Should Apply to Artificial Intelligence Devices Serving as Members of a Corporate Board*, 4 GEO. L. TECH. REV. 263 (2019).

and foster homes to attempt to change the cultural values of Indigenous peoples.⁶⁴ In the context of relationships with Indigenous communities, the idea of a “White Man’s burden”⁶⁵ in managing the Global South is no longer espoused or embraced, at least not in explicit statements in the mainstream of most societies.⁶⁶

Although not contemplated at the time of the announcement of the intent to create Iwokrama in 1989, the local Indigenous community, who used the forest, made it known that they wanted to have a role in its management. The government realized that they would have to create a mechanism for shared governance which was included in the legislation that formally created the Iwokrama Centre by 1996.⁶⁷ Guyanese law now unambiguously states the right of native communities to self-governance and to title of their land.⁶⁸

All retellings of the origin story of Iwokrama highlight the role of Guyana’s national government in answering a call from the Commonwealth community of nations to offer commitments to advance the goal of the 1992 Rio Earth Summit.⁶⁹ This is noteworthy because principles and processes associated with multi-year efforts under the auspices of the United Nations may seem to lack outcomes or impact.⁷⁰ Also, in an era in which multilateral institutions and international cooperation are challenged, this serves as an example of how a community like the Commonwealth can serve to encourage national leadership. Finally, it also highlights the role of individual leaders in being able to rally resources and advance a cause; this provokes the question of how much more could be done in various sectors, regions, and levels, to advance worthy ideas.⁷¹

B. Biodiversity, Climate, Rainforest Preservation, and the Relevance of International Law

In the first component of the case presented above, another issue in the pithy fact summary is whether there is an obligation under international law to protect endangered species.⁷² Under international law, the treaty most on point is the Convention on Biological Diversity (CBD).⁷³

⁶⁴ See Sonja Starr and Lea Brilmayer, *Family Separation as a Violation of International Law*, 21 BERKELEY J. INT'L L. 213 (2003).

⁶⁵ Rudyard Kipling, *The White Man’s Burden*, THE KIPLING SOC’Y, https://www.kiplingsociety.co.uk/poem/poems_burden.htm (last visited Feb. 24, 2022).

⁶⁶ See Dwight Newman, *Introduction to Symposium on International Indigenous Rights, Financial Decisions, and Local Policy*, 109 AJIL UNBOUND 207 (2016).

⁶⁷ Discussed in Section B of the case (1996-2020) and in the corresponding text of Part III.

⁶⁸ See Amerindian Act.

⁶⁹ See Graham G. Watkins, *The Iwokrama Centre and Forest: Introduction to Special Papers*, 154 PROC. ACAD. OF NAT. SCI. PHILA. 1 (2005).

⁷⁰ Later we will consider the Sustainable Development Goals which grew out of Agenda 21, a product of the Rio Earth Summit.

⁷¹ For a collection of speeches by President Cheddi Jagan, who played a key role in the consultative process to realize the creation of Iwokrama between 1992 and 1997, see PRESIDENT CHEDDI JAGAN SPEAKS ON ENVIRONMENT AND DEVELOPMENT (Navin Chandarpal ed., 2000).

⁷² For up-to-date coverage of news related to sustainability-related U.N. treaties, and fora where international aspirations are discussed, see IISD EARTH NEGOTS. BULL., <https://enb.iisd.org/> (last visited Feb. 25, 2022).

⁷³ Convention on Biological Diversity, June 5, 1992, 1760 U.N.T.S. 79, https://treaties.un.org/doc/Treaties/1992/06/19920605%2008-44%20PM/Ch_XXVII_08p.pdf. For a simple and accessible explanation of the treaty with links to further information, see UNITED NATIONS DECADE ON BIODIVERSITY, CONVENTION ON BIODIVERSITY, (<https://www.cbd.int/undb/media/factsheets/undb-factsheet-cbd-en.pdf>).

Although the CBD is said to be binding, it recognizes national sovereignty over natural resources, while simultaneously expressing support of local community input and equitable treatment of Indigenous peoples.⁷⁴ The CBD was one of a collection of treaties and statements agreed upon at the 1992 Earth Summit,⁷⁵ at which goals were intended to result in tangible commitments and outcomes.⁷⁶ Guyana has introduced laws consistent with its treaty commitments, creating, among other things, an Environmental Protection Agency in 1996 empowered to undertake environmental impact assessments and to punish polluters.⁷⁷ As recently as 2013, legislation was introduced to curb trafficking of animals.⁷⁸

One could argue that Guyana, legally speaking, was fulfilling CBD treaty commitments and respecting its own laws and constitution⁷⁹ when successive governments followed through on creating Iwokrama. Globally however, the response of humanity to mass extinction—in terms of actions through laws and as far as outcomes—do not give cause for optimism.⁸⁰ The problem, as in many parts of the world, is not the lack of a law on paper or online, but rather enforcement.⁸¹

It is a matter of consensus that we are in a time of the sixth mass extinction in the history of life on Earth, as best as we can tell.⁸² Human activity is the cause of a rate of species disappearance that is 100-1,000 times normal background rate.⁸³ Frank Fenner, the scientist credited with the eradication of smallpox, among other achievements, concluded humanity itself would be extinct by 2110.⁸⁴ E.O. Wilson expressed the opinion that, of all our current blunders, not doing more to stop the current loss of lifeforms is the mistake that future generations “are least likely to forgive.”⁸⁵

⁷⁴ For a discussion of this balancing of statements that appear to be in tension with each other, see Justin K. Holcombe, *Protecting Ecosystems and Natural Resources by Revising Conceptions of Ownership, Rights, and Valuation*, 26 J. LAND RES. & ENV'T. L. 83 (2005).

⁷⁵ Edward A. Parson, Peter M. Haas, and Marc A. Levy, *A Summary of the Major Documents Signed at the Earth Summit and the Global Forum*, 34 ENV'T: SCI. POL'Y SUSTAINABLE DEV., Oct. 1992, at 12.

⁷⁶ See Alan S. Miller, *Environmental Policy in the New World Economy*, 3 WIDENER L. SYMP. J. 287, 287–91 (1998).

⁷⁷ Environmental Protection Act 1996, Act No. 11 of 1996 (Guy.), https://mlgrd.gov.gy/wp-content/uploads/2016/07/Guyana_Environmental_Protection_Act_1996.pdf.

⁷⁸ *Guyana Recommits to Biodiversity*, STABROEK NEWS (March 6, 2014), <https://www.stabroeknews.com/2014/03/06/news/guyana/guyana-recommits-biodiversity/>.

⁷⁹ The Constitution of Guyana states: “Every citizen has a duty to participate in activities designed to improve the environment and protect the health of the nation.” Constitution of the Co-operative Republic of Guyana Act, ch. 1:01, at art. 25, <http://parliament.gov.gy/constitution.pdf>. It goes on to state: “The well-being of the nation depends upon preserving clean air, fertile soils, pure water and the rich diversity of plants, animals and eco-systems.” *Id.* at art. 36.

⁸⁰ See James M. Chen, *The Fragile Menagerie: Biodiversity Loss, Climate Change, and the Law*, 93 IND. L. J. 303 (2018).

⁸¹ Bram Ebus, *Troubled Waters along the Guyana-Venezuela Border*, INT'L. CRISIS GRP. (Oct. 28, 2019), <https://www.crisisgroup.org/latin-america-caribbean/guyana/troubled-waters-along-guyana-venezuela-border>.

⁸² See ELIZABETH KOLBERT, *THE SIXTH EXTINCTION: AN UNNATURAL HISTORY* (2014).

⁸³ See Jurriaan M. De Vos, Lucas N. Joppa, John L. Gittleman, Patrick R. Stephens, and Stuart L. Pimm, *Estimating the Normal Background Rate of Species Extinction*, 29 CONSERVATION BIOLOGY 452 (2014).

⁸⁴ Lin Edwards, *Humans will be Extinct in 100 years says Eminent Scientist*, PHYS.ORG (June 23, 2010), <https://phys.org/news/2010-06-humans-extinct-years-eminent-scientist.html>.

⁸⁵ Endangered Species Act Oversight: Hearings Before the Subcomm. on Envtl. Pollution of the Comm. on Env't. and Pub. Works, 97th Cong. 366 (1981) (statement of Edward O. Wilson, Baird Professor of Science, Harvard University).

Arguably, from the deontological perspective,⁸⁶ one could easily argue there is an absolute duty to protect unique and irreplaceable lifeforms from permanent annihilation. However, encroachment of humans into wilderness areas has also been blamed as a contributing factor to the probability of zoonotic viruses making the jump from wildlife to humans, including HIV-AIDS, SARS, and the novel Coronavirus that causes COVID-19.⁸⁷ Therefore, there is an argument based on utilitarianism (creating the most benefits for the greatest number of people)⁸⁸ for protecting areas rich in biodiversity.

However, utilitarianism is the means of reasoning that has allowed generations of informed leaders to justify inaction, or even actions that exacerbate, in the context of biodiversity loss and the destruction of ecosystems: note that the first of the U.N.'s Sustainability Development Goals (SDGs) is not to stop mass extinction but rather to alleviate poverty.⁸⁹ While some may argue that human development is needed to accomplish conservation goals, the order of the SDGs reflects the perceived "development vs. conservation" trade-off that has justified the decisions that have led humanity into having the biological impact equivalent to a comet strike.

When asked whether and how international law impacted them, Iwokrama management made it clear that their commitments preceded the creation of treaty obligations:

The Iwokrama Offer was made in 1989 to the Commonwealth in the run up to Rio [so] Guyana was way ahead of the Rio Environment Conference held in 1992 where all the Conventions for Biodiversity, Climate Change and Desertification emerged. Guyana is a signatory to all three of these conventions and many other treaties. The President also committed to the Paris Agreement on Climate Change in 2015 – by committing to expanding our protected areas by 2 million hectares which will bring Guyana to Aichi Target of 17 of Guyana being Protected Areas (PAs). The Protected Areas Commission has put forward a paper on new suggested PAs.⁹⁰

For theorists, policy-makers, and those in the field, a recent significant observation is how much biodiversity protection, climate, and Indigenous rights are all interconnected.⁹¹ As of 2020, conservation activist groups have debated and decided that human well-being in biodiverse areas

⁸⁶ Deontology, a theory of moral obligation, is classically expressed in the categorical imperative—to paraphrase, once a duty is established, it should not be compromised—for an excellent primer, see Craig Turner, *Kant's Categorical Imperative and Mandatory Minimum Sentencing*, 8 WASH. UNIV. JURIS. REV. 235, 255-56 (2016), citing to IMMANUEL KANT, *GROUNDWORK OF THE METAPHYSICS OF MORALS* (18th ed. 2012).

