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## The Politics of Cost-Benefit Analysis: A Risky Bet for Environmental Law and Policy in Brazil

Julio Borges

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# THE POLITICS OF COST-BENEFIT ANALYSIS: A RISKY BET FOR ENVIRONMENTAL LAW AND POLICY IN BRAZIL

JULIO BORGES\*

## ABSTRACT

Seeking to disseminate cost-benefit analysis as part of a global agenda of reforms on regulatory policy, the Organization for Economic Cooperation and Development (“OECD”) has advocated this economic tool to all its member countries. A key partner of that international organization since 2007, Brazil officially sought in 2017 to be a permanent OECD member, which means accepting orientation from that organization on policy reforms, namely regulatory policy. This Article disagrees with OECD’s recommendation because traditional cost-benefit analysis has been technically flawed and politically biased towards a deregulatory agenda. The purpose of this Article, therefore, is to analyze the potential impacts of introducing cost-benefit analysis for environmental law and policy in Brazil. To achieve this goal, understanding the particular background and features of environmental law and policy in Brazil becomes essential. In this sense, this Article argues that cost-benefit analysis creates a particular risk to environmental law and policy in Brazil due to at least three factors: (a) it would reinforce the already strong presidential dominance over the regulatory agenda on environmental protection, undermining environmental agencies’ authority and scientific-based decisions; (b) it would imperil any possibility of improvement of the current levels of transparency, participation, and accountability on the decision-making processes for environmental laws and regulations; (c) it conceals a regulatory policy against new and existing laws and regulations on environmental protection.

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## INTRODUCTION

At first glance, cost-benefit analysis might seem a helpful tool for rationalizing decision-making processes for laws and regulations. After all, numbers are straightforward and neutral. But as one moves closer to understanding why cost-benefit analysis was created and how it has traditionally been applied in the United States, one might realize that

cost-benefit analysis has been a methodologically flawed and politically biased tool. In a broad sense, cost-benefit analysis has been an instrument for implementing a business-friendly agenda based on laissez-faire ideas fairly unsympathetic to any major role for government in society.<sup>1</sup>

The traditional methodologies used for cost-benefit analysis have been particularly controversial. As Lisa Heinzerling and Frank Ackerman point out in their helpful book on cost-benefit analysis,<sup>2</sup> methods for giving a monetary value to either a human life, some endangered plant or animal, or a given ecosystem present serious flaws and ethical assumptions that undermine any credibility for that economic exercise.<sup>3</sup>

Although all these problems have been associated to traditional cost-benefit analysis, the Organization for Economic Cooperation and Development (“OECD”)—a powerful international think-tank that gathers a select group of rich countries to advocate for global policies based on free-market ideas—has been a major global player for spreading this economic tool throughout several developed and emerging economies, Brazil included.<sup>4</sup>

Rational approaches to regulatory decisions are a legitimate goal for any society, and cost-benefit analysis advocates have a point here. It is fair to recognize that the lawmaking process—in any democracy—appears to be the result of crude ideological disputes and seemingly messy lobbying from different social actors.<sup>5</sup> However, this is how democracy actually works. For tackling the complex social, economic, and environmental challenges to be faced in the twenty-first century, governments should therefore improve their ability to create more transparent and accountable decision-making processes for regulatory decisions. The traditional cost-benefit analysis, however, points in the opposite direction by creating obscure calculation methods and unaccountable institutional channels throughout the decision-making process.

This Article argues that traditional cost-benefit analysis poses a particular risk to environmental law and policy in Brazil due to at least three factors: (a) it would reinforce the already strong presidential dominance over the regulatory agenda on environmental protection, undermining the authority of environmental agencies; (b) it would imperil any

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<sup>1</sup> THOMAS O. MCGARITY, *FREEDOM TO HARM: THE LASTING LEGACY OF THE LAISSEZ FAIRE REVIVAL* 69 (2013).

<sup>2</sup> FRANK ACKERMAN & LISA HEINZERLING, *PRICELESS: ON KNOWING THE PRICE OF EVERYTHING AND THE VALUE OF NOTHING* (2004).

<sup>3</sup> *Id.* at 11.

<sup>4</sup> See generally OECD, *REGULATORY POLICY OUTLOOK 2015* (2015).

<sup>5</sup> See, e.g., MCGARITY, *supra* note 1, at 70.

possibility of improvement of the current levels of transparency and accountability in the decision-making processes for environmental laws and regulations; and (c) it conceals a regulatory policy against new and existing laws and regulations on environmental protection.

