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Deforestation of the Brazilian Amazon Under Jair Bolsonaro's Reign: A Growing Ecological Disaster and How It May Be Reduced

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Deforestation of the Brazilian Amazon Under Jair Bolsonaro’s Reign: A Growing Ecological Disaster and How It May Be Reduced

Richard Perez

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I. INTRODUCTION

Climate change is one of the most momentous issues facing planet Earth. The current warming trend shows that global temperatures have increased, the oceans have warmed and acidified, sea levels have risen, ice sheets have substantially shrunk, and the number of extreme weather events have escalated.¹ The majority of climate scientists agree that these unprecedented climate-warming trends over the past century stem from human activities.² Deforestation of the Amazon rainforest not only contributes to this major environmental threat, but also creates an onerous regulatory challenge.³ It is estimated that the Amazon alone is vanishing at a rate of 20,000 square miles per year.⁴ This number is sure to rise with Brazilian President Jair Bolsonaro's relaxed governmental oversight in addressing the fires destroying the Amazon and the significant level of unsanctioned agriculturally related deforestation. Moreover, the current scheme of deforestation-related international agreements is inadequate to properly address this crisis and is unlikely to curb the destruction before it is too late.⁵

¹ See *Climate Change: How Do We Know?*, NASA, <https://climate.nasa.gov/evidence/> (last updated Feb. 4, 2021) [hereinafter NASA].

² *Id.*

³ See *Forest Governance – Brazil*, GLOB. FOREST ATLAS, <https://globalforestatlas.yale.edu/amazon/forest-governance/brazil> (last visited Mar. 1, 2020).

⁴ *The Disappearing Rainforests*, RAIN-TREE, <http://www.rain-tree.com/facts.htm> (last visited Oct. 7, 2019).

⁵ See generally Steve Connor, *Scientists Say Kyoto Protocol is 'Outdated Failure'*, INDEPENDENT (Sep. 17, 2011, 12:28 PM), <https://www.independent.co.uk/environment/climate-change/scientists-say-kyoto-protocol-is-outdated-failure-5328805.html>.

Although there are numerous domestic and international regulations in place to protect the Amazon rainforest from deforestation, unfortunately, these conventions have failed to establish an effective means for promoting accountability.⁶ Without a functioning regulatory standard to enforce the relevant environmental laws, these regulations are merely fruitless aspirational endeavors that will not stop the rampant destruction of the Amazon—thus advancing the current warming trends plaguing our planet. However, because this epidemic is arguably a crime against humanity that carries genocidal implications, existing international mechanisms of accountability may be employed to halt the destruction before it reaches an unrecoverable breaking point.

This article will examine Brazilian environmental law and detail how President Jair Bolsonaro has systematically dismantled existing domestic legal authority designed to curb deforestation of the Amazon rainforest. An analysis detailing the shortcomings of the pertinent international mechanisms and authorities will follow. This article will then analyze some of the myriad proposals and responses prompted by this environmental calamity. Finally, this article will conclude by recommending the utilization of the International Criminal Court to prosecute Bolsonaro for crimes against humanity and/or genocide in light of deforestation's deleterious effects on indigenous communities and the global climate.

II. BACKGROUND

A. *The Link Between Deforestation & Climate Change*

The Amazon rainforest has long been recognized as a repository of ecological services not only for local tribes and communities, but also for the rest of the world.⁷ Additionally, it is the only rainforest that planet Earth has left in terms of size and biodiversity.⁸ As the Amazon rainforest is cleared and burnt, the carbon stored by the plants and trees is released into the atmosphere mainly as carbon

⁶ See *infra* Part V.

⁷ *Why Is the Amazon Rainforest Important?*, WORLD WILDLIFE FOUND., http://wwf.panda.org/knowledge_hub/where_we_work/amazon/about_the_amazon/why_amazon_important/ (last visited Oct. 7, 2019) [hereinafter WWF].

⁸ *Id.*

dioxide—a greenhouse gas that traps heat in Earth’s atmosphere.⁹ This phenomenon is known as the greenhouse effect.¹⁰ Under natural conditions, the Amazon rainforest removes carbon dioxide from the atmosphere and absorbs it during photosynthesis, an energy-creating process that yields the oxygen we need to breathe along with carbon, which allows the plants and trees to grow.¹¹ Without the largest tropical rainforest in the world, the greenhouse effect would augment—further contributing towards global warming.¹² This causal chain is likely to continue with more frequent droughts, severe storms, heatwaves, and fire weather.¹³ These deleterious effects impact communities and economies all over the world; therefore, an agenda calling for global action is required if we are to save this invaluable resource.

B. *Deforestation of the Amazon Rainforest*

Throughout human history, subsistence farmers, who cut down trees and cleared plots of land to produce crops for consumption and trade, have been a predominant cause of deforestation.¹⁴ Since 1978, over 289,000 square miles of Amazon rainforest have been destroyed.¹⁵ When innovations in industrial activities and large-scale agriculture developed in the twentieth century, deforestation rates skyrocketed.¹⁶ By the 2000’s, more than three-quarters of deforestation of the Amazon was for cattle-ranching.¹⁷ The Amazon rainforest has also been razed to create

⁹ Annika Dean, *Deforestation and Climate Change*, CLIMATE COUNCIL (Aug. 21, 2019), <https://www.climatecouncil.org.au/deforestation/>; see also Marc Lallanila, *What Is the Greenhouse Effect?*, LIVE SCIENCE (Mar. 8, 2018), <https://www.livescience.com/37743-greenhouse-effect.html>.

¹⁰ See *What Is The Greenhouse Effect?*, CLIMATE REALITY PROJECT (July 30, 2018, 9:41 AM), <https://www.climateRealityProject.org/blog/what-greenhouse-effect> (in-depth analysis on carbon dioxide and the greenhouse effect).

¹¹ See WWF, *supra* note 7.

¹² *Id.*

¹³ See NASA, *supra* note 1; see generally Dean, *supra* note 9.

¹⁴ Rhett A. Butler, *Amazon Destruction*, MONGABAY, https://rainforests.mongabay.com/amazon/amazon_destruction.html#content (last updated Dec 4, 2020).

¹⁵ *Id.*

¹⁶ See *id.*

¹⁷ *Id.*

space for soy farms, towns, colonization projects, to create dams, and dig up precious minerals.¹⁸ Contemporaneously, roads were paved that opened up previously inaccessible portions of the rainforest to settlement by impoverished people, illegal loggers, and land speculators.¹⁹

Brazil holds roughly one-third of Earth's remaining rainforests and the Brazilian Amazon accounts for roughly sixty percent of the Amazon rainforest.²⁰ Brazil was no exception to the deforestation trend outlined above; however, that trend began to reverse in 2004.²¹ Annual deforestation rates in Brazil declined by as much as eighty percent.²² This considerable drop was fueled by numerous factors, including increased law enforcement, satellite image monitoring, pressure from environmentalists, private and public sector initiatives, new protected areas, and macroeconomic trends.²³

Despite these positive conservational developments, Brazil's achievement in curbing deforestation of the Amazon was only temporary. Since 2012, these efforts have stalled and by July 2019, deforestation of the Amazon soared to levels not seen since the mid-2000s.²⁴ These echelons of deforestation are attributed in part to the recent fires that have devastated the Amazon.²⁵ The fires are a result of seasonal burning that Brazilian farmers engage in every year.²⁶ Known as the "queimada," this purposeful burning is used to clear land for agricultural purposes.²⁷ In addition to farmers, illegal loggers and miners light fires to destroy evidence of their illicit

¹⁸ *Id.*

¹⁹ *Butler, supra* note 14.

²⁰ *Id.*

²¹ *Id.*

²² *Id.*

²³ *Id.*

²⁴ *Id.*

²⁵ See Eduardo Simoes & Michael Perry, *Fires in Amazon Forest Rose 30% in 2019*, REUTERS (Jan. 8, 2020, 9:01 PM), <https://www.reuters.com/article/us-brazil-amazon-fires/fires-in-amazon-forest-rose-30-in-2019-idUSKBN1Z804V>.

²⁶ Morgan McFall-Johnsen & Aylin Woodward, *The Fires in the Amazon Are the Result of Seasonal Burning that Farmers Do Every Year. Here's Why They've Gotten So Bad this Summer.*, BUSINESS INSIDER (Aug. 23, 2019, 9:40 AM), <https://www.businessinsider.com/fires-in-the-amazon-rainforest-were-started-by-humans-2019-8>.

²⁷ *Id.*

activities and drive away indigenous people to clear more land for development.²⁸

The Brazilian Amazon burned at record rates in 2019 and 2020.²⁹ Notably, the Brazilian Amazon was subject to more fires in 2019 than in any year since researchers began keeping track of these seasonal fires in 2013.³⁰ Despite an unexpected drop in the number of fires in the month of September 2019, the overall number of fires in the Amazon biome from January through September was forty-three percent higher than the same period in 2018, according to Brazil's National Institute for Space Research ("INPE").³¹ The month of July established a record for the most deforestation in the Amazon in a single month, shrinking the rainforest by 519 square miles.³² INPE reported that the number of fires detected in the Amazon region was 89,178 in 2019, compared with 68,345 fires in 2018.³³ Data from August 2019 to July 2020 show deforestation is up by thirty-four percent compared with the previous year.³⁴ The blame for these astonishing figures has been placed on Brazilian

²⁸ *Id.*

²⁹ *Id.*; see also Jack Goodman & Christopher Giles, *Amazon Fires: Are They Worse this Year than Before?*, BBC (Aug. 28, 2020), [https://www.bbc.com/news/world-latin-america-53893161#:~:text=In%20the%20first%20seven%20months,times%20the%20size%20of%20London.\(showing an increase in fires between July 2019 and July 2020\)](https://www.bbc.com/news/world-latin-america-53893161#:~:text=In%20the%20first%20seven%20months,times%20the%20size%20of%20London.(showing%20an%20increase%20in%20fires%20between%20July%202019%20and%20July%202020).).

³⁰ McFall-Johnsen, *supra* note 26.

³¹ Terrence McCoy, *Amazon Fires Dropped Unexpectedly in September, After Summer Spike*, WASH. POST (Oct. 2, 2019, 1:18 PM), https://www.washingtonpost.com/world/the_americas/amazon-fires-dropped-unexpectedly-in-september-after-spiking-over-the-summer/2019/10/02/4ddc0026-e516-11e9-b403-f738899982d2_story.html.

³² See Jonathan Watts, *Amazon Deforestation Accelerating towards Unrecoverable 'Tipping Point'*, GUARDIAN (July 25, 2019, 12:40 PM), <https://www.theguardian.com/world/2019/jul/25/amazonian-rainforest-near-unrecoverable-tipping-point>.

³³ Simoes & Perry, *supra* note 25.

³⁴ Herton Escobar, *Illegal Deforestation in Brazil Soars amid Climate of Impunity*, SCI. MAG. (Aug. 5, 2020), <https://www.sciencemag.org/news/2020/08/illegal-deforestation-brazil-soars-amid-climate-impunity>; see also Joseph Guzman, *Brazil's Amazon Saw a Sharp Increase in Deforestation in October*, HILL (Nov. 13, 2020), <https://thehill.com/changing-america/sustainability/environment/525911-brazils-amazon-saw-a-sharp-increase-in>.