⁸⁷ Jane Goodall, *COVID-19 is a Product of our Unhealthy Relationship with Animals and the Environment*, MONGA BAY (May 4, 2020), <https://news.mongabay.com/2020/05/jane-goodall-covid-19-is-a-product-of-our-unhealthy-relationship-with-animals-and-the-environment/>.

⁸⁸ Utilitarianism stands in contrast to duty-based deontology and is also expressed as choosing the lesser of two evils. See JEREMY BENTHAM, *An Introduction to the Principles of Morals and Legislation*, in *THE WORKS OF JEREMY BENTHAM* (John Bowring ed., 1843).

⁸⁹ U.N. SUSTAINABLE DEVELOPMENT GOALS, <https://sdgs.un.org/goals>.

⁹⁰ E-mail from Raquel Thomas, Director, Resource Management and Training at Iwokrama, to Adam J. Sulkowski, Associate Professor, Babson College (May 27, 2020, 13:26 EDT) (on file with author).

⁹¹ See Erin Daly and James R. May, *Exploring Environmental Justice Through the Lens of Human Dignity*, 25 WIDENER L. REV. 177 (2019); Elisa Morgera, *No Need to Reinvent the Wheel for a Human Rights-Based Approach to Tackling Climate Change: The Contribution of International Biodiversity Law*, in 21 IUSGENT Climate Change L. 359 (2013).

actually has to be a priority if protection of wildlife is to be achieved.⁹² This is because conservation efforts such as anti-poaching campaigns tend to work better with the cooperation of people in the area, and tend to fail without their support. Organizations dedicated to environmental conservation now invest resources into engagement with Indigenous peoples. Iwokrama is illustrative of this reality. This points to the importance for law scholars in business schools—both in teaching and in scholarship—to develop transdisciplinary understanding of reality.⁹³

It is reasonable to consider the importance of forests. Even if tropical rainforests net oxygen production may occasionally be overstated by non-specialists,⁹⁴ there is little doubt as to their key role in regulating climate as part of the hydrological cycle, as carbon sinks,⁹⁵ and the most effective focus for policy.⁹⁶ Preserving rainforest is ranked number five in a comprehensive evaluation of 75 strategies for combatting catastrophic climate change.⁹⁷

With this foundation, we can begin to consider the scale and significance of Indigenous people in managing forests. Indigenous and community-owned lands represent eighteen percent of all land area, including at least 1.2 billion acres of forest (approximately fourteen percent of global forestlands).⁹⁸ Indigenous people's land management is ranked as number 39 on the same list of strategies for achieving climate impact neutrality.⁹⁹

Given the inseparability of forests and climate, and the existential threat of climate change,¹⁰⁰ the Paris Climate Agreement¹⁰¹ is an appropriate place to start considering the legal obligation to preserve forests. Yet, as of 2020, observers note that the voluntary national pledges were based on lowest common denominator consensus, and that there is no consequence for countries violating the emissions limits that they set for themselves.¹⁰² Among all these shortcomings, the lack of enforcement mechanism often raises the classic question: because rules are sometimes not followed, and often there is no enforcement or punishment mechanism, does that mean international law is not really law?¹⁰³ One response is to inquire whether international mechanisms contributed to rules evolving from idealistic and eccentric aspirations, to articulation

⁹² The tenBoma program—providing humanitarian assistance and then cooperating with local communities to stop poaching—is one such example. *In Africa, Poachers are Killing Elephants Every Day*, INT'L. FUND FOR ANIMAL WELFARE, <https://www.ifaw.org/projects/tenboma-wildlife-security-africa> (last visited Feb. 25, 2022).

⁹³ See Bagley *et al.*, *supra* note 1 and Sulkowski *et al.* (2020), *supra* note 1, and Sulkowski *et al.* (2021), *supra* note 1.

⁹⁴ Katarina Zimmer, *Why the Amazon Doesn't Really Produce 20% of the World's Oxygen*, NAT'L GEOGRAPHIC (Aug. 28, 2019). The Earth's oceanic ecosystems account for about 50% of oxygen in the atmosphere and sequester 50% of carbon emitted by the burning of fossil fuels. *Carbon Cycle*, NASA, <https://science.nasa.gov/earth-science/oceanography/ocean-earth-system/ocean-carbon-cycle> (last visited Feb. 25, 2022).

⁹⁵ Simon Lewis, *World's Intact Tropical Forests Reached 'Peak Carbon Intake' in 1990s*, Carbon Brief (Mar. 4, 2020), <https://www.carbonbrief.org/guest-post-worlds-intact-tropical-forests-reached-peak-carbon-uptake-in-1990s>.

⁹⁶ See Geoffrey J. Aguirre, *Why Cutting Down Trees Is Part of the Problem, but Planting Trees isn't Always Part of the Solution: How Conceptualizing Forests as Sinks can Work Against Kyoto*, 11 OR. REV. INT'L L. 205 (2009).

⁹⁷ DRAWDOWN: THE MOST COMPREHENSIVE PLAN EVER PROPOSED TO REVERSE GLOBAL WARMING 114 (Paul Hawken ed., 2017).

⁹⁸ *Id.* at 124–27.

⁹⁹ *Id.* at 124.

¹⁰⁰ Martin L. Weitzman, *A Review of the Stern Review on the Economics of Climate Change*, 45 J. ECON. LITERATURE 703 (2008).

¹⁰¹ Paris Agreement to the United Nations Framework Convention on Climate Change, Dec. 12, 2015, I-54113, <https://treaties.un.org/doc/Publication/UNTS/No%20Volume/54113/Part/I-54113-0800000280458f37.pdf>

¹⁰² Sushanta Kumar Mahapatra and Keshab Chandra Ratha, *Paris Climate Accord: Miles to Go*, 29 J. INT'L DEV. 147 (2016).

¹⁰³ See, e.g., Anthony D'Amato, *Is International Law Really 'Law'?* 79 NW. U. L. REV. 1293 (1985).

of principles, to accepted standards, to actual mainstream behavior. As alluded to in notes near the start of this case, this has happened in the context of labor.¹⁰⁴ The same may be occurring in the context of climate, with hundreds of recorded attempts to use courts to alter human activity with regard to climate.¹⁰⁵ Some have argued that, in addition to lawsuits, an international court of justice advisory opinion may be impactful.¹⁰⁶ Others have framed climate change as a human rights issue.¹⁰⁷ Finally, the topic of how to equitably decarbonize is its own thread of inquiry.¹⁰⁸ Distinct from the legal frameworks and consequences related to climate change, a large and growing body of literature is emerging around the ethical aspects.¹⁰⁹

When asked if the Paris Agreement or the process leading up to it impacted Iwokrama's functioning, Iwokrama management indicated that, as was the case with Indigenous shared governance, and biodiversity, they saw their actions as aligned and consistent with developments in international law and national policy, or, if anything, slightly ahead of the relevant treaty regimes.¹¹⁰

Guyana has been an outlier in terms of not (yet) annihilating its forests.¹¹¹ Ethically speaking, from the deontological perspective,¹¹² one could argue that there is a duty to test and demonstrate to the world that shared governance with Indigenous people could preserve an irreplaceable and vanishing key determinant of global climate. Applying a utilitarian perspective,¹¹³ it can easily be argued that based on the scale of the challenges and need for mitigating catastrophic consequences—creating the most good for the most people—setting aside land for conservation, shared Indigenous governance, and research into best forestry practices is ethically sound.

From the perspective of 2022, we now know two things with greater certainty. First, the state of science has advanced, and we know, with greater certainty, that we are already past the point at which profound changes are baked into the proverbial cake, due to large and increasing emissions of greenhouse gasses altering the atmosphere.¹¹⁴

¹⁰⁴ See Harvey, *supra* note 18.

¹⁰⁵ The Grantham Research Institute on Climate Change and the Environment at the London School of Economics maintains a global database of policies and litigation. See CLIMATE CHANGE LS. OF THE WORLD, <https://climate-laws.org/> (last visited Feb. 25, 2022). Similarly, the Sabin Center for Climate Change law keeps a database of climate litigation Database, see *U.S. Climate Change Litigation*, CLIMATE CHANGE LITIG. DATABASES, <http://climatecasechart.com/us-climate-change-litigation/> (last visited Feb. 25, 2022).

¹⁰⁶ Aaron Korman & Giselle Barcia, *Rethinking Climate Change: Towards and International Court of Justice Advisory Opinion*, 37 YALE J. INT'L. L. ONLINE 35 (2012).

¹⁰⁷ See César Rodríguez-Garavito, *Human Rights: The Global South's Route to Climate Litigation*, 114 AJIL UNBOUND 40 (2020).

¹⁰⁸ See Daniel Watts, *Capping Deforestation Emissions in Developing Countries Equitably and Effectively*, 8 SEATTLE J. FOR SOC. JUST. 819 (2010).

¹⁰⁹ See, e.g., DALE E. MILLER & BEN EGGLESTON, *MORAL THEORY AND CLIMATE CHANGE: ETHICAL PERSPECTIVES ON A WARMING PLANET* (2020); TIM CADMAN, ROWENA MAGUIRE, & CHARLES SAMPFORD, *GOVERNING THE CLIMATE CHANGE REGIME: INSTITUTIONAL INTEGRITY AND INTEGRITY SYSTEMS* (2016).

¹¹⁰ E-mail from Raquel Thomas, Director, Resource Management and Training at Iwokrama, to Adam J. Sulkowski, Associate Professor, Babson College (May 27, 2020, 13:26 EDT) (on file with author).

¹¹¹ See Foglia, *supra*, note 45.

¹¹² E-mail from Raquel Thomas, Director, Resource Management and Training at Iwokrama, to Adam J. Sulkowski, Associate Professor, Babson College (May 27, 2020, 13:26 EDT) (on file with author).

¹¹³ *Id.*

¹¹⁴ See David King, *Climate Repair*, *Cambridge Climate Lecture Series* (Feb. 14, 2019), <https://climateseries.com/home-blog/37-ccls2019-livestream>.

C. Legal, Ethical, and Scientific Perspectives on Ecotourism and Reduced-Impact Logging

1. How Authentic is Shared Stewardship in Practice?

From the key facts provided at the start of this article, a reasonable outside observer may be either cautiously optimistic or skeptical about mixed use. Elinor Ostrom documented in her Nobel prize-winning work in economics that shared local governance of a commons, like a fishery or a forest, often stabilizes into sustainable use patterns.¹¹⁵ Yet any critical thinker would ask what mechanisms assure that the institution's purported values are practiced, and how much governance and benefits are authentically shared.