To tackle all those factors, this Article is divided into two parts. The first Part provides an analysis of how politics has shaped traditional cost-benefit analysis in the United States and the role of the OECD in disseminating that economic tool throughout market-based economies, Brazil included. The second Part explores the history and background of environmental law and policy in Brazil to feature some major characteristics of that field and point out singular risks posed by cost-benefit analysis.

## I. COST-BENEFIT ANALYSIS: ORIGINS, METHODOLOGY, AND A CRITIQUE

When one looks at the trajectory of cost-benefit analysis in the United States, the United Kingdom, parts of Europe, and Australia, it rises like a seemingly unstoppable tide.<sup>6</sup> A neutral and scientific tool that imposes economic rationality for risk analyses over complex regulations is a powerful rhetoric.<sup>7</sup> As government decisions in democratic countries usually involve an overwhelming set of ongoing conflicts and deals among different social groups, rational decision-making processes become a legitimate goal for those concerned with regulatory policy.<sup>8</sup> But when seen more closely, traditional cost-benefit analysis reveals a series of methodologic flaws and politically biased assumptions that overshadow any value from its use.

In this Part, I review the history and main features of cost-benefit analysis to eventually gather some of the most influential critiques of it. By tracking its origins and development in the United States, it will clarify the original and ongoing purpose and use of cost-benefit analysis as a strategic weapon established to reduce the role of government in the economy. Further, analyzing the role of the OECD in globally spreading free-market policies in general, and cost-benefit analysis in particular, will be helpful to understand how this economic tool has been surrounding Brazil. But first of all, it is necessary to understand the basics of cost-benefit analysis and the main arguments against it.

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<sup>6</sup> See OECD, *supra* note 4, at 2.

<sup>7</sup> See generally MATTHEW D. ADLER & ERIC POSNER, *NEW FOUNDATIONS OF COST-BENEFIT ANALYSIS* (2006); CASS SUNSTEIN, *THE COST-BENEFIT REVOLUTION* (2018).

<sup>8</sup> See SUNSTEIN, *supra* note 7, at xviii.

### A. *Basic Understanding and Critique*

The traditional cost-benefit analysis involves three assumptions: (a) government projects and policies entail costs and benefits; (b) costs and benefits can be quantified and compared; and (c) as resources in society are limited and choices must be made to achieve results that improve the aggregate welfare and maximize net benefits, public policy or project benefits should overcome or justify their costs.<sup>9</sup>

A project to build a highway, for example, imposes costs and benefits to society. Benefits could be identified as improved infrastructure for transportation, increased export rates for national industries (such as agriculture, livestock, or mining), and reduced traffic for the local population. The most evident costs are the economic resources needed to finance the project, but there are also unquantifiable externalities such as the impacts on the environment (for example, air and water pollution).

For a rule-making proposal, costs and benefits accrue as well. A regulation to curb air pollution from vehicles, for instance, entails costs and benefits. Costs come, for example, from an imposed technology for reducing car pollution or a mandatory improvement on fuel efficiency. The most evident benefits from cleaner air are a reduction of human mortality and lung-related disease rates, mitigation of acid rain, and a moderated impact on the climate.<sup>10</sup>

In both situations (a project or a policy), quantification of costs or benefits might be a hard task when some “commodities” (human lives or ecosystems, for example) are simply not tradeable in markets. In these situations, advocates for cost-benefit analysis seek to put a price on human life or the environment by mimicking real markets in order to achieve monetary values for such untradeable “commodities.”<sup>11</sup>

#### 1. Determining the Price

For policy and rule-making decisions, it is widely accepted that it is usually easier to quantify costs than benefits, though overestimation

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<sup>9</sup> For this purpose, economists see cost-benefit analysis as a tool for achieving Kaldor-Hicks efficiency, which means an overall increase in social welfare where winners could compensate the losers. See Edward P. Stringham, *Kaldor-Hicks Efficiency and the Problem of Central Planning*, 4 Q.J. AUSTRIAN ECON. 41, 44 (2001).

<sup>10</sup> *Progress Cleaning the Air and Improving People's Health*, EPA, <https://www.epa.gov/clean-air-act-overview/progress-cleaning-air-and-improving-peoples-health> [<https://perma.cc/DZD4-B9B5>] (last updated Aug. 14, 2019).