President Jair Bolsonaro—accused of harming the Amazon to benefit his supporters in the logging, mining, and farming industries.³⁵

III. EXISTING LEGAL AUTHORITY IN ADDRESSING DEFORESTATION OF THE BRAZILIAN AMAZON

A look into the history of Brazilian law reveals a deep-rooted inclination toward protecting and preserving the Amazon rainforest. However, deficient resources and geographical impediments render these conservational laws idle and unenforced.

A. *Protection of the Amazon Rainforest: A Constitutional Right*

Enacted in 1988, the current Brazilian Constitution is the seventh rendition since the country attained independence in 1822.³⁶ Among other things, the 1988 constitution seeks to halt and reverse the rate of deforestation of the Amazon and protect the indigenous population that suffered as a result of the wave of Amazonian industrial activity that proliferated in the 1960's.³⁷ To do so, the constitution dedicates a chapter to the environment and delineates the people's right to an ecologically balanced environment.³⁸ The constitution also bestows the government with a duty to defend and preserve the environment for present and future generations.³⁹ To ensure the effectiveness of this right, the government is charged with “. . . preserving and restoring essential ecological processes and provide for ecological management of species and ecosystems; preserve the diversity and integrity of the Country's genetic

³⁵ See Tom Phillips, *Bolsonaro Rejects 'Captain Chainsaw' Label as Data Shows Deforestation 'Exploded,'* GUARDIAN (Aug. 7, 2019, 11:25 AM), <https://www.theguardian.com/world/2019/aug/07/bolsonaro-amazon-deforestation-exploded-july-data>.

³⁶ *Constitutional History of Brazil*, CONST. NET, <http://constitutionnet.org/country/constitutional-history-brazil>, (last visited Mar. 1, 2020).

³⁷ See Alexander Zaitchik, *Rainforest on Fire*, INTERCEPT (July 6, 2019, 8:00 AM), <https://theintercept.com/2019/07/06/brazil-amazon-rainforest-indigenous-conservation-agribusiness-ranching/>.

³⁸ CONSTITUIÇÃO FEDERAL [C.F.] [CONSTITUTION] art. 225 (Braz.).

³⁹ *Id.*

patrimony and to supervise entities dedicated to research and manipulation of genetic material; define territorial spaces that are to be specially protected; promulgate an environmental impact study that reveal activities that may cause significant degradation of the environment; promote environmental education at all levels; control production, commercialization and employment of techniques, methods and substances that carry a risk to life, the quality of life and the environment; and prohibit practices that jeopardize the native fauna and flora.”⁴⁰ Individuals and legal entities that engage in activities considered harmful to the environment are subject to criminal and administrative sanctions pursuant to this chapter.⁴¹

The 1988 constitution follows the theme of environmental conservation promulgated by its numerous predecessors.⁴² To begin with, the Imperial Constitution of 1824 prohibited industries which posed a significant threat to the health of citizens.⁴³ The 1934 constitution created more protections by “. . . dispensing protection in natural beauty and on Brazil’s historical, artistic, and cultural patrimony.”⁴⁴ As a result, the federal government was given jurisdiction over Brazil’s forests.⁴⁵ Three years later, a new constitution called for the protection of flora and fauna from disease and other harmful proxies.⁴⁶ The 1946 constitution gave Brazilian citizens “popular action”: the right to have government action detrimental to the environment declared void—a law never employed to hamper deforestation.⁴⁷ The 1967 constitution continued this conservational theme by delegating power to the national government to legislate on environmentally related issues.⁴⁸ Despite this reoccurring theme of environmental protection, the

⁴⁰ *Id.* art. 225 § 1, I-VII.

⁴¹ *Id.* art. 225 § 3.

⁴² Henry McGee & Kurt Zimmerman, *The Deforestation of the Brazilian Amazon: Law, Politics, and International Cooperation*, 21 U. MIAMI INTER-AM. L. REV. 513, 531-33 (1990) (discussing the long-standing constitutional concern for preserving and protecting Brazil’s natural environment).

⁴³ *Id.* at 532.

⁴⁴ *Id.* (internal quotations omitted).

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ McGee Jr. & Zimmerman, *supra* note 42 at 532.

Amazon rainforest was not particularly emphasized until the 1988 constitution.⁴⁹

Under the new constitution, the Brazilian Amazonian Forest is specifically described as part of the national patrimony that must be utilized under conditions to assure its preservation.⁵⁰ This rendition initially proved momentous for conservational efforts. The constitution zoned forty-three percent of the Amazon as off limits to industrial activity and land-clearing, and created rules restricting activity on the remaining fifty-seven percent.⁵¹ It also created the Brazilian Institute of Environment and Renewable Natural Resources (“IBAMA”), an environmental monitoring and enforcement agency.⁵² Moreover, the constitution overhauled the National Indian Foundation (“FUNAI”) to help Indigenous groups protect their lands and develop sustainable forest industries.⁵³ Notably, the constitution does not specifically recognize “crimes against the environment.”⁵⁴ While these regional changes transpired, international development banks imposed toughened environmental and social conditions on the reception of aid and loans.⁵⁵ Additionally, nongovernmental organizations and activist campaigns led successful international boycotts, leading to a breakthrough soy moratorium in 2006.⁵⁶ Regional efforts did not completely stop deforestation of the Amazon. However, the rate of deforestation peaked in 2004 and remarkably declined for several years.⁵⁷

B. Constitutional Schemes In Action: Brazilian Legislation

Legislation designed to protect the Brazilian Amazon dates back more than eight decades.⁵⁸ An environmental legislation boom commenced during the Vargas Regime, who introduced the first

⁴⁹ *Id.* at 533.

⁵⁰ CONSTITUIÇÃO FEDERAL [C.F.] [CONSTITUTION] art. 225 § 4 (Braz.).

⁵¹ Zaitchik, *supra* note 37.

⁵² *Id.*

⁵³ *Id.*

⁵⁴ McGee & Zimmerman, *supra* note 42, at 531.

⁵⁵ Zaitchik, *supra* note 37.

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ McGee & Zimmerman, *supra* note 42, at 533.

Brazilian forest code in 1934.⁵⁹ Premised on the constitutional principle that the Amazon rainforest is a common interest of all Brazilians, this progressive piece of legislation placed limits on the use of private property to preserve the country's natural vegetation.⁶⁰ The original code required that farmers retain at least twenty-five percent of their land in forest.⁶¹ The primary objective of the code was to ensure that enough forest was preserved to maintain a sustainable fuel supply while safeguarding wildlife that could be hunted to provide sustenance.⁶² This law remained in effect—and unenforced—for thirty years.⁶³ Consequently, farmers and developers were not met with opposition when clearing land for agricultural purposes.⁶⁴

In 1965, the newly empowered military dictatorship implemented Law No. 4,771, also known as the New Forest Code.⁶⁵ This legislation classifies properties into one of three categories. If land is designated into the first category, it is considered an area of permanent preservation meaning that it cannot be cut down and developed for economic purposes.⁶⁶ The second category derives slightly from the original forest code in that it creates a legal reserve by placing percentage-based limits on the use of private property.⁶⁷ Specifically, owners in the south and southeast region of the country are required retain at least twenty percent of their land in forest.⁶⁸ Landowners in the north region (Amazon) and the northern part of the centre-west must retain fifty percent.⁶⁹ No limits were placed on

⁵⁹ *Id.*

⁶⁰ See Bernardo Mueller & Lee J. Alston, *Legal Reserve Requirements in Brazilian Forests:*

Path Dependent Evolution of De Facto Legislation, ECONOMÍA REVISTA DA ANPEC - ASSOCIAÇÃO NACIONAL DOS CENTROS DE PÓS-GRADUAÇÃO EM ECONOMIA [Economy Magazine of ANPEC - Brazilian Association of Graduate Programs in Economics], Dec. 2007, at 25-53.

⁶¹ *Id.* at 29.

⁶² *Id.* at 30.

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ Mueller & Alston, *supra* note 60, at 30.

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ *Id.*

the northeast.⁷⁰ The third category, or remainder category, is the remainder of the land which could be used without reservations.⁷¹

Both renditions of the code provided a framework of penalties for violations of the legislation.⁷² Moreover, the current Penal Code of Brazil, promulgated in 1940, originally authorized the prosecution of individuals that damaged the environment if the environmental damage substantially affected public health.⁷³ However, these ambitious pieces of legislation did not provide for the financing of any enforcement measures—effectively guaranteeing that the legislation would remain ignored and unenforced.⁷⁴ The federal government subsequently created an interministerial group (Grupo de Trabalho Interministerial) which issued a plan that called for the preservation of native tribes and the creation of biological preserves covering fifty million hectares.⁷⁵ These congressional efforts did produce some positive results in slowing deforestation rates beginning in the late 1980's.⁷⁶ However, deforestation rates intensified during the mid and late 1990's and peaked in 2004 when the country lost more than 27,000 square kilometers of the Amazon rainforest.⁷⁷

Between 2004 and 2012, Brazil reduced overall deforestation in the Amazon by more than eighty percent, from more than 27,000 square kilometers of forest destroyed per year to less than 4,600 by utilizing near real-time satellite imagery to locate and shut down illegal logging sites.⁷⁸

In 2012, the New Forest Code was revamped to benefit farmers and developers by substantially reducing the area required for legal

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² McGee & Zimmerman, *supra* note 42, at 533.

⁷³ *See id.*

⁷⁴ *See id.*

⁷⁵ *See id.*

⁷⁶ Zaitchik, *supra* note 37.

⁷⁷ *Id.*

⁷⁸ *Rainforest Mafias: How Violence and Impunity Fuel Deforestation in Brazil's Amazon*, HUM. RTS. WATCH (Sept. 17, 2019), <https://www.hrw.org/report/2019/09/17/rainforest-mafias/how-violence-and-impunity-fuel-deforestation-brazils-amazon>. [hereinafter HUMAN RIGHTS WATCH].

reserves on rural private properties.⁷⁹ Pursuant to these changes, Amazon states that have protected at least sixty-five percent of their territory as conservation units or indigenous reserves can reduce the percentage of native vegetation required to be conserved on private lands.⁸⁰ According to the Forest Code Observatory, the update means that five million hectares of native vegetation—twice the state of Sergipe—will no longer be reforested, compensated, or regenerated pursuant to previous restoration provisions of the code.⁸¹ This update not only runs contrary to the Brazilian constitutional principles of conservation, but also opens the door for large-scale deforestation.⁸² The update also pardons illegal deforestation that occurred prior to 2008.⁸³ This absolution basically incentivizes farmers and developers to continue illegal deforestation.⁸⁴ It is not far-fetched to expect the implementation of more pardons in the future, especially under Bolsonaro’s pro-development administration. If farmers and developers do not fear enforcement of the law and/or are not provided with some sort of economic motivation to abide by the law, unremitting deforestation is the only foreseeable outcome.

The 2012 update was stalled in a legal battle over its constitutionality with the Attorney General’s Office, the Federal Public Ministry, and the left-wing Socialism and Freedom Party (“PSOL”) ever since its inception in 2012.⁸⁵ In February of 2018, Brazil’s Supreme Court ruled in favor of many of the pro-agriculture provisions of the New Forest Code, including relaxation of legal reserve rules and upholding the amnesty provision.⁸⁶ The New

⁷⁹ Claire Asher, *Brazil’s New Forest Code Puts Vast Areas of Protected Amazon Forest at Risk*, MONGABAY (Mar. 4, 2019), <https://news.mongabay.com/2019/03/brazils-new-forest-code-puts-vast-areas-of-protected-amazon-forest-at-risk/>.