A veteran representative of the Indigenous communities in their work with Iwokrama through various elected roles, Michael Williams provided insights from their perspective:

the land belonged to the state with only Fair View becoming Indigenous landholders [within Iwokrama boundaries]. This land was given by the Government of Guyana but presently we are seeing less contributions from the Commonwealth ... In the event of liquidation, Iwokrama's land would revert back to the state, but Fair View would keep their land.¹¹⁶

In terms of shared governance structures, the Iwokrama board includes a local representative from the NRDDDB with full voting rights.¹¹⁷ The NRDDDB in turn has quarterly meetings in which the local village leaders—or *Toshaos*—vote on what their representative should say or do, and independent auditors on Iwokrama operations also have contact with NRDDDB leadership.¹¹⁸ As NRDDDB representative Michael Williams explained, “all twenty villages are informed of our NRDDDB statutory meetings as our meetings are live broadcasted through our radio station.”¹¹⁹ The radio station—Guyana's only community-run—was started in cooperation with Iwokrama.¹²⁰

Similar to the functioning of a board in the context of corporate law elsewhere, board members are supposed to be independent and can vote on major policy decisions.¹²¹ Williams clarified that, “however, locally, most operations at Iwokrama are decided with input through NRDDDB.”¹²²

Perhaps the best indication that the NRDDDB is not a fig leaf of legitimacy—that it does not rubber stamp everything nor is somehow compromised—is that its representative on the Iwokrama board answered questions about the topics below with candor. He shared both what has worked and what, in his opinion, has not worked well, and what can improve. For example, he shared his opinion that the greatest difficulty of being on the NRDDDB was “so far... negotiating the benefits

¹¹⁵ Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (1990).

¹¹⁶ Author's conversation with Michael Williams, NRDDDB representative, (May 21, 2020).

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ *Id.*

¹²⁰ *Id.*

¹²¹ *Id.*

¹²² *Id.*

mechanism for all operations in Iwokrama.”¹²³ The benefit sharing arrangements—including his candid opinions—are described in the following sections.

A potentially interesting question is whether the CMA – the agreement outlining the shared governance plan – is an actual contract, as they may not see adequate consideration (a bargained-for exchange of sacrifices). This is a basic requirement of contract law in common law jurisdictions. Regardless, it can be pointed out that both sides commit to mutual consultation and giving up certain rights (such as roadside trapping). Students may also ask whether the provisions of the CMA are enforceable in court. The answer from CEO Dane is instructive:

Not necessary. Our relationship is based on mutual trust and there are dispute resolution committees for Fair View and for NRDDDB which involve an independent lawyer. [But ultimately] the agreements are enforceable in courts. Moreover, all of our agreements are drafted by lawyers and explained by lawyers to the communities. The key to co-management is to work together to a common goal – the fact that a party has to go to court would be defeating the entire thrust of what we are trying to do. When Fair View was applying for titled land to the Iwokrama Forest, the Government of Guyana asked Iwokrama wanted any conditions on the title – Iwokrama requested no conditions – rather we opted to work together as partners to manage not only the titled land but the overall Iwokrama Forest.¹²⁴

This emphasis on the importance of trust in one’s counterpart and a common goal reflects the reality in many business relationships, whether it is in a country of functioning courts, or a place where conventional institutions of rule-of-law do not always function as predicted. It is potentially instructive to highlight this reality: even if one does enter into an enforceable contract, in many situations, maintaining a relationship of trust is a more efficient and desirable approach than resorting to a court’s enforcement of promises.¹²⁵ This is not to say that contracts are not important; if nothing else, the process of negotiation can help work-through contingencies and establish commitments and consequences with sufficient clarity that dispute resolution in the court system is never needed.¹²⁶

2. Ecotourism

At the outset of this discussion, it should be acknowledged that ecotourism is a controversial topic. Estimates vary, but tourism may account for eight percent of global greenhouse

¹²³ *Id.*

¹²⁴ Author’s conversation with Dane Gobin, CEO of Iwokrama, (May 29, 2020). Dane elaborated: “If the NRDDDB wants to break the relationship with Iwokrama, the court does not need to be involved, [because] the CMA and MOU have provisions for ending the relationship. The whole plan is to co-exist with our community partners without unresolvable conflict—this is not a commercial arrangement as such—if the community partners pulled out, it is unlikely that Iwokrama would survive as no conservation model would be worth developing without the full and integral participation of the Indigenous peoples.” *Id.*

¹²⁵ See Adam J. Sulkowski, *EXTREME ENTREPRENEURSHIP* (Van Rye Publishing, 2021), at 15–23 and 67–79.

¹²⁶ See Gerlinde Berger-Walliser, Robert C. Bird & Helena Haapio, *Promoting Business Success through Contract Visualization*, 17 J. L. BUS. & ETHICS 55 (2011); George J. Siedel & Helena Haapio, *Using Proactive Law for Competitive Advantage*, 47 AM. BUS. L.J. 641 (2010); Soile Pohjonen, *Proactive Contracting: In Contracts Between Businesses*, 12 IUS GENTIUM 147, 151–52 (2006).

gas emissions.¹²⁷ Yet ecotourism—traveling to enjoy nature—has been defended because of the jobs created and the gains in terms of awareness and support for conservation and environmental protection, and because harms can be mitigated or offset.¹²⁸ Put another way, ecotourism, like travel for scientific purposes or to academic conferences, is defended using the rhetoric of utilitarianism:¹²⁹ as being justified by creating net benefits.

The question of if and how tourism can be ethical and sustainable has spawned books and academic research.¹³⁰ Methods of preserving cultural heritage in the context of sustainable tourism has been studied in the Rupununi region.¹³¹ As discussed in the sections below dealing with forestry, a key question is the alternative to which we make our comparisons. Compared to a cruise to Antarctica, for example, an American taking a birdwatching trip to Guyana has a relatively smaller impact on climate, and incentivizes protection of Iwokrama.¹³² Therefore, applying a utilitarian perspective, one could easily conclude that opting for the trip to Iwokrama is more ethical.

Certainly, as a remote location attracting 1,000-1,600 tourists in a typical year, Iwokrama has never been a mass tourism destination.¹³³ The remoteness—again, either a flight or an eight-hour drive from the only major city in Guyana, Georgetown—is both part of the appeal, and one reason that prices of transportation and room and board are difficult to discount: it costs more to provide services there.¹³⁴

Given the variety of birds and other fauna, Iwokrama is a site of international pilgrimage for bird and wildlife-spotting aficionados from the world over—a place where dedicated enthusiasts rise before first light to catch glimpses of elusive species.¹³⁵ Although the main attraction for many is the wildlife, other attractions include a forest canopy walkway and a trail to Turtle Mountain lookout. There are two locations with overnight accommodations within Iwokrama: the Iwokrama River Lodge and Research Centre on the Essequibo River at the site of the main interpretive center and scientific and ranger stations, and the Atta Rainforest Lodge near the forest canopy walkway. Some visitors go on past the southern boundary of Iwokrama and stay in local Indigenous community tourism facilities, in the villages of Surama and Rewa. The cessation of tourism at Iwokrama due to COVID-19 led to a reassessment of the feasibility of attracting more domestic tourism, a topic to be explored further below.

The direct economic benefits from ecotourism in Iwokrama are distributed through a mechanism with NRDDB: any visitor staying overnight pays a 15 dollar Forest Users Fee of which

¹²⁷ Daisy Dunne, *Tourism Responsible for 8% of Global Greenhouse Gas Emissions, Study Finds*, CARBON BRIEF (May 7, 2018), <https://www.carbonbrief.org/tourism-responsible-for-8-of-global-greenhouse-gas-emissions-study-finds>. For full details of the study, see Manfred Lenzen, Ya-Yen Sun, Futu Faturay, Yuan-Peng Ting, Arne Geschke, & Arunima Malik, *The Carbon Footprint of Global Tourism*, 8 NATURE CLIM. CHANGE 522 (2018).

¹²⁸ Brian Mullis, *The Growth Paradox: Can Tourism Ever Be Sustainable?* WORLD ECON. F., (Aug. 10, 2017), <https://www.weforum.org/agenda/2017/08/the-growth-paradox-can-tourism-ever-be-sustainable/>.

¹²⁹ See discussion *supra* at note 90.

¹³⁰ See, e.g., Sheila Malone, Scott McCabe, Andrew P. Smith, *The Role of Hedonism in Ethical Tourism*, 44 ANNALS OF TOURISM RSCH. 241 (2014).

¹³¹ The study was completed by a former employee of Iwokrama. David Jared Bowers, *Developing Sustainable Tourism through Ecomuseology: A Case Study in the Rupununi Region of Guyana*, 24 J. OF SUS. TOURISM 758 (2016), <https://theses.ncl.ac.uk/jspui/bitstream/10443/2413/1/Bowers%2C%20J%20%2014.pdf>.

¹³² See Eke Eijgelaar, Carla Thaper, & Paul Peeters, *Antarctic Cruise Tourism: The Paradoxes of Ambassadorship, "Last Chance Tourism" and Greenhouse Gas Emissions*, 18 J. OF SUS. TOURISM 337, 347 (2010).

¹³³ Author's conversation with Dane Gobin, CEO of Iwokrama, (May 29, 2020).

¹³⁴ *Id.*

¹³⁵ Author's observations, (January 12–14, 2020).

one third is intended to be used by the twenty villages, as determined by the NRDDDB, on any development of the NRDDDB's choice.¹³⁶ For now, according to Michael Williams, "we have only sponsored students going to University of Guyana, for health initiatives, and to offset costs of our statutory meetings. Separately, Fair View gets a share of proceeds for spending as their leadership decides."¹³⁷

One of the hoped-for benefits of ecotourism is the development of human capital. Meeting the needs of overnight guests for room, board, orientation, and guiding creates jobs. In the process, some individuals find a vocation or develop the capacities to choose next steps like starting their own ecotourism businesses. This impact on capacity building and human capital will be discussed below.