<sup>11</sup> See GREGORY MANKIW, *PRINCIPLES OF ECONOMICS* 225 (2015).

of costs has been common.<sup>12</sup> The price of an existing technology required by a new regulation on water pollution, for instance, usually is determined in private markets.<sup>13</sup> But on the side of benefits (a human life or an endangered species, for example), determining their price is an impossible task that cost-benefit practitioners assume as if it were possible.<sup>14</sup>

To determine the price of policy benefits such as a human life or the environment, "willingness to pay" has been the criterion used in traditional cost-benefit analysis in the United States.<sup>15</sup> In real markets, willingness to pay and willingness to accept are the most important economic concepts to identify the price of a given product.<sup>16</sup> But as human life and the environment are not products found in markets, cost-benefit analysis authorities use two alternative methods to determine the willingness to pay for those "commodities": (a) "contingent valuation" and (b) risk-related behaviors.<sup>17</sup> While the latter focuses, for instance, on how much workers accept for risky jobs or consumers pay for health insurance, the former is based on simple and direct surveys with people, asking them how much they value human lives or endangered species, for example.<sup>18</sup>

Apart from moral arguments, methods to identify the willingness to pay for human lives, wildlife species, or ecosystems, make no sense at all. First, the willingness to pay method completely ignores the differences between the choices made by a human being as a citizen and a consumer.<sup>19</sup> Further, the willingness of a consumer to pay for a market product (a car, for example) and the vague and illusory value that this consumer might have for a human life are totally different.<sup>20</sup>

Still, values obtained by analysis of different wages for risky and non-risky jobs are flawed because the reality of workers in those jobs might not be superior in monetary terms.<sup>21</sup> Either workers might not understand the risks involved in their jobs or they simply cannot choose

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<sup>12</sup> See ACKERMAN & HEINZERLING, *supra* note 2, at 38.

<sup>13</sup> Despite this fact, some regulations in the United States seek to force new technology. In this case, determining the price of this new technology might be a hard task.

<sup>14</sup> MARK SAGOFF, *THE ECONOMY OF THE EARTH: PHILOSOPHY, LAW, AND THE ENVIRONMENT* 92 (2008).

<sup>15</sup> ACKERMAN & HEINZERLING, *supra* note 2, at 94–98.

<sup>16</sup> MANKIW, *supra* note 11, at 135–36, 140.

<sup>17</sup> See generally ACKERMAN & HEINZERLING, *supra* note 2.

<sup>18</sup> ACKERMAN & HEINZERLING, *supra* note 2, at 164.

<sup>19</sup> SAGOFF, *supra* note 14, at 31.

<sup>20</sup> See *id.*

<sup>21</sup> ACKERMAN & HEINZERLING, *supra* note 2, at 75–76.

another job because they lack the skills.<sup>22</sup> Similar reasoning can be made regarding people buying health insurance.

Besides the “willingness to pay” method, cost-benefit analysis authorities use a discount rate to achieve the present value of human lives saved or an improved environment in the future.<sup>23</sup> In other words, as benefits from environmental regulations are usually enjoyed only in the future (environmental policies for tackling climate change, for example), the present value of those benefits should be discounted according to traditional cost-benefit analysis.

The main problems related to discount rates deal with ethical judgements on the value of future lives and its validity as a rational method to determine the present value of benefits to be created in a distant future.<sup>24</sup> As discount rates are largely used in private markets to determine the current value of a future quantity of money, their use for pricing human lives to be saved or ecosystems to be protected in the future entails a reduction of the intrinsic value of those lives and ecosystems.<sup>25</sup> Future generations, for example, would be assigned a lower value than the present ones (on existential terms) so their monetary price could not justify a given regulation to prevent future harms.<sup>26</sup> This assumption, which is questionable on moral terms, directly affects the methodology for using discount rates for public policies based on cost-benefit analysis.

Depending on the chosen discount rate (0.5 percent, 3 percent, or 12 percent, for example), the present value of future generations (in centuries) might be almost nothing. Disputes within the federal government in the United States that place the value of a human life between \$3.7 and \$6.1 million illustrate how poor that mechanism is.<sup>27</sup> Further, as countries with emerging economies such as Brazil might not have the resources to develop sophisticated calculations and methodologies to determine their own discount rates, they might simply choose random and arbitrary rates to justify choices based on economic policy priorities.<sup>28</sup>

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<sup>22</sup> *Id.* at 77.

<sup>23</sup> Discount rate is a method used in regular markets (particularly financial markets) for determining the present value of a future amount of money. For example, \$100 today does not have the same value of \$100 in one year. At a 3 percent discount rate, \$100 today means \$103 in one year.

<sup>24</sup> ACKERMAN & HEINZERLING, *supra* note 2, at 186.

<sup>25</sup> *Id.* at 187.