⁸⁰ *Id.*

⁸¹ Angela Boldrini, Daniel Carvalho, & Phillippe Watanabe, *Congress and Senate Divided over Forest Code Measure*, FOLHA DE S.PAULO (Mar. 30, 2019), <https://www1.folha.uol.com.br/internacional/en/brazil/2019/05/congress-and-senate-divided-over-forest-code-measure.shtml> (English version).

⁸² See Asher, *supra* note 79.

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ Sue Branford & Maurício Torres, *Analysis: The Brazilian Supreme Court’s New Forest Code Ruling*, MONGABAY (Mar. 7, 2018),

Forest Code remains in effect today and comprises the majority of Brazilian forestry legislation.

C. *Conservational Administrative Bodies*

Brazil has several multilateral bodies and authorities responsible for protecting its natural environment. These bodies and authorities collectively form the National Environmental System (“SISNAMA”), which aims to institute sustainability standards that protect and improve the environmental quality of Brazil pursuant to the 1981 National Environmental Policy Act.⁸⁷ The primary administrative body for implementing these environmental policies is the Brazilian Institute of the Environment and Renewable Natural Resources (“IBAMA”)—a federal agency under the Ministry of Environment (“MMA”).⁸⁸ Created in 1989, IBAMA must guarantee the operation of the 1981 National Environmental Policy Act by developing various activities related to the preservation and conservation of Brazil’s natural resources.⁸⁹ IBAMA also oversees the use of natural resources such as water, flora, fauna and soil and imposes fines on those who breach the environmental preservation requirements.⁹⁰ Moreover, IBAMA is responsible for granting environmental licenses for any development projects that pose a detriment to the environment.⁹¹

The Chico Mendes Institute for Biodiversity Conservation (“ICMbio”) is Brazil’s other leading environmental agency and its

<https://news.mongabay.com/2018/03/analysis-the-brazilian-supreme-courts-new-forest-code-ruling/>.

⁸⁷ See ÉDIS MILARÉ, ET AL., ENVIRONMENTAL LAW AND PRACTICE IN BRAZIL: OVERVIEW, PRACTICAL LAW COUNTRY Q&A, Westlaw (database last updated Feb. 1 2021).

⁸⁸ See Renata Garcia, *Introduction to IBAMA*, BRAZ. BUS., (Jun. 16, 2015), <https://thebrazilbusiness.com/article/introduction-to-ibama>. (The Ministry of Environment is a cabinet-level federal ministry comparable to the Environmental Protection Agency (EPA) in the United States).

⁸⁹ See *id.*

⁹⁰ *Id.*

⁹¹ *Id.*

federal parks' protector.⁹² Operating predominantly in the management of federally protected areas, ICMBio is in charge of safeguarding Brazil's natural heritage, endorsing biodiversity conservation via research and education, and promoting ecologically sound management practices.⁹³ IBAMA and ICMBio have the powers to fine loggers, sequester equipment used for illegal deforestation, and may even destroy that equipment when its transport is infeasible or jeopardizes the environment or its agents.⁹⁴ However, as will be discussed in further detail, these powers were detrimentally constrained after Bolsonaro took office.⁹⁵ IBAMA and ICMBio often conduct joint operations with support from federal and state police, which can detain people engaged in illegal logging anywhere.⁹⁶

These agencies played a crucial role in the momentous decrease in deforestation that occurred from 2004-2012, however, personnel and budget cuts have weakened their capacity to enforce environmental law.⁹⁷ In 2009, IBAMA employed roughly 1,600 environmental inspectors throughout the country.⁹⁸ In 2019, the number was down to 780, with only a small fraction allocated to the Amazon rainforest.⁹⁹ Due to the enormity of the Amazon and agency personnel reductions, local communities and native tribes play a major enforcement role by alerting authorities of illicit activity.¹⁰⁰ Unfortunately, these forest "defenders" often receive death threats and are sometimes killed by those engaged in deforestation.¹⁰¹ To combat this violence, Brazil implemented a program in 2004 to protect the defenders—amounting to nothing more than occasional phone check-ins.¹⁰² Despite the criminal

⁹² See *Chico Mendes Institute for Biodiversity Conservation (ICBIO)*, DEVEX <https://www.devex.com/organizations/chico-mendes-institute-of-biodiversity-conservation-icmbio-49509> (last visited March 1, 2020).

⁹³ *Id.*

⁹⁴ See HUMAN RIGHTS WATCH, *supra* note 78.

⁹⁵ See *infra* Part IV Section C.

⁹⁶ See HUMAN RIGHTS WATCH, *supra* note 78.

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.*

nature of these violent conflicts, it is easy to set them aside and classify them as a localized conflict, which sweeps them under the proverbial rug—receiving no further attention from the appropriate authorities.¹⁰³ Budgetary constraints combined with the remoteness in which these cases arise renders agency efforts and defender protection programs futile in the war to save the Amazon.¹⁰⁴

In addition to the monetary and terrestrial obstacles that Brazil's conservational administrative bodies have encountered in recent years, the presidential election of Jair Bolsonaro has introduced a plethora of limitations that further weaken efforts to save the Amazon rainforest.¹⁰⁵ As will be discussed in further detail, Bolsonaro's and his administration have worked meticulously to gut environmental agencies, paving the way for more unrestricted deforestation.

IV. INADEQUACY OF EXISTING ENVIRONMENTAL LEGAL AUTHORITY: AN EXECUTIVE ADMINISTRATION COMMITTED TO DEFORESTATION

Although each of the aforementioned legal instruments have played fundamental roles in reducing deforestation of the Brazilian Amazon, their logistical inadequacies render them unlikely to halt deforestation before it reaches the point of no return. For years, Brazil received international praise for implementing stronger government enforcement and commitments to halt industry-related deforestation.¹⁰⁶ However, political backlash driven by politicians representing agricultural interests triggered Brazilian Congress to loosen forest protections in 2012.¹⁰⁷ A barrage of antienvironmental legislative proposals were submitted by conservative lawmakers to pave the way for rapid development of various industries.¹⁰⁸ Economic recessions and political scandals diverted money and

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *See generally id.*

¹⁰⁶ Jeff Tollefson, *Deforestation Spikes in Brazilian Amazon*, NATURE (Nov. 8, 2016), <https://www.nature.com/news/political-upheaval-threatens-brazil-s-environmental-protections-1.20955>.

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

attention away from environmental enforcement measures—encouraging ranchers and illegal land grabbers to clear land.¹⁰⁹ When these calamities are paired with the pro-development executive administration, the doom of the Brazilian Amazon is the only foreseeable outcome.

A. *Eliminating Environmental Fines*

Principally, relaxed governmental oversight, deriving from an alleged desire to expand the Brazilian economy, exacerbates this environmental calamity—to the extent of undermining and derailing the conservation and sustainability objectives demarcated in Brazilian law. To begin with, fines constitute one of the key punitive mechanisms for deterring illegal deforestation.¹¹⁰ Since Jair Bolsonaro took office on January 1, 2019, imposition of such fines has dropped significantly. In 2019, IBAMA imposed the lowest number of fines for illegal deforestation in at least eleven years.¹¹¹ Moreover, not only did ICMBio fail to impose any fines in the month of May 2019, but it also failed to conduct any anti-deforestation operations.¹¹² Overall fines for illegal deforestation from January 1-May 15 decreased by thirty-four percent compared to the same period in 2018—the largest percentage drop of fines ever recorded in Brazil.¹¹³

One might argue that this decline is the product of reduced deforestation rates. However, figures on illegal deforestation, published by INPE and confirmed by the federal government, demonstrate that in May 2019 the Amazon region shrunk by 285 square miles—an area almost the size of New York City.¹¹⁴ This figure reflects the highest level of illegal deforestation for a single month—a thirty-four percent increase over the region cleared in May 2018.¹¹⁵ This reduction in the number of fines, in conjunction

¹⁰⁹ *Id.*

¹¹⁰ See Sue Branford & Thais Borges, *Brazil Guts Environmental Agencies, Clears Way for Unchecked Deforestation*, MONGABAY (Jun. 10, 2019), <https://news.mongabay.com/2019/06/brazil-guts-environmental-agencies-clears-way-for-unchecked-deforestation/>.

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ *Id.*; see also *infra* Part IV Section C.

¹¹⁴ Branford & Borges, *supra* note 110.

¹¹⁵ *Id.*

with the increased rates of illegal deforestation, reflect a discernible pro-deforestation ideology attributable to Bolsonaro's pro-development administration.¹¹⁶

B. Constricting Law Enforcement

The Bolsonaro administration has worked methodically to limit environmental agencies from enforcing environmental law. Since Bolsonaro took office, the amount of illegally harvested timber seized by environmental agencies fell considerably, in comparison to the amount seized during Michel Temer's tenure IN 2018.¹¹⁷ From January-April 2019, only forty cubic meters of illegal timber, or roughly ten large trees, were seized by government officials, while 25,000 cubic meters were seized in 2018.¹¹⁸ Six illegal deforestation monitoring operations, planned for the latter half of 2019, were either canceled or downsized—continuing the downward trend in volume of seized illegal timber.¹¹⁹ Astonishingly, IBAMA announced on its website that it must publicize in advance the timing and location details of future monitoring operations, notwithstanding the fact that the success of these raids relies on the element of surprise.¹²⁰ Moreover, this advance notice makes IBAMA agents more susceptible to criminal attacks.¹²¹ Bolsonaro, having run a business-oriented campaign, recognizes that allowing his supporters' illegally harvested timber to be confiscated runs contrary to his own interests.

C. Anti-Environmental Exercise of Executive Power

Bolsonaro's pro-development decrees, ministerial appointments, and agency-wide terminations correlate with his campaign vows to expand business operations in Brazil, including into its protected regions.¹²² Within hours of taking office,

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ *Id.*

¹²⁰ Branford & Borges, *supra* note 110.

¹²¹ *Id.*

¹²² Associated Press, *Brazil's Environmental Changes under a Far-Right Climate Skeptic*, NY POST, (Aug. 20, 2019, 3:31 PM),

Bolsonaro transferred responsibility for delineating indigenous territories from the Justice Ministry to the Agriculture Ministry—a move labeled by one lawmaker as “letting the fox take over the chicken coop.”¹²³ This decree also transferred the agency for indigenous affairs from the Justice Ministry to a newly created Ministry for Family, Women and Human Rights led by an ultraconservative evangelical pastor.¹²⁴ However, the Supreme Federal Court, Brazil’s highest court, reversed the decree.¹²⁵

Likewise, Bolsonaro appointed Tereza Cristina to the position of Agriculture Minister—a successful businesswoman that has combatted tribal land rights and encouraged agricultural expansion into indigenous territories, in order to assimilate native people with the Brazilian economy.¹²⁶ Bolsonaro also appointed Ricardo Salles to the position of Environment Minister—a lawyer convicted in 2018 of fraud for modifying an environmental protection plan to favor mining interests, while serving as Sao Paulo state’s environment minister between 2016 and 2018.¹²⁷ Salles supports eliminating the demarcation of indigenous lands and the notion of companies self-regulating the environmental licensing process.¹²⁸ Moreover, Ernesto Araujo, Bolsonaro’s Foreign Minister, has claimed that climate change is a “dogma” used by the left to foster

<https://nypost.com/2019/08/20/brazils-environmental-changes-under-a-far-right-climate-skeptic/>; see also Branford & Borges, *supra* note 110.