3. Scientific Use and Funding

One of the unambiguous successes of Iwokrama has been as a venue for science. As Thomas Wagner explains, there is an ever-decreasing availability of intact tracts of rainforest for baseline studies. Key recent discoveries related to Iwokrama have included previously unknown aspects of chemistry related to the carbon cycle in the headwater streams of tropical forests¹³⁸ and the identification of the critical role of the Guiana Shield Forest as an overlooked guardian of South American precipitation and climate.¹³⁹ Also, several new species have been discovered in the region.¹⁴⁰

A universal ethical issue related to science is how to pay for it. Very recently, the most prestigious research institutions in the world have had to grapple with the scandals related to sources of funding.¹⁴¹ Given the meticulously documented role of ExxonMobil in both funding science, and yet sowing doubt with regard to climate change, some may question accepting money from an oil giant. A perfect question for an ethical debate, whether in the classroom or among ethicists, is whether, and under what conditions, one would take a check from ExxonMobil to pay for research. For those that think it is any purer to take money from Norway, one could ask whether it makes a difference that the money received from Norway for rainforest conservation is from their sovereign wealth fund, which is also oil money.¹⁴²

It bears emphasizing that a large number of our most storied academic institutions have unsavory funding sources in their past.¹⁴³ We could go on pointing to prestigious or even holy institutions that may have acquired assets in a less-than-holy way. The point is to provide fodder for conversation: from whom, and under what circumstances or limitations, would we accept

¹³⁶ Author's conversation with Michael Williams, NRDDDB representative, (May 21, 2020).

¹³⁷ *Id.*

¹³⁸ Ryan C. Pereira, Isabella Bovolo, Nathan Forsythe, Nikolai Pedentchouk, Geoff Parkina & Thomas Wagner, *Seasonal patterns of rainfall and river isotopic chemistry in northern Amazonia (Guyana): From the headwater to the regional scale*, 52 J. S. AM. EARTH SCIENCES 108, 108–18 (July 2014).

¹³⁹ See Bovolo, *supra* note 9.

¹⁴⁰ See, e.g., Burton K. Lim and Valéria da C. Tavares, *Review of Species Richness and Biogeography of Bat (Chiroptera) From the Guiana Subregion of South American with Comments on Conservation*, 18 ECOTROPICA 105, 105-18 (2012).

¹⁴¹ Susan Svrluga, *Epstein's Donations to Universities Reveal a Painful Truth About Philanthropy*, WASH. POST (Sept. 8, 2019), https://www.washingtonpost.com/local/education/epsteins-donations-to-universities-reveal-a-painful-truth-about-philanthropy/2019/09/04/e600adae-c86d-11e9-a4f3-c081a126de70_story.html.

¹⁴² See Foglia, *supra*, note 45.

¹⁴³ Alex Carp, *Slavery and the American University*, N.Y. REV. BOOKS (Feb. 7, 2018), <https://www.nybooks.com/daily/2018/02/07/slavery-and-the-american-university/>.

sponsorship? According to at least one article discussing ethics in science in the context of climate change, funding sources are not a key factor, but rather: (1) the choice of research problem, (2) selection of data, (3) likelihood and reliability of a hypothesis or theory explaining a phenomenon, and (4) the application of the results of the research either to research or social problems.¹⁴⁴

Ultimately, some may agree that, as one research scientist put, “yes, some schools now have a policy of not even speaking with the oil giants. But as long as they don’t influence the outcome (and this can be controlled through clear agreements), I am okay with them paying for research. We need these partnerships to keep the science going.”¹⁴⁵ As another observer commented, “as long as they have no editorial control, don’t muzzle the science, and the funding source is disclosed, then I’d take it.”¹⁴⁶ Others raise the concern that large donations to universities can influence research agendas.¹⁴⁷ A repeated focus of concern is the perceived ability of oil companies to engage in reputation cleansing by associating with global brands with high name recognition.¹⁴⁸

4. Reduced Impact Logging – Pros, Cons, and are Benefits Shared?

As the Amazon rainforest has been cleared, evidence has emerged of a greater pre-Colombian human presence there than previously imagined.¹⁴⁹ For example, since 2000, there is a growing collection of data on altered soil conditions indicating large scale farming in the Amazon.¹⁵⁰ Generally, Indigenous peoples have used or cut down trees in the Amazon biome more than commonly imagined.¹⁵¹ As Raquel Thomas explains: “there is no such thing as *pristine* rainforest—the local Indigenous people have been here using it for thousands of years—but rather, here it’s still *intact*—rather than destroyed.”¹⁵²

Of greater immediate urgency, as of 2009, tropical forests were selectively logged at twenty times the rate that they were cleared, and this selective harvesting has impacted one fifth of tropical rainforests.¹⁵³ Therefore, knowledge about how to adjust forestry continues to be valuable, so that

¹⁴⁴ Nancy Tuana, *Ethics and What Is not Seen: The Effects of Remote Consequences on Ethical Analysis*, 15 GEO. J. L. & PUB. POL'Y 979, 981 (2017).

¹⁴⁵ Author’s conversation with a source who prefers to remain anonymous, (May 26, 2020).

¹⁴⁶ Author’s conversation with a source who prefers to remain anonymous, (May 30, 2020).

¹⁴⁷ Maeve McClenaghan, *Investigation: Top universities take £134m from fossil fuel giants despite divestment drive*, UNEARTHED (Oct. 22, 2015), <https://unearthed.greenpeace.org/2015/10/23/data-top-universities-take-134m-from-fossil-fuel-giants-despite-divestment-drive/>.

¹⁴⁸ Mel Evans, *Painting with Oil*, 63 DISSENT 11, <https://muse.jhu.edu/article/616476>.

¹⁴⁹ Simon Romero, *Once Hidden by Forest, Carvings in Land Attest to Amazon’s Lost World*, N.Y. TIMES (Jan. 14, 2012),

https://www.nytimes.com/2012/01/15/world/americas/land-carvings-attest-to-amazons-lost-world.html?_r=1.

¹⁵⁰ The influence of human alteration has been generally underestimated, reports Darna L. Dufour: “Much of what has been considered natural forest in Amazonia is probably the result of hundreds of years of human use and management.” *Use of Tropical Rainforests by Native Amazonians*, 40 BIOSCIENCE 652, 658 (1990). For an example of how such peoples integrated planting into their nomadic lifestyles, see Rival, Laura, *The Growth of Family Trees: Understanding Huaorani Perceptions of the Forest*, 28 LAN 635 (1993).

¹⁵¹ Michael J. Heckenberger, Afukaka Kuikuro, Urissapá Tabata Kuikuro, J. Christian Russell, Morgan Schmidt, Carlos Fausto & Bruna Franchetto, *Amazonia 1492: Pristine Forest or Cultural Parkland?* 301 SCIENCE 1710, 1710-14 (2003).

¹⁵² Author’s conversation with Raquel Thomas, Director, Resource Management and Training at Iwokrama, (Jan. 12, 2020).

¹⁵³ Gregory P. Asner, Thomas K. Rudel, T. Mitchell Aide, Ruth Defries, & Ruth Emerson, *A Contemporary Assessment of Change in Humid Tropical Forests*, 23 CONSERVATION BIOLOGY. 1386, 1386-95 (2009).

ecosystems can remain functional.¹⁵⁴ Further, Community Forestry Management—the involvement of the 400-500 million forest-dwellers in management of their local resources—has been suggested since at least the 1980s as an equitable and effective way to stem the global pandemic of deforestation.¹⁵⁵

These facts help understand Iwokrama's answer to a key question posed by a Guyanese journalist at Iwokrama's Georgetown office: "Why log at Iwokrama? There's the rest of the country where we can log."¹⁵⁶ Raquel Thomas, a forest ecologist by training, answered: "because part of our mission from conception was to be a test site and support the science to see if reduced impact logging works."¹⁵⁷ The other explanation is from CEO Dane Gobin: "we want to show that preserving a rain forest can be financially self-sustaining."¹⁵⁸ He added: "before us, no one tried FSC-certified logging in Guyana. Now, two others do it, and more are applying. We showed it was possible."¹⁵⁹

According to independent forest ecology experts, it is important to appreciate how many years of effort went into studying the territory before developing a forestry plan. According to Thomas Wagner of Heriot Watt University:

They completed a truly herculean task—fully surveying a dense and hardly accessible forest—virtually every single tree was inventoried and meticulously transferred into digital forest maps—the basis to develop tailored and sustainable logging plans—credit should go to Forest Manager Ken Rodney and his forestry team, providing indispensable local knowledge and hands-on help from Indigenous communities.¹⁶⁰

According to the most recently publicly available forestry plan, the area to be logged was reduced from 50 percent of territory to 30 percent of Iwokrama, at a rate of less than 0.5 percent of the Iwokrama Forest per year, "under a very selective harvesting system so only a few stems per [hectare] will be removed and no large gaps are created in the forest canopy,"¹⁶¹ among other best practices like controlling in what direction a tree is felled.¹⁶²

A study of over a thousand reputable datasets collected from published studies concluded that, in various tropical rainforests under various conditions, RIL appears to be significantly less

¹⁵⁴ Zuzana Burivalova, Fangyuan Hua, Lian Pin Koh, Claude Garcia & Francis Putz, *A Critical Comparison of Conventional, Certified, and Community Management of Tropical Forests for Timber in Terms of Environmental, Economic, and Social Variables*, CONSERVATION LETTERS, A J. SOC'Y FOR CONSERVATION BIOLOGY., (March 11, 2016) <https://doi.org/10.1111/conl.12244>.

¹⁵⁵ Susan Charnley & Melissa R. Poe, *Community Forestry in Theory and Practice: Where Are We Now?* 36 ANN. REV. ANTHROPOLOGY, 301, 306 (2007), <https://www.annualreviews.org/doi/full/10.1146/annurev.anthro.35.081705.123143>.

¹⁵⁶ Author's conversation with journalist Mikhail Rodrigues and Raquel Thomas, Director, Resource Management and Training at Iwokrama, (January 15, 2020).

¹⁵⁷ *Id.*

¹⁵⁸ Author's conversation with Dane Gobin, CEO of Iwokrama, (May 29, 2020).

¹⁵⁹ *Id.*

¹⁶⁰ E-mail from Thomas Wagner, Professor in Earth System Science, Heriot-Watt University, to Adam J. Sulkowski, Associate Professor, Babson College (May 26, 2020, 16:49 EDT) (on file with author).

¹⁶¹ IWOKRAMA, PUBLIC SUMMARY: FOREST MANAGEMENT AND MONITORING, (Aug 2017), at 13, <https://iwokrama.org/wp-content/uploads/2017/08/Iwokrama-Public-Summary-August-2017.pdf>.

¹⁶² *Id.*

harmful to ecosystems than clearcutting.¹⁶³ Anecdotally, according to Raquel Thomas, more animals have been counted in Iwokrama (using camera traps) after selective logging has taken place.¹⁶⁴ In response to that assertion, Michael Williams replied: “My thoughts are that, when there is more monitoring and when there are more researchers, then, as such, you can find more species.”¹⁶⁵

Regardless of whether we accept the findings that RIL is comparatively benign, two other issues remain: (1) the merits of offsetting emissions in one part of the world with credits for preserving forests elsewhere, and (2) whether FSC certification is guaranteed to deliver the benefits that it is intended to have. Both practices have their advocates and detractors.