<sup>26</sup> *Id.* at 190–91.

<sup>27</sup> *Id.* at 200.

<sup>28</sup> As the United States has adopted a discount rate between 3 percent and 7 percent for cost-benefit analysis, Mexico has adopted a discount rate of 12 percent for cost-benefit

Furthermore, discounting future benefits simply ignores the irreversible risks of future environmental catastrophes. As lives and nature in the future are valued less for cost-benefit analysis, foreseeable extreme events and their impact on those future generations remain unconsidered. In other words, traditional cost-benefit analysis does not take into consideration a crisis perspective.<sup>29</sup>

Together, uninformed surveys on willingness to pay for non-tradeable values and highly speculative discount rates for future benefits compose the basic methodologic portfolio for traditional cost-benefit analysis. The indeterminacy and obscurity of those criteria to make up a price for a human life or the environment only reinforce how cost-benefit analysis is subject to political motivation and biased manipulation.

Finally, as pricing everything is impossible, cost-benefit advocates have created qualitative elements (distributive aspects and impacts on rights, for example) to be considered when officials should decide on a given regulation.<sup>30</sup> The problem is that once costs and benefits are quantified in monetary terms, and a cost-benefit analysis is assumed as a regulatory tool for deciding the government's actions and policies, those qualitative aspects are not considered or, at most, do not meaningfully influence the final decision.<sup>31</sup> After all, numbers present a straightforward picture that is impossible to compare or balance with complex welfare, no quantitative elements such as distributive impacts or impacts on rights from rules.

## 2. Transparency and Accountability

With regard to decision-making processes for regulatory decisions, clear communication and an open process are essential for guaranteeing the transparency and accountability of those decisions. Instead, cost-benefit analysis creates obstacles to transparency and accountability.

First, as traditional cost-benefit analysis applies a highly technical language for decision makers and requires the creation of an oversight office, significant challenges are imposed on agencies and public interest groups.

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analysis on its infrastructure projects. See MICHAELA LIVERMORE & RICHARD L. REVESZ, *THE GLOBALIZATION OF COST-BENEFIT ANALYSIS IN ENVIRONMENTAL POLICY* 169 (2013).

<sup>29</sup> See ACKERMAN & HEINZERLING, *supra* note 2, at 186.

<sup>30</sup> See generally Cass R. Sunstein, *The Real World of Cost-Benefit Analysis: Thirty-Six Questions (and Almost as Many Answers)*, 114 COLUM. L. REV. 167, 195 (2014).

<sup>31</sup> See Susan Rose-Ackerman, *Putting Cost-Benefit Analysis in Its Place: Rethinking Regulatory Review*, U. MIAMI L. REV. 335, 335–36 (2010).

People not trained in economics usually have difficulty in understanding or discussing economic terms.<sup>32</sup> In the case of cost-benefit analysis and its specialized (or “impenetrable”)<sup>33</sup> economic vocabulary, even a basic understanding of its practice requires considerable training in economics.<sup>34</sup> Lawyers and scientists not familiar with economic terms, for example, may find no room to participate in those technical discussions.

As transparency and accountability have high value for democracies and rights protection, clear communication is an essential tool to improve both participation and social control over regulatory activity. The justification for regulatory decisions should be accessible to all affected industries, public interest groups, and citizens. As cost-benefit analysis limits policy discussions to an economic vocabulary, it creates more hurdles for open and accessible participation in the public arena.<sup>35</sup>

But technical language is not the only factor that can reduce transparency and accountability. The creation of an oversight office to supervise agencies might affect openness and create obscure institutional channels for influencing the final decision, undermining environmental agencies’ authority.<sup>36</sup>

In the United States, since the introduction of cost-benefit analysis in 1981 and the creation of an oversight office located within the President’s office (the Office on Information and Regulatory Affairs—“OIRA”), the transparency and accountability patterns provided by the Administrative Procedure Act (“APA”) have been undermined.<sup>37</sup> Undisclosed discussions among agencies, OIRA, other executive branch authorities, and affected industries have influenced the decision-making processes of federal agencies. These obscure channels have been created in connection with cost-benefit analysis, though they are not provided for by the APA.<sup>38</sup>

This American model of creating oversight offices to supervise agencies on cost-benefit analysis has inspired the OECD’s agenda on

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<sup>32</sup> See Frank Ackerman & Lisa Heinzerling, *Pricing the Priceless: Cost-Benefit Analysis of Environmental Protection*, 150 U. PA. L. REV. 1553, 1577–78 (2002).