¹²³ *Id.*

¹²⁴ *Id.*

¹²⁵ Thais Arbex, *Supreme Court Keeps Demarcation of Indigenous Lands with Indigenous Agency*, FOLHA DE S.PAULO (Aug. 2, 2019, 11:33 AM), <https://www1.folha.uol.com.br/internacional/en/brazil/2019/08/supreme-court-keeps-demarcation-of-indigenous-lands-with-indigenous-agency.shtml>.

¹²⁶ See Fabiano Maisonnave, *Bolsonaro’s Plan to Unlock the Amazon: Split its Indigenous Peoples*, CLIMATE HOME NEWS (May 13, 2019, 10:16 AM), <https://www.climatechangenews.com/2019/05/13/bolsonaros-plan-unlock-amazon-split-indigenous-peoples/>.

¹²⁷ Associated Press, *supra* note 122.

¹²⁸ Jenny Gonzales, *New Appointments, New Policies Don’t Bode Well for Brazilian Amazon*, MONGABAY, (Feb. 4, 2019), <https://news.mongabay.com/2019/02/new-appointments-new-policies-dont-bode-well-for-brazilian-amazon/>.

China's growth and expressed his desire to "help Brazil and the world liberate itself from the globalist ideology."¹²⁹

Finally, Bolsonaro chose Franklimberg Ribeiro de Freitas to head FUNAI, Brazil's indigenous affairs agency, despite recently being a consulting advisor for indigenous, community, and environmental affairs with the Belo Sun mining company—where he sided against indigenous land rights.¹³⁰ Notably, Salles and Ribeiro eliminated the climate change units within their respective ministries, while Salles cut the budget for the implementation of the Climate Change National Policy by ninety-five percent.¹³¹

The disorder and inefficiencies plaguing IBAMA and ICMBio are chiefly attributable to the terminations of the heads of the agencies' state bodies, which oversee most deforestation-monitoring procedures.¹³² In a single day in February 2019, Salles fired twenty-one of the twenty-seven state superintendents.¹³³ Currently, only four of the state bodies have official heads.¹³⁴ Without proper leadership, agencies are left disorganized without competent procedures to conduct anti-deforestation operations. It is these state superintendents who possess authority over the charging of smaller fines—which constitute most fines imposed for illegal deforestation.¹³⁵ Likewise, the Bolsonaro administration reduced the discretionary budget of the Ministry of the Environment by twenty-three percent—eradicating funds that were allotted for enforcement efforts and for combating fires razing the Amazon.¹³⁶

Bolsonaro has both indirectly and directly impacted these agencies' capacity to enforce environmental law, leaving agency morale at a low point. For example, Bolsonaro took further measures to protect his supporters in barring the legal policy that allowed

¹²⁹ Associated Press, *supra* note 122; *see also* Anthony Boadle, *Brazil Foreign Minister Says 'There Is No Climate Change Catastrophe,'* REUTERS (Sept. 11, 2019, 5:52PM), <https://www.reuters.com/article/us-brazil-environment-araujo/brazil-foreign-minister-says-there-is-no-climate-change-catastrophe-idUSKCN1VW2S2>.

¹³⁰ Gonzales, *supra* note 128.

¹³¹ HUMAN RIGHTS WATCH, *supra* note 78.

¹³² Branford & Borges, *supra* note 110.

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ HUMAN RIGHTS WATCH, *supra* note 78.

IBAMA and ICMBio to destroy equipment used for illegal deforestation—one of the most effective deterrents in curbing deforestation.¹³⁷ Bolsonaro also called for the banning of anti-deforestation measures, which sought to end the illegal extraction of timber from a protected area in Rondônia.¹³⁸ His statement managed to halt all government monitoring operations in the protected forest, and instill fear in agency officials of possible assaults if they enter the protected area.¹³⁹ In essence, Bolsonaro’s new policies have obligated the nation’s environmental experts to sit idle and not enforce environmental law.¹⁴⁰

D. Scientific Disbelief & Anti-Environmental Rhetoric

Bolsonaro has substantiated his skepticism toward deforestation rates in the Amazon and climate change on several occasions. In one instance, Bolsonaro suggested that people should eat less and “poop every other day” to save the planet. INPE data shows Brazil’s significant progress in curbing deforestation beginning in 2007.¹⁴¹ Conversely, this data recently revealed the extensive rise in deforestation since Bolsonaro took office, notwithstanding Bolsonaro’s own assertions that his policies are not detrimental to the Amazon.¹⁴² To no surprise, Bolsonaro stamped the data as fraudulent lies and fired physicist Ricardo Galvão, INPE’s director, replacing him with a military acquaintance.¹⁴³ Without corroborating evidence, Bolsonaro claimed that INPE was working “at the service of some NGO.”¹⁴⁴

¹³⁷ *Id.*

¹³⁸ Branford & Borges, *supra* note 110.

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ See Rhett A. Butler, *Amazon Deforestation in Brazil Falls 29% for 2007*, MONGABAY (Aug. 13, 2007), <https://news.mongabay.com/2007/08/amazon-deforestation-in-brazil-falls-29-for-2007/>.

¹⁴² See Branford & Borges, *supra* note 110.

¹⁴³ Terrence McCoy, *Brazil’s Amazon Monitor, Fired after Dispute with Bolsonaro, Speaks Out on Deforestation*, WASH. POST (Aug. 9, 2019, 6:00 AM), https://www.washingtonpost.com/world/the-americas/the-amazon-monitor-who-was-fired-by-bolsonaro-speaks-out-on-deforestation/2019/08/06/f436af92-b844-11e9-bad6-609f75bfd97f_story.html.

¹⁴⁴ *Id.*

Bolsonaro has blamed everyone except himself for the conflagrations razing the Amazon rainforest. For example, Bolsonaro made an uncorroborated statement pertaining to the destructive fires when he blamed his left-wing NGO critics for the conflagrations—alleging that his critics set the fires in order to make him look bad.¹⁴⁵ Bolsonaro admitted that he had no real evidence to support his claim.¹⁴⁶ Bolsonaro has even blamed the fires on Hollywood actor and environmentalist Leonardo DiCaprio, unfoundedly alleging that DiCaprio funded nonprofit groups to start the fires.¹⁴⁷ These allegations of culpability follow police raids that took place at the headquarters of nonprofit groups in the Amazonian state of Pará, when four volunteer firefighters were arrested and accused of starting the fires to secure funding from sympathetic donors.¹⁴⁸ A judge later ordered their release and federal prosecutors claim that evidence points to land-grabbers as the primary suspects, rather than firefighters and nonprofit groups.¹⁴⁹

Bolsonaro's pro-development agenda does not conform to the Principles of Sustainable Development. Therefore, his administration cannot justifiably assert a development narrative to excuse its detrimental, antienvironmental policies.¹⁵⁰ Bolsonaro's weakening of environmental policies caused Brazilian Amazon deforestation levels to reach a twelve-year high in 2020.¹⁵¹ These

¹⁴⁵ Terrence McCoy, *The Amazon is Burning. Bolsonaro Says his Critics Are Setting the Fires, to Make Him Look Bad*, WASH. POST (Aug. 22, 2019, 5:55 PM), https://www.washingtonpost.com/world/the_americas/the-amazon-is-burning-bolsonaro-says-his-critics-are-setting-the-fires-to-make-him-look-bad/2019/08/21/722ca092-c424-11e9-8bf7-cde2d9e09055_story.html.

¹⁴⁶ Jonathan Watts, *Jair Bolsonaro Claims NGOs behind Amazon Forest Fire Surge – but Provides No Evidence*, GUARDIAN (Aug. 21, 2019), <https://www.theguardian.com/world/2019/aug/21/jair-bolsonaro-accuses-ngos-setting-fire-amazon-rainforest>.

¹⁴⁷ Associated Press, *Brazil's President Blames Leonardo DiCaprio amid Amazon Fires*, PBS (Nov. 29, 2019, 12:54 PM), <https://www.pbs.org/newshour/world/brazils-president-blames-leonardo-dicaprio-amid-amazon-fires>.

¹⁴⁸ *Id.*

¹⁴⁹ *Id.*

¹⁵⁰ See generally *The 17 Goals*, U.N. DEP'T OF ECON. & SOC. AFF., SUSTAINABLE DEV., <https://sdgs.un.org/goals> (last visited Mar. 1, 2021).

¹⁵¹ Jake Spring & Lisandra Paraguassu, *Deforestation in Brazil's Amazon Skyrockets to 12-Year High under Bolsonaro*, REUTERS (Nov. 30, 2020),

actions undermine a pro-development narrative in the international arena because economic development cannot be cogitated in exclusivity of sustainability. For example, United States President Joe Biden has threatened economic consequences against Brazil if it did not halt deforestation.¹⁵² If such economic sanctions are implemented, other economic powerhouses in the international arena may follow suit, resulting in harmful setbacks to Brazil's economy and Bolsonaro's "pro-development objective."¹⁵³ The potential economic damage to Brazil's economic interests was recently exhibited in June 2020, when over two dozen financial institutions, that collectively control roughly \$3.7 billion in assets, warned the Brazilian government that investors were steering away from countries that are accelerating the degradation of ecosystems.¹⁵⁴

V. INADEQUACY OF EXISTING INTERNATIONAL AUTHORITY

Deforestation of the Amazon rainforest has clear international dimensions. As the Amazon depletes in volume, carbon stored by the vegetation is released into the atmosphere, the world loses crucial allies in keeping excess carbon out of the atmosphere, and the livestock and crops that replace the fallen vegetation generate more of the greenhouse gases that continue to warm the globe.¹⁵⁵ Global warming subsequently leads to a plethora of extreme weather events that carry detrimental implications felt across the entire planet.¹⁵⁶ Therefore, a substantial body of international authority has developed for, among other things, the purpose of

<https://www.reuters.com/article/brazil-environment/deforestation-in-brazils-amazon-skyrockets-to-12-year-high-under-bolsonaro-idUSKBN28B3MV>.

¹⁵² *Id.*

¹⁵³ See generally *infra* Part VI.

¹⁵⁴ Ernesto Londoño & Leticia Casado, *Under Pressure, Brazil's Bolsonaro Forced to Fight Deforestation*, N.Y. TIMES (Aug. 28, 2020), <https://www.nytimes.com/2020/08/01/world/americas/Brazil-amazon-deforestation-bolsonaro.html>.

¹⁵⁵ *What is the Relationship Between Deforestation And Climate Change?*, RAINFOREST ALLIANCE (Aug. 12, 2018), <https://www.rainforest-alliance.org/articles/relationship-between-deforestation-climate-change>.

¹⁵⁶ See *infra* Part II Section A.

curbing deforestation and mitigating climate change. The international schemes discussed later have potential to alleviate some of the injurious effects of deforestation. However, they are severely inhibited by structural limitations and a regime that is blatantly uncommitted to upholding the rule of law.