At the very least, there are difficulties in verification in remote locations, among other reasons for doubt.¹⁶⁶ Plus, some question whether tree planting and conservation of trees should be significantly relied upon in efforts to curb climate change.

Further, the FSC system has been criticized because of incidences of outright fraud.¹⁶⁷ There is a website dedicated to documenting misdeeds involving certified operations¹⁶⁸ with subpages dedicated to countries, including Guyana.¹⁶⁹ Iwokrama does not appear among the stories there. The fact that a large logging operation, endorsed by the WWF, was decertified elsewhere in Guyana¹⁷⁰ can be interpreted a few ways. On the one hand, two reputable brands (FSC and WWF) were associated with a problematic operation—so arguably, this might give rise to skepticism in the credibility of both brands and certification. On the other hand, it shows that abuses are, at least sometimes, caught and exposed. Were it not for a certification standard, there would be no scandal.

In the case of Iwokrama, it is partly the anticipation of FSC auditors’ questions that gave rise to the decision to purchase two drones to monitor for attempts at illegal mining.¹⁷¹ In this regard, FSC certification arguably was having its desired effect of encouraging greater stewardship.¹⁷²

¹⁶³ Jake E. Bicknell, Matthew J. Struebig, David P. Edwards, & Zoe G. Davies, *Improved Timber Harvest Techniques Maintain Biodiversity in Tropical Forests*, 24 *CURRENT BIOLOGY* 1119, 1119-20 (2014). Although it is only one example rather than a data set of over a thousand, the Menominee tribe in what is now Wisconsin proved the durability of sustainable forestry managed by an Indigenous community: between 1854 until 1961 (when Congress terminated their tribal status), the Menominee were one of the more economically stable tribes due to harvesting 2.5 billion board feet of lumber (the equivalent of clearcutting their forest twice), even as standing timber increased for over 140 years. Nancy Tuana, *Ethics and What Is not Seen: The Effects of Remote Consequences on Ethical Analysis*, 15 *GEO. J. L. & PUB. POL'Y* 979, 981 (2017).

¹⁶⁴ Author’s conversation with Raquel Thomas, Director, Resource Management and Training at Iwokrama, (Jan. 12, 2020).

¹⁶⁵ Author’s conversation with Michael Williams, NRDDDB representative, (May 21, 2020).

¹⁶⁶ *REDD: An Introduction*, REDD-MONITOR, <https://redd-monitor.org/redd-an-introduction/>.

¹⁶⁷ Richard Conniff, *Greenwashed Timber: How Sustainable Forest Certification Has Failed*, *YALE ENVT.* 360 (Feb. 20, 2018), <https://e360.yale.edu/features/greenwashed-timber-how-sustainable-forest-certification-has-failed>.

¹⁶⁸ *About*, FSC-WATCH, <https://fsc-watch.com/about/>.

¹⁶⁹ *Guyana*, FSC-WATCH, <https://fsc-watch.com/category/guyana/>.

¹⁷⁰ *FSC audit of SGS leads to suspension of largest tropical logging certificate FSC-Watch*, FSC-WATCH (Jan. 18, 2007), http://www.fsc-watch.org/archives/2007/01/18/FSC_audit_of_SGS_leads_to_suspension_of_largest_tropical_logging_certificate.

¹⁷¹ Author’s conversation with Dane Gobin, CEO of Iwokrama, (May 29, 2020); *see infra*, Section C.1.i. at note 223.

¹⁷² *Id.*

To some extent, improvements in technology continue to advance our ability to track certifications in supply chains,¹⁷³ but there are still instances where what is promised in theory does not comport with reality. Fraud is, of course, a basic concept covered in most business law courses and textbooks.¹⁷⁴ An astute reader of this case would spot potential allegations of fraud as an issue about which Iwokrama's management and stakeholders should be vigilant. Indeed, some students may search online and find that Ian Swingland, a prominent conservationist appointed head of the Iwokrama board in 2002, was convicted in the UK for his role in an attempted fraud.¹⁷⁵ The scheme was not related to Iwokrama—rather, with two other men, he had attempted to help wealthy investors avoid 60 million pounds in taxes between 2005-2008 through fraudulent records related to carbon credits and investment losses.¹⁷⁶ Still, this illustrates risks inherent to selling offsets: it can be hard to prove a fraud, and easy to raise suspicions and accusations of fraud. Indeed, the risk of accusations of fraud are the reason that Dane Gobin says he does not favor transacting in mandated or formalized carbon offset schemes *per se*, but rather voluntary offset donations to Iwokrama's general fund.¹⁷⁷

This shines a light on two phenomena: (1) required and (2) voluntary disclosures. Under United States law, non-profits and publicly traded companies are required to make audited financial disclosures. In the case of non-profits, it is partly to ameliorate doubts as to whether funds are not being misappropriated.¹⁷⁸ Disclosure does not guarantee prudent use of funds, but “sunlight is said to be the best disinfectant”¹⁷⁹ is the most succinct explanation for the legal framework supporting institutional transparency.¹⁸⁰ Even when companies are not unambiguously required to disclose certain information, as is the case with sustainability-related data, thousands of companies do.¹⁸¹ The Global Reporting Initiative (GRI) is one commonly adopted standard.¹⁸² Resource extraction companies, including mining, oil, and gas companies, were actually the early adopters.

¹⁷³ See Joan MacLeod Heminway and Adam J. Sulkowski, *Blockchains, Corporate Governance, and the Lawyer's Role*, 65 WAYNE L. REV. 17, 49 (2019); Adam Sulkowski, *Blockchain, Business Supply Chains, Sustainability, and Law: The Future of Governance, Legal Frameworks, and Lawyers*, 43 DEL. J. CORP. L. 303 (2018).

¹⁷⁴ See, e.g., NANCY KUBASEK, M. NEIL BROWNE, DANIEL HERRON, LUCIEN DHOOGHE, & LINDA BARKACS, *DYNAMIC BUSINESS LAW* (5th ed. 2020).

¹⁷⁵ Pat Sweet, *Two jailed for £60m fraudulent HIV cure tax fraud*, ACCOUNTANCY DAILY (Feb. 26, 2019), <https://www.accountancydaily.co/two-jailed-ps60m-fraudulent-hiv-cure-tax-fraud>.

¹⁷⁶ *Former Iwokrama Chairman facing tax evasion charges in UK*, STABROEK NEWS (Sept. 21, 2016), <https://www.stabroeknews.com/2016/09/21/news/guyana/former-iwokrama-chairman-facing-tax-evasion-charges-uk/>. Another chair of the Iwokrama board, Rajendra Pachauri, who shared a Nobel Prize for his work in the Intergovernmental Panel on Climate Change (IPCC), was accused of harassment. *Iwokrama Chairman resigns amidst sex scandal*, KAIETEUR NEWS ONLINE (Feb. 25, 2015), <https://www.kaieteurnews.com/2015/02/25/iwokrama-chairman-resigns-amidst-sex-scandal/>.

¹⁷⁷ Author's conversation with Dane Gobin, CEO of Iwokrama, (May 29, 2020).

¹⁷⁸ Lawrence J. Trautman & Janet Ford, *Non-Profit Governance: The Basics*, 52 AKRON L. REV. 971, 981 (2018).

¹⁷⁹ Louis D. Brandeis, *What Publicity Can Do*, HARPER'S WKLY. Dec. 20, 1913 at 10, https://www.sechistorical.org/collection/papers/1910/1913_12_20_What_Publicity_Ca.pdf; see also Louis D. Brandeis, *OTHER PEOPLE'S MONEY AND HOW THE BANKERS USE IT* 92 (1914).

¹⁸⁰ Conversely, there is concern that some authoritarian governments use reporting requirements against civil society organizations to intimidate, harass, and suppress. See Dragan Golubović, *International Standards Relating to Reporting and Disclosure Requirements for Non-Governmental Organizations*, Expert Council on NGO Law of the Conference of INGOs of the Council of Europe, CONF/EXP (2018) 3, November 27, 2018, <https://rm.coe.int/expert-council-conf-exp-2018-3-review-ngo-reporting-requirements/16808f2237>.

¹⁸¹ José Luis Blasco & Adrian King, *The KPMG Survey of Corporate Social Responsibility Reporting* (2017), <https://home.kpmg/xx/en/home/insights/2017/10/the-kpmg-survey-of-corporate-responsibility-reporting-2017.html>.

¹⁸² See GLOBAL REPORTING INITIATIVE, <https://www.globalreporting.org/>.

The reason for greater-than-required transparency was to win the trust of investors and to proactively address the concerns of potential detractors.¹⁸³ In Iwokrama's case, they could not apply for international grants without submitting audited financial statements.¹⁸⁴

With all of this as background, in the case of Iwokrama, there is disagreement between credible sources as to whether the scale of timber harvesting was widely and fully understood by the Indigenous representatives at the inception of the project, and how much, in terms of benefits, there is to share.¹⁸⁵ When asked whether the local Indigenous communities could stop the logging if they so desired, Michael Williams said yes "if the 8,000 inhabitants of the 20 villages voted against logging operations at their NRDDDB statutory meeting, then, per the MOU and CMA, the logging could be halted."¹⁸⁶

There is a mechanism for sharing benefits from logging that is similar to that of distributing revenue from ecotourism, but it has not functioned in practice as expected—as Michael Williams explained:

I was one of the local directors for the logging component. However, things did not go well as planned. Iwokrama's first logging partner started in 2007 and everything began well. But ... there were management issues because of shareholders pulling out and new persons coming in and in 2011 the operations closed. In 2014 Iwokrama made an agreement with another company ... This company worked until 2019 last year and then [they] pulled out, as their finance supporter ... pulled out from them. During these years ... Iwokrama supported some of [the] NRDDDB statutory meetings but the only village that benefited all along since the logging started in 2007 was Fair View, since the village was in the Iwokrama concession and there was a special arrangement with the village. Now, in 2020, Iwokrama signed with another partner, Evergreen, and they are about to commence operations. We are still to meet to discuss benefit sharing mechanism with them. We have seen no proceeds from the logging. There's been no board meeting in three years.¹⁸⁷

He added:

We also think that there should be less burning of unusable scraps of wood. There is a mechanism for locals to have second grade and low-grade materials, but this has not worked well because of criteria set to access it, and with transportation being the main issue.¹⁸⁸ I'm not sure there is clear consensus on logging.¹⁸⁹

¹⁸³ See Christopher J. Hughey & Adam J. Sulkowski, *More Disclosure = Better CSR Reputation? An Examination of CSR Reputation Leaders and Laggards in the Global Oil & Gas Industry*, 12 J. Acad. Bus. & Econ. 2, 24–34 (2012).