A. *Efforts by the United Nations*

The United Nations (“UN”) has long recognized the global impacts of climate change; thus, the UN has established several multilateral environmental agreements to mitigate the global threat. In 1992, its “Earth Summit” produced the United Nations Framework Convention on Climate Change (“UNFCCC”) as an initial step in combatting the climate change calamity.¹⁵⁷ 197 countries, including Brazil, ratified the Convention with the goal of preventing “dangerous” human interference with the climate system.¹⁵⁸ The UNFCCC itself does not prescribe any enforcement mechanisms; rather, the framework delineates how specific international treaties may be negotiated to particularize further action toward the goals of the UNFCCC.¹⁵⁹ Among these specific treaties is the Kyoto Protocol, a legally binding international agreement that commits signatory countries to specific emissions reduction targets.¹⁶⁰ Although some have credited the Kyoto Protocol for encouraging eco-friendly innovation and greater reliance on renewable energy, scientists have considered it a disappointment for its failure to produce any demonstrable reductions in current and anticipated emissions growth.¹⁶¹ In 2016, Brazil ratified the Paris Agreement on Climate Change and

¹⁵⁷ *Climate Change*, U.N., <https://www.un.org/en/sections/issues-depth/climate-change/> (last visited Jan. 11, 2020).

¹⁵⁸ *Id.*

¹⁵⁹ See K.F. Kuh, *The Law of Climate Change Mitigation: An Overview*, 2 ENCYCLOPEDIA OF THE ANTHROPOCENE 505, 505 (2018).

¹⁶⁰ Hannah Chang, *A “Legally Binding” Climate Agreement: What Does it Mean? Why Does it Matter?*, EARTH INST. (Feb. 23, 2010), <https://blogs.ei.columbia.edu/2010/02/23/a-“legally-binding”-climate-agreement-what-does-it-mean-why-does-it-matter/>.

¹⁶¹ Connor, *supra* note 5; see generally Steve Maich, *Kyoto Protocol's Shortcomings*, CANADIAN ENCYCLOPEDIA, <https://www.thecanadianencyclopedia.ca/en/article/kyoto-protocols-shortcomings> (last updated Dec. 13, 2013).

committed to eradicating illegal deforestation in the Amazon by the year 2030.¹⁶² The Paris Agreement builds upon the UNFCCC and aims to improve the global response to the dangers of climate change by initiating adequate financial flows, new technological frameworks, and an improved capacity building framework.¹⁶³ The Paris Agreement requests each country to framework and communicate their post-2020 climate actions, also known as their Nationally Determined Contributions (“NDCs”), these climate actions collectively determine whether the world achieves the goals of the Agreement.¹⁶⁴

It is irrefutable that the aforementioned treaties have worked progressively for the betterment of the environment within the context of climate change.¹⁶⁵ However, several limitations render these treaties ineffectual in curbing deforestation in the Amazon. First, these efforts have fundamentally neglected the requisite urgency in combatting deforestation of the Brazilian Amazon. For example, the Kyoto Protocol never adopted any means for considering tropical forest conservation or prevention of deforestation as a means for mitigating climate change, over concerns of efficacy.¹⁶⁶ Even if the Protocol had adopted such a mechanism, it still had no real power of sanction or coercion over a

¹⁶² Chris Mooney & Dom Phillips, *Brazil Just Ratified the Paris Climate Agreement. Here's Why that's a Really Big Deal*, WASH. POST, (Sept. 12, 2016), <https://www.washingtonpost.com/news/energy-environment/wp/2016/09/12/brazil-just-ratified-the-paris-climate-agreement-heres-why-thats-a-really-big-deal/>.

¹⁶³ *The Paris Agreement*, U.N. FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC), <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>, (last visited Jan. 11, 2020).

¹⁶⁴ *Nationally Determined Contributions (NDCs)*, UNFCCC, <https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs>, (last visited Jan. 11, 2020).

¹⁶⁵ See generally *What is the United Nations Framework Convention on Climate Change*, UNFCCC, <https://unfccc.int/process-and-meetings/the-convention/what-is-the-united-nations-framework-convention-on-climate-change> (last visited Feb. 06. 2021).

¹⁶⁶ Paulo Moutinho et al., *Why Ignore Tropical Deforestation? A Proposal for Including Forest Conservation in the Kyoto Protocol*, 56 UNASYLVA 27, 27 (2005).

noncompliant party.¹⁶⁷ It is important to note that these treaties require the enactment of domestic legislation to give effect to their terms.¹⁶⁸ International agreements are considered “binding” on parties when the agreement enters into force.¹⁶⁹ If Brazil does not enact domestic legislation implementing the terms of the “binding” treaty, then, the international obligation remains no less binding, but Brazil is simply in default of its international obligation.¹⁷⁰ In other words, without adequate enforcement mechanisms at the domestic level, parties are free to continue injurious industrial and agricultural practices with impunity.

The Paris Agreement managed to address the Kyoto Protocol's conservation shortcomings by including the REDD + program in its climate-oriented initiative.¹⁷¹ The REDD + program aims to reduce greenhouse gas emissions by providing internationally funded financial incentives to reduce deforestation and forest degradation, promote forest conservation and sustainable management, and boost forest carbon stocks in developing countries.¹⁷² Although this seems like a victory for environmentalists, Bolsonaro has already demonstrated his disinterest in such monetary incentives by loosening environmental regulations, cutting enforcement budgets, and supporting development in protected areas.¹⁷³

However, the Paris Agreement lacks enforceable standards. Article 5, for example, states that parties “should take action” to

¹⁶⁷ Michael Gillenwater, *The Treaty Compliance Challenge: Enforcement Under the Kyoto Protocol*, GHG MGMT. INST. (Feb. 10, 2010), <https://ghginstitute.org/2010/02/10/the-treaty-compliance-challenge-enforcement-under-the-kyoto-protocol/>.

¹⁶⁸ Chang, *supra* note 160.

¹⁶⁹ *Id.*

¹⁷⁰ *See id.*

¹⁷¹ *See generally* Nancy Harris & Fred Stolle, *Forests Are in the Paris Agreement! Now What?*, WORLD RESOURCES INST.: INSIGHTS BLOG (Jan. 5, 2016), <https://www.wri.org/blog/2016/01/forests-are-paris-agreement-now-what>.

¹⁷² *Id.*

¹⁷³ *See* Leticia Casado & Ernesto Londoño, *Under Brazil's Far-Right Leader, Amazon Protections Slashed and Forests Fall*, N.Y. TIMES (Jul. 28, 2019), <https://www.nytimes.com/2019/07/28/world/americas/brazil-deforestation-amazon-bolsonaro.html>.

preserve forests due to their role as carbon sinks.¹⁷⁴ It is difficult to ascertain the word “should” and the legal obligations to be implemented by the signatory parties.¹⁷⁵ Likewise, Article 5 states that parties are “encouraged to take action” to implement the existing deforestation framework.¹⁷⁶

Like the Kyoto Protocol, the Paris Agreement lacks an effective enforcement mechanism. James Hansen, former NASA scientist, expressed anger over the agreement—labeling its provisions as “promises” rather than rigid obligations.¹⁷⁷ To no avail, Hansen advocated for imposing fees on greenhouse gas emissions as the only effective means for deterring anti-environmental behavior.¹⁷⁸ Without a third-party, independent enforcement body that can hold infringing parties accountable for failing to meet their obligations, parties to the agreement are unlikely to uphold their respective commitments. This is especially true for Brazil, seeing as its administration has not implemented any new policies to curb emissions growth.¹⁷⁹ To further exacerbate the issue, Brazil’s technical negotiators at the United Nations talks are disengaged from political leaders and are unclear on their specific goals.¹⁸⁰ This essentially means that negotiators may reach emissions deals that are likely to be refuted by the Bolsonaro administration.¹⁸¹

¹⁷⁴ Paris Agreement to the United Nations Framework Convention on Climate Change, art. 5, Dec. 12, 2015, T.I.A.S. No. 16-1104 [hereinafter *Paris Agreement*]; see also Ash Murphy, *Jair Bolsonaro Wants to Deforest the Amazon – What Powers Does the UN Have to Stop Him?*, CONVERSATION (July, 12, 2019, 11:43 AM), <http://theconversation.com/jair-bolsonaro-wants-to-deforest-the-amazon-what-powers-does-the-un-have-to-stop-him-120154>.

¹⁷⁵ Murphy, *supra* note 174.

¹⁷⁶ Paris Agreement, *supra* note 174.

¹⁷⁷ Oliver Millman, *James Hansen, Father of Climate Change Awareness, Calls Paris Talks 'a Fraud'*, GUARDIAN, (Dec. 12, 2015), <https://www.theguardian.com/environment/2015/dec/12/james-hansen-climate-change-paris-talks-fraud>.

¹⁷⁸ *See id.*

¹⁷⁹ *Brazil*, CLIMATE ACTION TRACKER, <https://climateactiontracker.org/countries/brazil/> (last visited Jan. 11, 2020).

¹⁸⁰ Jake Spring, *Brazil's Climate Negotiators in Dark on Bolsonaro's Aims: Sources*, REUTERS, (Dec. 2, 2019), <https://www.reuters.com/article/us-climate-change-accord-brazil/brazils-climate-negotiators-in-dark-on-bolsonaros-aims-sources-idUSKBN1Y617N>.

¹⁸¹ *Id.*

B. *International Governmental Organizations*

Several international organizations have been created to save the environment; however, their efforts have been inhibited by limited resources, conflicting interests, and executive refutation. The United Nations Environment Programme (“UNEP”) describes itself as the world’s foremost environmental authority.¹⁸² It is responsible for setting the global environmental agenda, promoting the implementation of the environmental dimension of sustainable development within the United Nations system, while serving as an authoritative advocate for the global environment.¹⁸³ Limitations have nevertheless impacted UNEP’s capacity to promote substantial environmental change. Budgetary constraints and organizational impediments create obstacles that are not necessarily insurmountable but are enough to significantly inhibit environmental progress.¹⁸⁴ Moreover, despite recognizing the importance of halting the seasonal fires plaguing the Brazilian Amazon, prior to the Climate-Action Summit of September 2019, UNEP did not outline a specific course of action. Instead, UNEP offered futile words of inspiration when a spokesperson claimed UNEP was ready to “work with” Brazil in responding to the crisis.¹⁸⁵ This statement does not reflect the requisite sense of urgency to combat the destruction. Most importantly, it fails to recognize that the Brazilian executive administration does not care to implement environmental policy or stop unlawful deforestation.

The International Tropical Timber Organization (“ITTO”) is an intergovernmental organization created to promote the sustainable

¹⁸² *Why Does UN Environment Programme Matter?*, U.N. ENV’T PROGRAMME, <https://www.unenvironment.org/about-un-environment/why-does-un-environment-matter> (last visited Jan. 17, 2020).

¹⁸³ *Id.*

¹⁸⁴ See generally Gavin Murphy, *Upgrading the United Nations Environmental Programme to Meet the Needs of the 21st Century*, E-INT’L. REL. (May 24, 2016), <https://www.e-ir.info/2016/05/24/upgrading-the-united-nations-environmental-programme-to-meet-the-needs-of-the-21st-century/>; see also McGee & Zimmerman, *supra* note 42 at 541 (explaining the Programme is “extraordinarily small.”).

¹⁸⁵ Inger Anderson, *Statement by Inger Andersen on the Ongoing Fires in the Amazon Rainforest*, U.N. ENV’T (Aug. 23, 2019), <https://www.unenvironment.org/news-and-stories/statement/statement-inger-andersen-ongoing-fires-amazon-rainforest>.

management and conservation of tropical forests.¹⁸⁶ The ITTO develops internationally agreed policy guidelines and norms to encourage sustainable forest management (“SFM”), sustainable tropical timber industries, and trade.¹⁸⁷ Despite Brazil’s membership with the ITTO, mere policy guidelines and words of encouragement do not provide the strict intervention necessary to stop the Bolsonaro administration from destroying and subsequently developing protected regions of the Amazon. Moreover, the ITTO promotes sustainable tropical timber supply chains.¹⁸⁸ Given the vastness of the Brazilian Amazon, in combination with the gutting of local enforcement agencies, the ITTO is not in the position to discern whether Brazilian timber was sourced responsibly. Similar to the aforementioned treaties, these international organizations lack enforceable standards and enforcement mechanisms— rendering these international efforts futile in curbing destruction of the Amazon.

VI. RESPONSES TO BRAZILIAN INACTION

Bolsonaro’s threat to the Amazon and climate change has sparked varied reactions from all over the world. Although some of these responses are promising, many carry implications that further exacerbate this environmental calamity.

To begin with, numerous entities have come together and pledged financial resources to combat deforestation of the Amazon. For example, Leonardo DiCaprio’s environmental organization Earth Alliance pledged \$5 million to help protect the Amazon, in wake of the seasonal fires.¹⁸⁹ Conversely, Norway and Germany suspended funding for the Amazon Fund, a REDD + mechanism

¹⁸⁶ *About ITTO*, INT’L TROPICAL TIMBER ORG., https://www.itto.int/about_itto/ (last visited Jan. 17, 2020).

¹⁸⁷ *Id.*

¹⁸⁸ *Id.*

¹⁸⁹ Amanda Jackson, *Leonardo DiCaprio’s New Environmental Fund Pledges \$5 million in Aid amid Amazon Fires*, CNN, <https://www.cnn.com/2019/08/25/americas/leonardo-dicaprio-amazon-fire-fund-trnd/> (last updated Aug. 26, 2019, 8:38 AM).

created to raise donations for non-reimbursable investments, in efforts to combat deforestation in the Brazilian Amazon.¹⁹⁰ This response arose after the Brazilian government blocked operations of a fund receiving the aid.¹⁹¹ Norway has worked closely with Brazil to protect the Amazon rainforest for many years, contributing \$1.2 billion to the Amazon Fund—making it the biggest donor by far.¹⁹² One might perceive this course of action as counterintuitive. However, Bolsonaro’s administration unilaterally changed the Amazon Fund’s governance structure and shut down the committee responsible for selecting which environmental projects to support.¹⁹³ The administration has not planned for creating a new committee.¹⁹⁴ Bolsonaro responded irately, telling reporters “isn’t Norway that country that kills whales up there in the North Pole?”¹⁹⁵ He urged Norway to “take that money and help Angela Merkel reforest Germany.”¹⁹⁶ Given his angry response, Bolsonaro likely altered the Fund’s governance structure in an attempt to seize and allocate the suspended funds toward his own economic interests.¹⁹⁷

Global responses affecting trade have further ensued as a result of Bolsonaro’s anti-environmental policy. The seasonal fires prompted several large American corporations to stop buying leather from Brazil.¹⁹⁸ Nevertheless, loopholes in the chain of production and distribution—made possible by laundering—renders such action futile because these corporations may inevitably end up with leather

¹⁹⁰ *Norway Stops Amazon Fund Contribution in Dispute with Brazil*, REUTERS (Aug. 15, 2019, 4:19 PM), <https://www.reuters.com/article/us-brazil-environment-norway/norway-stops-amazon-fund-contribution-in-dispute-with-brazil-idUSKCN1V52C9> [hereinafter REUTERS]; AMAZON FUND, <http://www.amazonfund.gov.br/en/home/> (last visited Jan. 17, 2020).

¹⁹¹ REUTERS, *supra* note 190.

¹⁹² *Id.*

¹⁹³ *Id.*

¹⁹⁴ *Id.*

¹⁹⁵ *Id.*

¹⁹⁶ *Id.*

¹⁹⁷ See McCoy, *supra* note 145 (stating Bolsonaro has ironically claimed that Brazil has no money to combat the fires).

¹⁹⁸ Marc Bain, *The Amazon Fires Prompt H&M, Vans and Timberland to Stop Buying Brazilian Leather*, QUARTZ, (Aug. 30, 2019), <https://qz.com/1698612/amazon-fires-prompt-vans-timberland-to-stop-buying-brazilian-leather/>.

produced in Brazil.¹⁹⁹ The market share of these companies is also minimal; therefore, these sanctions are unlikely to encourage Brazil, the second-largest leather producer in the world, to adhere to responsible sourcing requirements.²⁰⁰ Unless the vast majority of leather-consuming nations unite to boycott Brazilian leather, these smaller boycotts are unlikely to stop Brazil from deforesting the Amazon to, among other things, create more room for cattle. Moreover, China uses a significant amount of Brazilian leather to manufacture products exported to the United States and Europe—inescapably associating countless manufacturers and consumers with Brazilian deforestation.²⁰¹

American Senators Brian Schatz and Chris Murphy recognize deforestation of the Amazon as a national security crisis. They have recommended that the United States put a hold on its bilateral relationship with Brazil until its government takes action to combat deforestation.²⁰² They recommend that the United States freeze regular military exercises and exchanges with Brazil—an unlikely course of action at the time, given former President Donald Trump’s friendship with Bolsonaro.²⁰³ The senators have also suggested that Congress should amend the Lacey Act, which bans the import of illegally trafficked wildlife, plants and timber, to include prohibitions on irresponsibly sourced beef and leather.²⁰⁴ The senators believe that this legislation would build on the Brazilian

¹⁹⁹ *Id.*

²⁰⁰ See *Which Countries Produce the Most Leather?*, BUFFALO JACKSON, <https://buffalojackson.com/blogs/insight/which-countries-produce-the-most-leather> (last visited Jan. 17, 2020).

²⁰¹ Christina MacFarquhar, *Fifteen European and US Companies that Could Help Cut Deforestation Risk from Brazil-China Leather Trade*, MEDIUM, (Aug. 3, 2019), <https://medium.com/global-canopy/fifteen-european-and-us-companies-that-could-help-cut-deforestation-risk-from-brazil-china-leather-5bea87cc5268>.

²⁰² Brian Schatz & Chris Murphy, *The Amazon Rainforests are Still on Fire. If Trump Won't Act, Congress Will.*, NBC NEWS, (Sept. 4, 2019), <https://www.nbcnews.com/think/opinion/amazon-rainforests-are-still-fire-if-trump-won-t-act-ncna1049556>.

²⁰³ But see Henry Olsen, *Bolsonaro Learns that Trump Treats his Friends Worse than his Enemies*, WASH. POST (Dec. 2, 2019, 2:58 PM), <https://www.washingtonpost.com/opinions/2019/12/02/trumps-latest-tariffs-display-his-worst-qualities/>.

²⁰⁴ Schatz & Murphy, *supra* note 202.

laws that prohibit farmers and ranchers from using illegally deforested areas in the Amazon.²⁰⁵ For reasons covered previously, these Brazilian laws have not and will not curb illegal deforestation.²⁰⁶ The senators also believe that amending the Lacey Act will ensure that responsible sourcing laws are properly enforced in the United States.²⁰⁷ These beliefs are misguided—especially given the complications with supply chain verification created by the remoteness in which these activities take place, criminal influence on supply chains, and lack of adequate governmental oversight. As of April 2021, no such amendment has been officially proposed.²⁰⁸

The United States does not stand alone in expressing a dire need for regulatory intervention. The European Union (“EU”) recently opened the door to impose regulation on company supply chains importing Brazilian products into its market, in an attempt to ensure the EU consumes products “from deforestation-free supply chains.”²⁰⁹ These proposals suggest bolstering certification standards “that help to identify and promote deforestation-free commodities.”²¹⁰ Again, the difficulties inherent with supply chain verification, created by activities such as “laundering,” reduce these proposals to mere ambitions rather than binding legal authority.²¹¹

Additionally, the EU and Mercosur, a Southern American trade block comprised of Argentina, Brazil, Uruguay, and Paraguay, are in the process of working out a trade deal that includes a

²⁰⁵ *Id.*

²⁰⁶ *See infra* Part IV.

²⁰⁷ Schatz & Murphy, *supra* note 202.

²⁰⁸ *See U.S. S2561 Big Cat Public Safety Act*, BILL TRACK 50, <https://www.billtrack50.com/BillDetail/1140242> (last visited Mar. 2, 2021) (demonstrating efforts by Senators Schatz and Murphy to propose a *bill to amend* the Lacey Act on September 26, 2019, which ultimately died in committee on December 2020).

²⁰⁹ Chloé Farand, *EU Moots Crackdown on Deforestation through Supply Chains*, CLIMATE CHANGE NEWS (July 23, 2019, 3:34 PM), <https://www.climatechangenews.com/2019/07/23/eu-moots-crackdown-deforestation-supply-chains/>.

²¹⁰ *Id.*

²¹¹ *See id.*

commitment to tackle deforestation.²¹² The Mercosur trade deal has reached agreement in principle, but has yet to be officially ratified.²¹³ The trade deal has been subject to significant criticism because although it has reached agreement in principle, the deal has failed to prevent Bolsonaro from opening the Amazon for economic development.²¹⁴ The trade deal also lifts tariffs on a number of goods, including food produce.²¹⁵ Consequently, the Brazilian administration might be more motivated to persist in deforesting the Amazon to increase production and export figures.²¹⁶ This theory is more likely to be appreciated given that the trade deal lacks enforceable safeguards.²¹⁷ Finally, this agreement is the product of over twenty years of negotiation.²¹⁸ Given the many regulatory intricacies characteristic of such an agreement, there is no foreseeable timeframe as to when the trade deal will be officially ratified—a calamitous reality given the time sensitive nature of this ongoing environmental disaster.

The international financial community has rebuked the anti-environmental actions of the Bolsonaro administration, while urging Brazilian companies to take a more hands-on approach in combating illegal deforestation. In an open letter, more than two-hundred investment funds, managing \$16 trillion, warned Brazilian companies, whose supply chains benefit from illegal deforestation, that they could face financial threats from stakeholders under pressure of increasing reputational, operational and regulatory risks.²¹⁹ The investment funds advised Brazilian companies to

²¹² *Key Elements of the EU-Mercosur Trade Agreement**, EUROPEAN COMMISSION, (June 27, 2019), https://ec.europa.eu/commission/presscorner/detail/en/QANDA_19_3375.

²¹³ *See id.*

²¹⁴ *See id.*

²¹⁵ Natalie Sauer, *EU-Mercosur Trade Deal will Drive Amazon Deforestation, Warns Ex-Minister*, CLIMATE CHANGE NEWS, (Jan. 7, 2019), <https://www.climatechangenews.com/2019/07/01/eu-mercotur-trade-deal-will-drive-amazon-deforestation-warns-ex-minister/>.