¹⁸⁴ Author's conversation with Dane Gobin, CEO of Iwokrama, (May 29, 2020).

¹⁸⁵ Author's conversation with Ron Allicock, (January 14, 2020); Author's conversation with Michael Williams, NRDDDB representative, (May 21, 2020).

¹⁸⁶ *Id.*

¹⁸⁷ Author's conversation with Michael Williams, NRDDDB representative, (May 22, 2020).

¹⁸⁸ Author's conversation with Michael Williams, NRDDDB representative, (May 21, 2020).

¹⁸⁹ *Id.*

Iwokrama's management agrees there has not been a board meeting in three years, and say it is due to the President of Guyana and Commonwealth Secretary General not agreeing upon a chairperson for the board.¹⁹⁰ In fact, only four of the sixteen board positions are now filled. The CEO, Dane Gobin, says that it is not known why the President of Guyana and the Secretary General of the Commonwealth have not filled the remaining board vacancies.¹⁹¹

5. Are Benefits Accruing to Indigenous People?

Working at Iwokrama has offered life-altering training and experiences for employees as well as guests. As Head Ranger Micah Davis described: "I used to hunt, but then I saw a mother monkey taking care of a baby here, and now I cannot kill them."¹⁹² Famously, authorities on motivation note the human need to feel a sense of mission or purpose once basic needs are met.¹⁹³ Iwokrama has played a role in this way. If one spends time with the employees and gets to know their ambitions, it is clear that some hope to start their own eco-tourism businesses, similar to existing Indigenous-owned hospitality establishments.¹⁹⁴ Another alternative path is illustrated by Ron Allicock, an Indigenous local who was trained and worked as a ranger at Iwokrama.¹⁹⁵ He now owns his own business guiding international birdwatching groups while not bashful about sharing his opinions. He is very much against logging in Iwokrama, and he is also unabashed in his description of Iwokrama as a truly special place for appreciating wildlife.¹⁹⁶

Michael Williams confirms that employees are "mostly locals: cooks, maids, finance, tour guides, rangers, checkpoint guards, and so on."¹⁹⁷ Williams made it clear he would like to see more opportunities for members of his community to develop, saying "I don't want to see them die as rangers; I want to see more of them get doctorates."¹⁹⁸ On the question of whether Indigenous peoples had opportunities for development and advancement, Raquel Thomas added: "We have Indigenous staff in higher positions, including Assistant Forest Manager Michael Demendonca, Assistant Operations Manager Bradford Allicock, and Tourism Manager Michael Patterson and Community Relations Manager Grace Roberts—the latter two are from Arawak communities closer to the coast. Grace Roberts earned a Masters in Heritage Education through an Iworkama-Newcastle University collaboration."¹⁹⁹

¹⁹⁰ Author's conversation with Dane Gobin, CEO of Iwokrama, (May 29, 2020).

¹⁹¹ *Id.*

¹⁹² Author's conversation with Micah Davis, Iwokrama Head Ranger, (January 13, 2020).

¹⁹³ See, e.g., Abraham H. Maslow, *A Theory of Human Motivation*, 50 PSYCH. REV. 4, 370-96 (1943).

¹⁹⁴ Author's conversation with Micah Davis, Iwokrama Head Ranger, (January 13, 2020).

¹⁹⁵ Ron Allicock's grandfather, Fred Allicock, built the field station and was the first Field Station Manager. Ron's father, Sydney Allicock, is Vice President and Minister of Indigenous Affairs of Guyana and an Iwokrama board member.

¹⁹⁶ Author's conversation with Ron Allicock, (January 14, 2020).

¹⁹⁷ Author's conversation with Michael Williams, NRDDDB representative, (May 21, 2020).

¹⁹⁸ *Id.* This is a generalizable observation to other contexts and places: human capital development is an uneven process, with many countries across the spectrum of development experiencing a growing gap in income, educational achievement, and class mobility. See Marianne Cooper & Allison J. Pugh, *Families Across the Income Spectrum: A Decade in Review*, 82 J. MARRIAGE & FAM. 272 (2020).

¹⁹⁹ E-mail from Raquel Thomas, Director, Resource Management and Training at Iwokrama, to Adam J. Sulkowski, Associate Professor, Babson College (May 27, 2020, 13:26 EDT) (on file with author).

Another hoped-for benefit of ecotourism that is related to human capital development is preservation of culture.²⁰⁰ The Bina Hill Institute, located near the community radio station, is one example of Iwokrama contributing to both education and preservation of Indigenous culture.²⁰¹ Other examples include providing support for those documenting Indigenous knowledge.²⁰² Ethically speaking, the support of Iwokrama in preserving and passing-down and sharing culture may be one of its significant roles, in that it is impossible to calculate—in monetary terms—the value of traditional knowledge, ways of life, and ways of seeing the world and what is meaningful.²⁰³ Shara Seelall, from the Essequibo Coast, has documented the need for both traditional knowledge and science as indispensable to effective conservation management at Iwokrama.²⁰⁴ Overall, it is important to note that Michael Williams—despite his candor about what could be better—is supportive of Iwokrama: “We would like Iwokrama to continue existing as in the past there were a lot of training opportunities for our people.”²⁰⁵

IV. The Pandemic

This section deals with Iwokrama’s challenges as of 2020-22, a watershed period for many people and institutions, including Iwokrama. The year 2021 marked the 25th anniversary of the passage of the Iwokrama Law. But before 2020 was even halfway over, much of the world’s institutions paused or modified normal operations due to the COVID-19 pandemic. It was an unplanned and undesired massive experiment that allowed us to observe the consequences of a stop or break in the status quo.

A. Issues Related to the Impact of the COVID-19 Pandemic

The global economic shutdown due to the COVID-19 pandemic had a significant impact on Iwokrama.²⁰⁶ The COVID-19 pandemic largely shutdown tourism globally.²⁰⁷ One principle this revealed is the danger of overspecialization. Although Iwokrama might have appeared to have diversified sources of revenue, including donations, tourism, timber sales, government support, and training, three of these sources were impacted. Logging paused, tourism ceased, and donors—if they felt able to give—were redirecting philanthropic donations to causes related to health.²⁰⁸

²⁰⁰ Soojung Kim, Michelle Whitford, & Charles Arcodia, *Development of Intangible Cultural Heritage as a Sustainable Tourism Resource: the Intangible Cultural Heritage Practitioners’ Perspectives*, 14 J. HERITAGE TOURISM 422 (2019).

²⁰¹ *Bina Hill Institute Youth Education Centre-Mission Statement*, NORTH RUPUNUNI DISTRICT DEVELOPMENT BOARD <https://nrddb.org/index.php?q=bhiylc>.

²⁰² Jayalaxshmi Mistry, Deirdre Jafferally, Lisa Ingwall-King, & Sean Mendonca, *Indigenous Knowledge*, in 7 INTERNATIONAL ENCYCLOPEDIA OF HUMAN GEOGRAPHY, 2ND ED. 211 (Kobayashi, A., ed., 2020).

²⁰³ Nancy Tuana, *Ethics and What Is Not Seen: The Effects of Remote Consequences on Ethical Analysis*, 15 GEO. J. L. & PUB. POL'Y 979, 988-89 (2017).

²⁰⁴ Shara Sellall, *Examining the Integration of Traditional Knowledge and Science in Conservation Management* (2019).

²⁰⁵ Author’s conversation with Michael Williams, NRDDDB representative, (May 21, 2020).

²⁰⁶ Author’s conversation with Dane Gobin, CEO of Iwokrama, (May 29, 2020).

²⁰⁷ Hanna Ziady, *2020 Is a Catastrophe for Tourism Businesses. Here's What the Industry Needs to Get Back on Its Feet*, CNN (May 13, 2020), <https://www.cnn.com/2020/05/13/business/travel-and-tourism-recovery-coronavirus/index.html>.

²⁰⁸ Author’s conversation with Dane Gobin, CEO of Iwokrama, (May 29, 2020).

The drop in demand for oil caused a collapse of oil prices,²⁰⁹ meaning that even government revenue from offshore oil drilling was threatened, and therefore the government may not be as able to serve as a backstop.²¹⁰ At the time of writing, the full impact of pandemic-related disruptions are still impossible to estimate in Guyana and in other parts of the world.

The impact in the North Rupununi was not as devastating as in Indigenous communities elsewhere in South America: “We’re okay, thanks. We’ve gone back to farming, fishing, some hunting,” Michael Williams said—however, he quickly added: “the skid trails from the logging—they’ve made it easier, though, to get into the forest and to do hunting illegally. We need more guards.”²¹¹

Although the pandemic was initially hyped as a respite from greenhouse gas emissions,²¹² and a break for nature that was not entirely the case. Several factors contributed to the pandemic of human health magnifying the pandemic of ecosystem destruction: a combination of distracted governments, opportunistic criminals, and unemployed people needing to meet basic needs led to higher rates of illegal mining, logging, and poaching.²¹³ Iwokrama was not immune from this threat.²¹⁴ As Dane Gobin explained:

If someone finds out that gold is \$1800 per ounce, and they don’t have other work, they’re going to look for gold. In Iwokrama, there must have been between 30-40 smalltime individuals and 3-4 bigger operations with more damaging equipment and pumps [looking for gold].²¹⁵

At the time of writing this, Raquel Thomas and Iwokrama rangers were at times pursuing criminal miners in Iwokrama with Guyanese police and individuals from the Ministry of Natural Resources.²¹⁶ A press release from the Ministry of Natural Resources confirmed their patrols in the Iwokrama area,²¹⁷ and news reports publicized rewards for information, and that there would be enhanced monitoring by drone and camera traps.²¹⁸ When asked if the FSC standard reinforced the need to invest in monitoring, for fear of losing certification, Dane confirmed: “We know we’ll

²⁰⁹ *US Oil Prices Turn Negative as Demand Dries Up*, BBC NEWS (Apr. 21, 2020),

[https://www.bbc.com/news/business-](https://www.bbc.com/news/business-52350082#:~:text=The%20price%20of%20US%20oil,world%20have%20kept%20people%20inside.)

[52350082#:~:text=The%20price%20of%20US%20oil,world%20have%20kept%20people%20inside.](https://www.bbc.com/news/business-52350082#:~:text=The%20price%20of%20US%20oil,world%20have%20kept%20people%20inside.)