²¹⁶ *See id.*

²¹⁷ Farand, *supra* note 209.

²¹⁸ *See id.*

²¹⁹ Marina Lopes, *Investment Funds Managing \$16 Trillion Urge Companies in Brazil to Fight Amazon Deforestation*, WASH. POST, (Sept. 19, 2019), https://www.washingtonpost.com/world/the_americas/investment-funds-managing-16-trillion-urge-companies-in-brazil-to-fight-

“publicly disclose and implement a commodity-specific no deforestation policy with quantifiable, time-bound commitments covering the entire supply chain and sourcing geographies.”²²⁰ The investment funds also suggested “establishing a transparent monitoring and verification system for supplier compliance with the company’s no deforestation policy.”²²¹ At first glance, these suggestions seem promising. However, similar to the proposals and guidelines discussed previously, these suggestions do not provide a concrete answer to the imperative question of: How? How are these companies supposed to implement, adhere to, and enforce such a policy in the face of an industry fueled by intimidation, violence, and political corruption?

In response to the letter, Otávio Rêgo Barros, a spokesman for the Bolsonaro administration, told reporters that the government was “adopting all measures to deal with the fire and deforestation crisis.”²²² Although Bolsonaro sent soldiers to combat the fires, he rejected an aid package while labeling calls for international collaboration as an attack on Brazilian sovereignty.²²³

VII. RECOMMENDED COURSE OF ACTION

For the reasons explained previously,²²⁴ the existing domestic and international legal mechanisms are insufficient to effectively

deforestation/2019/09/19/08174706-dae6-11e9-a1a5-162b8a9c9ca2_story.html; *Investor Statement on Deforestation and Forest Fires in the Amazon*, U.N. Principals for Responsible Investment (UNPRI) (Sept. 18, 2019), https://www.unpri.org/Uploads/c/k/h/investorstatementondeforestationandforestfiresintheamazon_502487.pdf [hereinafter UNPRI].

²²⁰ UNPRI, *supra* note 219.

²²¹ *Id.*

²²² Lopes, *supra* note 219.

²²³ *Id.*

²²⁴ Due to the deeply corrupt nature of Brazil’s political environment, no internal punitive action can be expected. Corruption in Brazil’s political environment serves as a political strategy conducted throughout Brazilian history. For more information, see Benjamin Fogel, *Brazil: Corruption as a Mode of Rule*, 51 NACLA REP. ON THE AM. 153, 153-58 (2019). Moreover, Brazil’s Constitution endows its President with immunity against criminal law and political control over criminal investigations. *Cf.* CONSTITUIÇÃO FEDERAL [C.F.] [CONSTITUTION] art. 86 § 4 (stating that the president “cannot be held

address the rampant deforestation of the Brazilian Amazon. In order to realize significant reductions in illegal deforestation, the world is in need of a new international legal mechanism accompanied by enforceable domestic programs. Considering the shortcomings of existing international authority within the context of adequate enforcement procedures, the United Nations should amend the Paris Agreement to include a set of concrete enforcement standards, imposition of fines, and a legal mechanism by which to adequately enforce those standards and already existing obligations. The amendment should also establish an efficient means of monitoring irresponsibly sourced products to ensure that chains of production do not engage in illegal deforestation. Moreover, the amendment should establish an international tribunal to enforce existing obligations and resolve disputes.

The realm of existing international legal authority can be improved to assist individual countries, including Brazil, in the battle against deforestation and climate change. However, no form of international intervention will save the Amazon rainforest independent of Brazilian collaboration. Therefore, President Bolsonaro and his allies must be compelled to roll back on their anti-environmental administrative decisions and adhere to both Brazilian and international environmental law. To induce such action, these individuals must fear concrete repercussions—a fear that cannot be realized given the inadequacy of existing legal authority. Utilizing the International Criminal Court (“ICC”) to prosecute Bolsonaro and his administration for crimes against humanity and/or genocide may be the only avenue of intervention that addresses the time sensitive nature of this continuing environmental catastrophe.

A. *Designate Ecocide as a Crime Against Humanity*

Ecocide is a term generally understood to mean the deliberate and widespread destruction of the environment.²²⁵ It is a term that many people hope will eventually be on par with other

responsible for acts outside the exercise of his functions” during the term of his presidency) (Braz.).

²²⁵ Ernesto Lodoño, *Imagine Jair Bolsonaro Standing Trial for Ecocide at The Hague*, N.Y. TIMES (Sept. 21, 2019), <https://www.nytimes.com/2019/09/21/sunday-review/bolsonaro-amazon-fire.html>.

crimes against humanity.²²⁶ Currently, there is no international crime that can be fundamentally used to hold individuals accountable for their roles in ecological catastrophes. If the international arena is to save the Amazon rainforest and mitigate the snowballing effects of climate change, it should recognize ecocide as a crime against humanity and incorporate it into the Rome Statute.²²⁷

The ICC currently has jurisdiction over four categories of crime: genocide, crimes against humanity, war crimes, and crimes of aggression.²²⁸ These crimes are collectively known as Crimes Against Peace, and are meant to constitute “the most serious crimes of concern to the international community as a whole.”²²⁹ Conventionally, crimes against humanity are considered to harm a class of immediate victims and humanity as a whole; thus, the world has an interest in their punishment and deterrence.²³⁰ As codified in Article 7 of the Rome Statute, the following acts are punishable as crimes against humanity when perpetrated by a state actor as part of a systematic or widespread attack against a civilian population: murder; extermination; deportation or forcible transfer; false imprisonment; torture; rape, sexual slavery, or enforced sterilization; ethnic persecution; disappearance; apartheid; “Other inhumane acts of a similar character intentionally causing great suffering, or serious injury to body or to mental or physical health.”²³¹ The intent requirement for liability is “knowledge of the attack.”²³²

Of the aforementioned acts, four are relevant for the analysis of considering ecocide as a crime against humanity: extermination,

²²⁶ *Id.*

²²⁷ The Rome Statute is the treaty that established the International Criminal Court. It was adopted on July 17, 1989 and entered into force on July 1, 2002. Rome Statute of the International Criminal Court (“RSICC”), 2187 U.N.T.S. 90, *entered into force* July 1, 2002 [hereinafter Rome Statute].

²²⁸ *Id.* at art. 5; *see also Understanding the International Criminal Court*, INT’L CRIM. CT., <https://www.icc-cpi.int/iccdocs/PIDS/publications/UICCEng.pdf>.

²²⁹ Rome Statute, *supra* note 227 at Preamble.

²³⁰ Tara Smith, *Are the Amazon Fires a Crime against Humanity?*, PRI (Sept. 19, 2019, 11:00 AM), <https://www.pri.org/stories/2019-09-19/are-amazon-fires-crime-against-humanity>.

²³¹ Rome Statute, *supra* note 227 at art. 7.

²³² *Id.*

deportation or forcible transfer of population, persecution, and “other inhumane acts of a similar character intentionally causing great suffering, or serious injury to the body or to mental or physical health.”²³³ Pursuant to the Rome Statute, “deportation or forcible transfer” is defined as the “forced displacement of persons through expulsion or other coercive acts from the area in which they are lawfully present, without grounds permitted under international law.”²³⁴ Moreover, “persecution” is defined as the “intentional and severe deprivation of fundamental rights contrary to international law by reasons related to the identity of such group or collectivity.”²³⁵ The UN Declaration on the Rights of Indigenous Peoples (“UNDRIP”) bestows indigenous people with a number of rights, including: the right not to be subjected to forced assimilation or destruction of their culture; the right to determine and develop priorities and strategies for exercising their right to development; the right to maintain and strengthen their distinctive spiritual relationship with their traditionally owned or otherwise occupied and used lands, territories, waters, coastal seas and other resources and to uphold their responsibilities to future generations in this regard.²³⁶ These rights substantiate an international legal safeguard to the link between indigenous people and the natural environments they call home. These rights also provide a framework by which to prosecute ecocide as a crime against humanity. For example, in *Kupreskic et al*, the International Criminal Tribunal for the Former Yugoslavia (“ICTY”) decided that expulsion, with destruction of homes and properties could constitute a severe and intentional deprivation of fundamental rights, and consequently persecution, for these purposes.²³⁷ Specifically, the Court held that,

²³³ *Id.*

²³⁴ *Id.* at art. 7(2)(d).

²³⁵ *Id.* at art. 7(2)(g).

²³⁶ United Nations Declaration on the Rights of Indigenous Peoples (“UNDRIP”), arts. 8, 23, 25, G.A. Res. 61/295, U.N. Doc. A/RES/61/295 (Sept. 13, 2007), *adopted* Sept. 13, 2007.

²³⁷ See ICTY, <https://www.icty.org>, (last visited Mar. 3, 2020) (“The International Criminal Tribunal for the former Yugoslavia (ICTY) was a United Nations court of law that dealt with war crimes that took place during the conflicts in the Balkans in the 1990s.”).

[A]ttacks on property can constitute persecution. [...] Such an attack on property in fact constitutes a destruction of the livelihood of a certain population. This may have the same inhumane consequences as a forced transfer or deportation. Moreover, the burning of a residential property may often be committed with a recklessness towards the lives of its inhabitants. The Trial Chamber therefore concludes that this act may constitute a gross or blatant denial of fundamental human rights, and, if committed on discriminatory grounds, it may constitute persecution.²³⁸

By applying these legal doctrines to the conduct of Jair Bolsonaro and his administration, the ICC would likely find that such conduct amounts to “attacks against a civilian population” by the way of “forcible transfer” and “persecution,” which, as will be discussed, may ultimately result in the “extermination” of the indigenous people that call the Amazon Rainforest home. Since taking office, Jair Bolsonaro has been deliberately negligent in protecting indigenous lands from encroaching land-grabbers, miners, and loggers.²³⁹ Similar to the defendants in *Kupreskic et al.*, who burned residential property with a recklessness towards the lives of its inhabitants, Bolsonaro and his administration have engaged in a level of volitional negligence to the extent that it constitutes the functional equivalent of mowing down the Amazon rainforest themselves.²⁴⁰ This negligent conduct rises to the level of intentional and criminal because Bolsonaro commands the Armed Forces, Brazil’s intelligence services, and indigenous policy decision-making.²⁴¹ As discussed previously, Bolsonaro has systematically and deliberately operated to dismantle the entities responsible for protecting the Amazon Rainforest and its indigenous

²³⁸ Prosecutor v. Kupreskic et al., Case No. IT-95-16-T, Judgement, ¶ 628-31 (January 14, 2000).

²³⁹ See *infra* Part IV.