²¹⁰ Author’s conversation with Dane Gobin, CEO of Iwokrama, (May 29, 2020).

²¹¹ Author’s conversation with Michael Williams, NRDDB representative, (May 16, 2020).

²¹² Le Quéré, C., et al. *Temporary reduction in daily global CO₂ emissions during the COVID-19 forced confinement*, NATURE CLIM. CHANG. (May 19, 2020), <https://doi.org/10.1038/s41558-020-0797-x>.

²¹³ Kimberly May, *The Hidden Toll of Lockdown on Rainforest*, BBC NEWS (May 18, 2020),

<https://www.bbc.com/future/article/20200518-why-lockdown-is-harming-the-amazon-rainforest>.

²¹⁴ *Illegal mining, logging continuing cause for concern in Iwokrama forest*, STARBOEK NEWS (May 14, 2020), <https://www.stabroeknews.com/2020/05/14/news/guyana/illegal-mining-logging-continuing-cause-for-concern-in-iwokrama-forest/>.

²¹⁵ Author’s conversation with Dane Gobin, CEO of Iwokrama, (May 29, 2020).

²¹⁶ Author’s conversation with Raquel Thomas, Director, Resource Management and Training at Iwokrama, (May 27, 2020).

²¹⁷ Press Release: *Ministry of Natural Resources Wardens Corp Leads Monitoring and Enforcement Exercise to Combat Illegal Mining in Iwokrama Protected Area—Operation “FOREST SHIELD” a Success*, MINISTRY OF NAT. RESOURCES CO-OPERATIVE REP. OF GUYANA (May 13, 2020), <https://nre.gov.gy/2020/05/13/press-release-ministry-of-natural-resources-wardens-corp-leads-monitoring-and-enforcement-exercise-to-combat-illegal-mining-in-iwokrama-protected-area-operation-forest-shield-a-s/>.

²¹⁸ Denis Chabrol, *Iwokrama to Use High-Tech Drones to Spot Illegal Miners*, DEMERARA WAVES (MAY 13, 2020), <https://demerarawaves.com/2020/05/13/iwokrama-to-use-high-tech-drones-to-spot-illegal-miners/>.

be asked questions at FSC certification time, so, even though there's no money coming in, we had to buy camera traps and two drones to show that we're monitoring and trying to stop them.”²¹⁹

This may prompt a reconsideration by some readers of some opinions they may have held. Namely, if increased illegal poaching, logging, and mining is what occurs in the absence of an institution like Iwokrama, as is the case elsewhere in South America,²²⁰ then might it be better to have the presence of tourists, scientists, and foresters in and around Iwokrama?

B. Plans to Break-Even

When asked for his plan for breaking-even in 2020, Dane Gobin answered: “I need 1.2 million dollars per year to make Iwokrama run . . . 30 percent will be from donors, 30 percent from business activity, like timber sales, and 30 percent from corporate social giving . . . the remaining 10 percent from the government or the Commonwealth.”²²¹ When asked for new initiatives to make-up for a lack of international tourism and charitable giving, he offered two ideas:

I want to go to our Guyanese businesses and offer them to adopt an acre for 25 dollar per year for local schools, an informal offset for their carbon emissions, and a way for kids in the schools to connect with their piece of forest The other idea is with our new logging partner, Evergreen Timber, a U.S. company: they suggested we co-brand and tell our story, on every item of wood that they sell . . . the Brooklyn Bridge has a greenheart wood surface on its walkway . . . we need to tell our story in places like that.²²²

One of the remaining four board members, Minister of Indigenous Peoples' Affairs Sydney Allcock, offered his opinions on Iwokrama at the crossroads of 2020 when asked how Iwokrama can survive. His list of ideas included “a complete review of the status as it is” and a “focus on science research, target universities, [and] tropical medicine development.”²²³ With regard to tourism, he suggested marketing to “locals and high end clients. Birding, fishing, hiking, trekking, boating, jungle survival, wildlife filming.”²²⁴ With regard to non-timber products, he mentioned selling “forest fruits, honey, orchids, etc.”²²⁵ On the issue of timber, he stated: “use more of the pieces that are burnt to make tables, chairs, beds . . . make full use of the whole tree.” He continued:

We just cannot focus on one product; we have to diversify activities. Create annual conservation activities where people pay to partake, make it rewarding. Partner with companies that can send you clients. Put well-experienced personnel to manage the various sections. Create our own model, the Iwokrama model, something that will

²¹⁹ Author's conversation with Dane Gobin, CEO of Iwokrama, (May 29, 2020).

²²⁰ *Mining Industry in South America Threatens Indigenous Communities*, INDIAN LAW RESOURCE CENTER, <https://indianlaw.org/content/mining-industry-south-america-threatens-indigenous-communities>.

²²¹ Author's conversation with Dane Gobin, CEO of Iwokrama, (May 29, 2020).

²²² *Id.*

²²³ *Id.*

²²⁴ *Id.*

²²⁵ *Id.*

attract clients. Train the staff to a high level of management to get value for money.²²⁶

Some readers may wonder whether these ideas may have been tested in the past at Iwokrama. Others may have thought of ideas like re-localizing tourism or exporting non-timber products. The next sections will explore these ideas.

One potential lasting effect of the pandemic may be re-localization of various industries. One example of this is in Vietnam, which has attempted to make-up for the shortfall of foreign tourist dollars by encouraging domestic tourism.²²⁷ This points to one potential way forward for Iwokrama. However, by all accounts, Guyanese are rarely making the trek inland to visit Iwokrama. Dane Gobin is skeptical about attracting domestic tourism: because of its remoteness from the coast, where most people live, the costs of transportation and room and board are well above the price that can be afforded by most Guyanese, and difficult to reduce.²²⁸ Raquel Thomas is optimistic about the idea:

We have discussions with tourism operators and the Guyana Tourism Authority are exploring how to engage domestic tourists. Iwokrama has always catered for students, researchers, and has accommodations that can help with this—e.g., rooms instead of cabins, or a building with shared accommodation. There are also ways to do Iwokrama on a budget—e.g., using public bus vs. flying or hiring a four-by-four vehicle.²²⁹

As mentioned, much of the 130-mile road from Georgetown is laterite—a reddish clay that becomes nearly impassable to conventional vehicles when wet—making Iwokrama an eight-hour trip (including a short ferry crossing of a river) from the capital; otherwise one must purchase a ticket on a charter plane to the Fair View airstrip. Another alternative is attracting tourists from Brazil, but leaders of the Rupununi region want the border to be kept closed for another three months because of the high rates of infection in Brazil.²³⁰ Attracting guests from Venezuela is unlikely because of the economic collapse there, which has resulted in unsafe conditions in the region on their disputed border.²³¹ Attracting visitors, if they can travel, is unlikely from the remaining neighbor, Suriname, for the same reason that attracting large numbers of domestic tourists is unlikely (cost and distance).

²²⁶ Correspondence with Sydney Allicock, Vice President and Minister, Indigenous Affs. of Guyana, (May 30, 2020).

²²⁷ James Pearson, *Vietnam Offers Cut-Price Paradise to Lure Local Travelers Post Coronavirus*, JAKARTA POST (May 19, 2020), <https://www.thejakartapost.com/travel/2020/05/19/vietnam-offers-cut-price-paradise-to-lure-local-travelers-post-coronavirus.html>.

²²⁸ Author's conversation with Dane Gobin, CEO of Iwokrama, (May 29, 2020).

²²⁹ E-mail from Raquel Thomas, Director, Resource Management and Training at Iwokrama, to Adam J. Sulkowski, Associate Professor, Babson College (May 27, 2020, 13:26 EDT) (on file with author).

²³⁰ *Close Brazil Border for Another 3 Months—Rupununi Businesses Urge*, KAIETEUR NEWS ONLINE (May 27, 2020), <https://www.kaieteurnews.com/2020/05/27/close-brazil-border-for-another-3-months-rupununi-businesses-urge/>.

²³¹ *Guyana 2020 Crime & Safety Report*, OVERSEAS SEC. ADVISORY COUNCIL. (Mar. 27, 2020), <https://www.osac.gov/Content/Report/736ce36a-b933-4293-838a-184d53f8a6aa>.

C. The Viability of Bioprospecting or Marketing Non-Timber Goods?

Given that 50 percent of approved new drugs over a 30-year period have origins in nature,²³² it should not come as a surprise that bioprospecting—finding commercially valuable substances in nature—has a long history. Some argue that, due to advances in technology and regulations, it has a potentially a bright future.²³³

This raises the issue of intellectual property (IP) rights, and the reality, given the huge number of yet-to-be-discovered species, that, when a rainforest is slashed and burned, we not only eliminate life forms but we are also effectively burn a library of irrecoverable genetic information that may be valuable as a source of therapies.²³⁴ This leads us back to one more quote from Michael Williams, who was also a representative on the Iwokrama Science and Timber Committees “we have the IP data sharing protocol and we think it is working.”²³⁵

However, according to Raquel Thomas and Dan Gobin, two challenges have stood in the way of Iwokrama making a foray into bioprospecting for remedies or medicines: first, the prohibitive costs involved to bring a product into the legal export arena, and second, the lack of an IP protection regime in Guyana.²³⁶ Another risk of attempting to find and commercialize Indigenous knowledge is potentially being accused of a form of theft that has been labeled biopiracy.²³⁷ Elizabeth Losos points out that there have been strong efforts made in bioprospecting in the past in several places that could not generate profit, and eventually had to be nationalized, such as INBio in Costa Rica.²³⁸

Short of attempting to produce medicines, Iwokrama has supported local Indigenous businesses in selling soap and skin care products based on local ingredients and Indigenous knowledge.²³⁹ Dane Gobin explains that they would rather play a role supporting Indigenous community members in business ventures of this sort rather than competing or taking that opportunity away from them.²⁴⁰

²³² Ciddi Veeresham, *Natural Products Derived from Plants as a Source of Drugs*, 3 J. ADV. PHARM. TECH. & RES. 200 (2012).

²³³ Aleksandra Skirycz, Sylwia Kierszniowska, Michaël Méret, Lothar Willmitzer & George Tzotzos, *Medicinal Bioprospecting of the Amazon Rainforest: A Modern Eldorado?* 34 TRENDS IN BIOTECHNOLOGY 781 (2016), [https://www.cell.com/trends/biotechnology/comments/S0167-7799\(16\)30001-4](https://www.cell.com/trends/biotechnology/comments/S0167-7799(16)30001-4). There are claims of Indigenous remedies mitigating symptoms of COVID-19. <https://www.dailymail.co.uk/news/article-8337413/Brazils-remote-tribes-say-traditional-cures-helped-overcome-coronavirus.html>. However, the World Health Organization has cautioned against relying on herbal remedies. <https://www.dw.com/en/covid-19-who-cautions-against-the-use-of-traditional-herbs-in-africa/a-53341901>.

²³⁴ See Mary Riley, *INDIGENOUS INTELLECTUAL PROPERTY RIGHTS: LEGAL OBSTACLES AND INNOVATIVE SOLUTIONS*, (2004).

²³⁵ Author's conversation with Michael Williams, NRDDDB representative, (May 21, 2020).

²³⁶ Author's conversation with Raquel Thomas, Director, Resource Management and Training at Iwokrama, (May 28, 2020); author's conversation with Dane Gobin, CEO of Iwokrama, (May 29, 2020).

²³⁷ Vanessa Danley, *Biopiracy in the Brazilian Amazon: Learning from International and Comparative Law Successes and Shortcomings to Help Promote Biodiversity Conservation in Brazil*, 7 FLA. A&M U. L. REV. 291, 292 (2012).

²³⁸ Pablo Fonseca Q. *A Major Center of Biodiversity Research Crumbles*, SCIENTIFIC AMERICAN (Apr. 21, 2015), <https://www.scientificamerican.com/article/a-major-center-of-biodiversity-research-crumbles/>.

²³⁹ Author's conversation with Raquel Thomas, Director, Resource Management and Training at Iwokrama (May 27, 2020).

²⁴⁰ Author's conversation with Dane Gobin, CEO of Iwokrama, (May 29, 2020).

D. Oil: The Wild Card

Oil exploitation is a wild card in the present and future of Guyana. Presidents of Guyana since the 1980s have committed to a low carbon, green development strategy. A significant source of uncertainty about the future of this strategy, besides the current pandemic and Guyana's unresolved presidential election, is how the operation of Exxon Mobil in Guyanese waters will influence Guyana. An open question is whether the proceeds from oil exploitation will lead to the "resource curse" experienced by many countries,²⁴¹ or whether the oil wealth will be invested in furtherance of projects like Iwokrama, that would allow the rest of the economy to develop in a way that preserves Guyana's forests. If Guyana's rainforests are extensively logged, restoring a rainforest is a rare and slow phenomenon, with examples such as Gaviotas, in Colombia, being exceptions that prove the rule.²⁴² Guyana is worth watching, as an ecologist has put it, because it is a chance to watch, rapidly and in real time, whether and how a sudden oil windfall will impact a country.

It would be an oversight not to contemplate that, in 2019, even after a 30 percent drop in profits, ExxonMobil made 14.3 billion dollars in net profit.²⁴³ In the same year, the CEO received a raise of 25 percent, making 23.5 million dollars.²⁴⁴ In comparison, Iwokrama's annual budget of 1.2 million dollars is 0.0084 percent of Exxon's annual profits. In other words, projects like Iwokrama could normally be saved as an affordable public relations step for a global oil giant. On the other hand, with the current era of volatility and uncertainty, during which oil prices dropped,²⁴⁵ it is impossible to foresee how much largesse will flow from Guyanese oil exploitation—either through government channels or directly—to projects like Iwokrama.

V. Conclusion

An opinion eventually shared by a majority of those interviewed about this illustrative case of shared Indigenous governance—whether directly involved, partnered, or utterly disassociated with Iwokrama—is that there are no "right" answers, but rather trade-offs.²⁴⁶ These are the same positions that were articulated at the time of the creation of the national forest system in the United States. To John Muir, preserving natural systems and landscapes was a sacred duty that should not be balanced with commercial interests.²⁴⁷ To Gifford Pinchot, federal lands should allow for both recreational enjoyment and commercial exploitation.²⁴⁸ President Theodore Roosevelt ultimately sided with Gifford Pinchot and hence United States national forests are designated (as expressed on signs as one enters) "Land of Many Uses" that are administered by the U.S. Department of

²⁴¹ James A. Robinson, Ragnar Torvik & Thierry Verdier, *Political Foundations of the Resource Curse*, 79 J. DEV. ECON. 447, 448 (2006).

²⁴² See ALAN WEISMAN, *GAVIOTAS, A Village to Reinvent the World*, Chelsea Green Pub. (1998).

²⁴³ *ExxonMobil Earns \$14.3 Billion in 2019; \$5.7 Billion in Fourth Quarter*, BUS. WIRE (Jan. 21, 2020), <https://www.businesswire.com/news/home/20200131005260/en/ExxonMobil-Earns-14.3-Billion-2019-5.7-Billion>.

²⁴⁴ Paul O'Donnell, *Exxon Mobil CEO Darren Woods Got a 25% Pay Raise in 2019*, THE DALL. MORNING NEWS (Apr. 10, 2020), <https://www.dallasnews.com/business/energy/2020/04/10/exxon-mobil-ceo-darren-woods-got-a-25-pay-raise-in-2019/>.

²⁴⁵ BBC NEWS, *supra* note 213.

²⁴⁶ Even those opposed to logging still agreed that visitors should be invited to travel to Iwokrama, stay, and enjoy the wildlife spotting. Author's conversation with Ron Allicock, (January 14, 2020).

²⁴⁷ See JOHN CLAYTON, *NATURAL RIVALS*, 2019.

²⁴⁸ *Id.*

Agriculture.²⁴⁹ However, in contrast to the creation of the U.S. National Forest System, the illustrative case of Iwokrama shows that international law and Indigenous shared governance have the potential to play a greater role in conservation than at the turn of the 20th Century.

This article has taken a transdisciplinary approach to evaluating nine issues presented at the start. This is because reality does not present challenges neatly divided into disciplinary silos.²⁵⁰ This article should provoke further research into all the identified issues:

- (1) Indigenous people's rights under international law;
- (2) intertwined with that issue are questions of legal and ethical duties of stewardship of endangered species, plus ecosystems and climate under international law;
- (3) assuring authentic shared governance;
- (4) whether and how ecotourism can be sustained;
- (5) ethical questions about the funding of science;
- (6) business, legal, and ethical issues related to logging, and certification standards;
- (7) how benefits of sustainable development are shared;
- (8) business, legal, and ethical issues related to disruptions, and how to be resilient and adapt;
- (9) overall, based on a utilitarian or a deontological perspective, is the model deployed here preferable to the alternative scenarios highlighted by the COVID-19 pandemic?

One's opinion as to the merits of this example of shared Indigenous governance and mixed use may likely depend on whether we accept Dane Gobin's suggestion that "there is no other way" for Iwokrama to survive despite the fact we may not like it.²⁵¹ Assuming that is true, then at least the argument can be made that RIL and other shared use approaches are less harmful than alternative means of logging, and much less harmful than mining.

By all accounts, Iwokrama's activities generate positive societal effects in terms of employment, training, and capacity development of Indigenous communities, cultural preservation, science, and ecosystem conservation, and a relatively smaller environmental footprint than other approaches in the region. The alternative of dissolving Iwokrama is likely to generate fewer benefits for all involved. One could easily conclude it is ethical to continue the activities as they were at the start of 2020, assuming it is possible to break-even. Yet the potential for reasonable and informed individuals to possibly disagree on exactly how to move forward—especially through a pandemic that has halted international tourism—makes this case ripe for discussion.

If one believes that it would be better for Iwokrama to be dissolved, then other regions of Guyana, and neighbors Brazil and Suriname and the territory of French Guiana provide a window into what is possible.²⁵² In other words, Iwokrama and its context and impacts and options should

²⁴⁹ *Id.*

²⁵⁰ See Bagley *et al.*, *supra* note 1 and Sulkowski *et al.* (2020), *supra* note 1, and Sulkowski *et al.* (2021), *supra* note 1.

²⁵¹ Author's conversation with Dane Gobin, CEO of Iwokrama, May 29, 2020. Dane Gobin added: "You don't like it. I don't like it. Malaysians don't like it. But deforestation goes on. We have tried everything. There is no other way for a forest to pay for itself other than to do logging. At least we are doing it the right way." *Id.* He went on to explain it may be preferable to work with a company that has not previously followed reduced impact practices, so as to educate and show them better practices." *Id.*

²⁵² A comparison with Venezuela is less instructive, because of Venezuela's extremely dire circumstances. Anatoly Kurmanaev, *Venezuela's Maduro, Used to Crises, Faces His Toughest One Yet*, N.Y. TIMES, (Apr. 13, 2020), <https://www.nytimes.com/2020/04/13/world/americas/venezuela-maduro-oil.html>.

be compared to the destructive state of affairs—ecologically and to Indigenous lives—elsewhere. For example, deforestation surged in 2019 by 85 percent over 2018 in Brazil.²⁵³ In less-patrolled areas of all the countries in the region, illegal mining has not only razed the forest down to the level of sand, but the toxic tailings from extracting gold have polluted rivers and resulted in pools of neon turquoise-colored water visible from a plane.²⁵⁴ It is not difficult, when comparing the harms of these two alternatives, to conclude that one should not let the perfect be the enemy of the good or, put another way, do not end an imperfect approach, because something worse may follow.

It could be that the two pandemics (COVID-19 and the illegal exploitation of natural resources in its wake) together reveal the value of shared governance with Indigenous communities of natural resources with local, national, and global support. This is especially so in light of failures of the international community to follow-up on pledges to pay for the outright, total protection of rainforests.²⁵⁵ The pandemic of illegal poaching, logging, and mining should draw attention to those who argue for engaged community stewardship backed by national and international support. There may be truth, in a very imperfect world, to the notion that mixed use of forests—so long as the use does not destroy them, and so long as there is shared Indigenous governance, stewardship, and benefit-sharing—is better than the alternative of leaving them vulnerable to the worse fate of annihilation.

²⁵³ Eduardo Simões, *Brazil Amazon Deforestation Jumped 85% in 2019 vs 2018: Government Data*, REUTERS (Jan. 14, 2020, 3:42 PM), <https://www.reuters.com/article/us-brazil-deforestation/brazil-amazon-deforestation-jumped-85-in-2019-vs-2018-government-data-idUSKBN1ZD2W0>.

²⁵⁴ Author's observations, (January 11, 2020).

²⁵⁵ Jason Goldman, *Ecuador Has Begun Drilling for Oil in the World's Richest Rainforest*, VOX (Jan. 14, 2017, 10:00 AM), <https://www.vox.com/energy-and-environment/2017/1/14/14265958/ecuador-drilling-oil-rainforest>.