²⁴⁰ *Id.*

²⁴¹ *Id.*

inhabitants.²⁴² As a result of this conduct, unlawful deforestation rates have skyrocketed to the dismay of indigenous communities that have been “forcibly transferred,” “persecuted,” and required to take protection matters into their own hands.²⁴³ If deforestation continues at the current rate, indigenous communities will be compelled to clash over territory and resources with neighboring tribes and may even resort to violence against the land invaders annihilating their multi-generation homes. This sort of population displacement, combined with the acceleration of climate change, clearly demonstrates why ecocide should be recognized as an international crime against humanity.²⁴⁴

To accomplish this unprecedented feat, a single party or coalition to the Rome Statute must propose an amendment to its charter, recognizing ecocide as a crime against humanity.²⁴⁵ Then, a two-thirds majority must support the initiative for it to be adopted.²⁴⁶ This legal process is not devoid of hurdles. Only countries that accept the amendment would be subject to its jurisdiction.²⁴⁷ Brazil would irrefutably reject such an amendment, however, pressure from countries that do accept the amendment may compel Brazil to accept the amendment or cut back on illegal deforestation. An international criminal law of ecocide would preclude investors from sponsoring anti-environmental practices and guarantors from

²⁴² *Id.*

²⁴³ Sophie Hirsh, *The Amazon Fires Are Destroying Indigenous People's Homes*, GREEN MATTERS, <https://www.greenmatters.com/p/amazon-rainforest-fires-indigenous-tribes> (last updated Aug. 18, 2020, 1:27 PM).

²⁴⁴ See generally Human Rights Advocacy Collective (CADHu) & the ARNS Commission, *Informative Note to the Prosecutor International Criminal Court pursuant to Article 15 of the Rome Statute requesting a Preliminary Examination into Incitement to Genocide and Widespread Systematic Attacks Against Indigenous Peoples by President Jair Messias Bolsonaro in Brazil*, PÚBLICA (2019), <https://apublica.org/wp-content/uploads/2019/11/e-muito-triste-levar-um-brasileiro-para-o-tribunal-penal-internacional-diz-co-autora-da-peticiao.pdf> (providing a more thorough analysis of the legal elements involved in establishing ecocide as a crime against humanity) [hereinafter CADHu] (Braz.).

²⁴⁵ *Making Ecocide a Crime*, STOP ECOCIDE, <https://www.stopecocide.earth/making-ecocide-a-crime> (last visited Jan. 25, 2020).

²⁴⁶ *Id.*

²⁴⁷ Lodoño, *supra* note 225.

insuring them.²⁴⁸ Individuals of superior responsibility would subsequently become criminally responsible for engaging in anti-environmental endeavors²⁴⁹—including engaging in trade with countries that are directly contributing to ecocide. Given his alleged objective of improving Brazil's economic growth and prosperity—and presuming a desire to avoid imprisonment—Bolsonaro would have no choice but to comply with the law due to its economic and punitive ramifications.

Although such an amendment has not yet been proposed, two sovereign states (Vanuatu and the Maldives) have publicly called for consideration of such an amendment (December 2019 at the Assembly of States Parties to the Rome Statute in The Hague, Netherlands).²⁵⁰ These calls for action shed further light on the importance of addressing this time-sensitive catastrophe swiftly and certainly. A formal proposal would shift matters towards necessitated change, put Bolsonaro and similarly situated parties on notice, and emphasize that blatant disregard for the natural environment and its indigenous inhabitants will not be tolerated.

B. Further Deforestation Will Result in Genocide

Although not the primary focus of this article, it is crucial to underscore the impacts of Bolsonaro's actions on Amazonian indigenous communities. Some argue that the aforementioned actions and omissions amount to crimes that fall within the jurisdiction of the ICC. Eloísa Machado, a law professor at Fundação Getúlio Vargas University in São Paulo, and a team of scholars have submitted an informative note to the prosecutor of the ICC, which may be used as a blueprint to open an investigation against Brazil.²⁵¹ Machado proclaims that Bolsonaro's actions may amount to genocide in light of the devastation that indigenous communities continue to be subject to.²⁵² These efforts may

²⁴⁸ *Making Ecocide a Crime*, *supra* note 245.

²⁴⁹ *Id.*

²⁵⁰ *Sovereign States Call on ICC to Seriously Consider Ecocide Crime*, STOP ECOCIDE (Dec. 19, 2019), <https://www.stopecocide.earth/newsletter-summary/sovereign-states-call-on-icc-to-seriously-consider-ecocide-crime->.

²⁵¹ Lodoño, *supra* note 225.

²⁵² *Id.*

potentially accelerate progress given the Court's reputation for slow prosecutions and narrow case selection.²⁵³

Pursuant to the Rome Statute, "genocide" is defined as any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such: (a) Killing members of the group; (b) Causing serious bodily or mental harm to members of the group; (c) Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part; (d) Imposing measures intended to prevent births within the group; (e) Forcibly transferring children of the group to another group.²⁵⁴ Jair Bolsonaro and his administration have engaged in a set of acts and substantial omissions that constitute a degree of incitement placing Brazil's indigenous population at risk of genocide. Bolsonaro's dehumanizing rhetoric²⁵⁵ and dismantling of environmental agencies and policy have led to an escalation of deforestation and violence, with tribe leaders being murdered—detrimentally impacting the survival of these communities in the long run.²⁵⁶

As outlined previously, these indigenous communities rely on the natural resources offered by the Amazon rainforest to survive. As the forest is razed for development, indigenous communities are forced to relocate and occupy other territories which might already be inhabited by other tribes. Additional issues will inevitably arise when tribes native to the Brazilian Amazon are forced to clash with communities in neighboring jurisdictions. When considering all these factors, genocide is certain to result because as the barrier between "uncontacted" tribes and modern civilization dwindles, indigenous communities are more likely to be exposed to viruses and diseases unique to the modern world.²⁵⁷ As displaced tribes with

²⁵³ *Id.*

²⁵⁴ Rome Statute, *supra* note 227 at art. 6.

²⁵⁵ Hirsh, *supra* note 243; CADHu, *supra* note 244 at 27 (quoting Rome Statute, *supra* note 227 at art. 6) (internal quotations omitted).

²⁵⁶ *Amazon Indigenous Leaders Killed in Brazil Drive-by Shooting*, GUARDIAN, (Dec. 7, 2019, 8:33 PM), <https://www.theguardian.com/world/2019/dec/08/amazon-indigenous-leaders-killed-in-brazil-drive-by-shooting>.

²⁵⁷ See Shana Hanbury, *Survival of Indigenous Communities at Risk as Amazon Fire Season Advances*, MONGABAY (Sept. 2, 2020), <https://news.mongabay.com/2020/09/survival-of-indigenous-communities-at->

infected members relocate, other communities are at risk of contracting and succumbing to diseases. Averting genocide is not listed in Bolsonaro's agenda. He once stated that "[t]here is no indigenous territory where there aren't minerals. Gold, tin and magnesium are in these lands, especially in the Amazon, the richest area in the world. I'm not getting into this nonsense of defending land for Indians."²⁵⁸ Bolsonaro has been true to his word. A report produced by the Indigenous Peoples' Missionary Council ("CIMI") notes that preliminary data for 2019 indicate a surge in trespassing and disputes over indigenous territories.²⁵⁹ According to the report, 111 incidents were recorded on seventy-six indigenous lands in 2018, rising to 160 incidents on 153 indigenous lands between January and September 2019.²⁶⁰ The report states that speeches given by then-presidential candidate Jair Bolsonaro were compelling forces in encouraging violence against Brazil's indigenous communities.²⁶¹ These deliberate acts and omissions are leading to deaths of indigenous people, the infliction of serious bodily and mental harm to others, and the infliction of conditions of life calculated to bring about its physical destruction in whole or in part, all pursuant to Article 6 of the Rome Statute.

In a broader sense, these indigenous communities are the foot soldiers in the war against deforestation and climate change because they defend the Amazon in remote areas against land grabbers, loggers, and miners.²⁶² The extermination and displacement of these communities aggravates this environmental calamity—especially in

risk-as-amazon-fire-season-advances/ ("And for isolated Indigenous groups, fire is a direct threat to survival, wiping out their forest food sources, and in some cases, forcing them into contact with the modern world, and potentially, modern diseases to which they have little resistance.").

²⁵⁸ Fiona Watson, *The Uncontacted Tribes of Brazil Face Genocide under Jair Bolsonaro*, SURVIVAL INT'L,

[https://www.survivalinternational.org/articles/3601-](https://www.survivalinternational.org/articles/3601-Bolsonaro%20uncontacted%20genocide)

[Bolsonaro%20uncontacted%20genocide](https://www.survivalinternational.org/articles/3601-Bolsonaro%20uncontacted%20genocide) (last visited Jan. 25, 2020).

²⁵⁹ Conselho Indigenista Missionário [Indigenous Missionary Council – CIMI], *Violência Contra os Povos Indígenas no Brasil [Violence against Indigenous Peoples in Brazil]*, RELATÓRIO (2018), <https://cimi.org.br/wp-content/uploads/2019/09/relatorio-violencia-contra-os-povos-indigenas-brasil-2018.pdf>. (Braz.).

²⁶⁰ *Id.*

²⁶¹ *Id.*

²⁶² *See infra* Part III Section C.

light of Bolsonaro effectively disabling both IBAMA and ICMBio. Therefore, the ICC must recognize that what the Bolsonaro administration has done and continues to do may result in the genocide of the indigenous communities that have called the Amazon rainforest home for thousands of years.

VIII. CONCLUSION

This recommended course of action does not significantly depart from the growing recognition that humanity suffers at the hands of environmental damage. In 2016, Fatou Bensouda, the ICC's head prosecutor, promised to prioritize cases within its jurisdiction that involved the "destruction of the environment, the illegal exploitation of natural resources or the illegal dispossession of land."²⁶³ The actions of the Bolsonaro administration fit squarely within this arena of propositioned prosecutorial action. Bolsonaro campaigned on—and has upheld—a promise to abrogate the land rights of indigenous people and open protected areas to his supporters in the logging, mining, and farming industries.²⁶⁴ Bolsonaro has disregarded his own country's environmental laws and regulations by turning a blind eye to illegal deforestation, undermining environmental enforcement agencies, and dismantling environmental protections.

All in all, deforestation of the world's largest rainforest is a significant, multifaceted problem. The increasing harm to indigenous communities and climate change provides the world with a powerful incentive to attack illegal deforestation with a sense of urgency. Although the link between deforestation and climate change has increasingly gained international recognition in past years, the current state of legal affairs will not suffice in the world's quest for halting illegal deforestation and curbing climate change before it reaches an irreversible point. Specifically, the numerous international mechanisms in place to limit deforestation and climate change fall short within the context of enforcement standards and punitive measures. Conversely, Brazilian law substantiates a

²⁶³ International Criminal Court Office of the Prosecutor, Policy Paper on Case Selection and Prioritisation 14 (Sept. 15, 2016), https://www.icc-cpi.int/itemsDocuments/20160915_OTP-Policy_Case-Selection_Eng.pdf.

²⁶⁴ See *infra* Part IV.

conservationist ideology at its core that, if adhered to, would not have produced the deforestation figures seen in 2019 and 2020. Without Brazilian collaboration, no existing environmental international mechanism will resolve any of the aforementioned ecological and humanitarian issues. Therefore, it is imperative that the ICC exercises its jurisdiction to prosecute Jair Bolsonaro and his allies. By recognizing ecocide as a crime against humanity, the ICC may prosecute Bolsonaro for his willful policy choices that have led to the widespread destruction of the Brazilian Amazon. Moreover, in consideration of the immediate detrimental effects that deforestation has on indigenous communities, the ICC should recognize the impending genocidal impact that further inaction creates and immediately prosecute Bolsonaro. The only thing that remains certain of this unremitting environmental calamity—or any other pressing matter—is that stagnation is the ultimate adversary in the journey for progress.