<sup>33</sup> Wendy E. Wagner, *The CAIR Ria: Advocacy Dressed Up as Policy Analysis*, in REFORMING REGULATORY IMPACT ANALYSIS 66 (Winston Harrington et al. eds., 2009).

<sup>34</sup> *Id.*

<sup>35</sup> See SEBASTIAN DAMART & BERNARD ROY, U. PARIS-DAUPHINE, LIMITATIONS OF COST-BENEFIT ANALYSIS TO SUPPORT PUBLIC DEBATE: THE CASE OF PUBLIC TRANSPORTATION DECISION-MAKING IN FRANCE 3, 11 (2006).

<sup>36</sup> See Lisa Heinzerling, *Inside EPA: A Former Insider’s Reflections on the Relationship Between the Obama EPA and the Obama White House*, 31 PACE ENVTL. L. REV. 325, 326 (2014).

<sup>37</sup> See Daniel A. Farber & Anne Joseph O’Connell, *The Lost World of Administrative Law*, 92 TEX. L. REV. 1137, 1138–39 (2014).

<sup>38</sup> Heinzerling, *supra* note 36, at 326.

regulatory policy. According to the OECD's recommendations on regulatory policy, all its member countries should provide for the creation of oversight bodies to supervise agencies' regulations.<sup>39</sup> An office in the central government (such as the Office of the President or the Prime Minister) would be highly recommended according to the OECD's guidance.<sup>40</sup>

In sum, rather than an open and accessible process of discussion on regulatory decisions between agencies and society, the American experience with traditional cost-benefit analysis and its oversight office demonstrates how that model has expanded the possibilities for behind-closed-door lobbying on government affairs, reducing transparency and accountability for regulatory decisions.

### *B. Tracking Cost-Benefit Analysis: Beyond the American Experience*

To understand how cost-benefit analysis has become an influential regulatory tool in some advanced economies and how its advocates aim to introduce it in emerging economies (such as Brazil), it is important to track its original motivations and historical pathway. In this sense, it is necessary to identify the political origins of cost-benefit analysis and explore the dynamic of international cooperation networks that advocate for widespread use of this tool throughout the world.

#### 1. Political Origins and Development

The systematic and ongoing use of cost-benefit analysis became widespread in the United States after President Reagan's election in 1980. Under a conservative platform for economic policy, which assumed that the government and the regulations it promulgated negatively affected the economy, President Reagan issued Executive Order No. 12291, which determined: (a) a mandatory use of cost-benefit analysis for all major federal regulations (meaning regulations that impacted the economy by \$100 million or more); (b) the creation of OIRA within the Office of Management and Budget ("OMB"), located in the White House under direct presidential supervision, to oversee all major proposed regulations from federal agencies through cost-benefit analysis.<sup>41</sup> During President Reagan's tenure, the practice of cost-benefit analysis by agencies (under OIRA oversight) was intense and the number of regulations issued by

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<sup>39</sup> OECD, *supra* note 4, at 94.

<sup>40</sup> *Id.*

<sup>41</sup> Exec. Order No. 12,291, 46 Fed. Reg. 13,193 (1981).

federal agencies decreased dramatically.<sup>42</sup> Rules on environmental protection were particularly affected.<sup>43</sup> This deregulatory trend was maintained by President George H. W. Bush.<sup>44</sup>

After the electoral victory of President Bill Clinton in 1995, there was an expectation that cost-benefit analysis would be set aside.<sup>45</sup> However, as President Bill Clinton sought to increase his influence over the federal agencies' regulatory agenda, a new executive order (Executive Order No. 12866) was enacted, keeping cost-benefit analysis as a major regulatory tool.<sup>46</sup> The difference here is that, according to the new executive order, other welfare aspects (such as redistributive issues and individual rights) were to be considered in the decision-making processes for cost-benefit analysis.<sup>47</sup> Further, benefits should only justify (not exceed, as provided by the original executive order signed by Reagan) the costs of the proposed regulation.<sup>48</sup>

When President George W. Bush entered office in 2001, cost-benefit analysis returned to its original purpose. A bold deregulatory policy—under President Bush and his OIRA chief John Graham, an enthusiastic scholar of cost-benefit analysis—used cost-benefit analysis as its major scientific justification.<sup>49</sup> Environmental regulation was again particularly affected as no meaningful policy on climate change was provided and the relationship between OIRA and environmental organizations was particularly antagonistic.<sup>50</sup>

President Obama's election in 2008 represented a new opportunity to review the adoption of cost-benefit analysis as an influential regulatory tool. But, as it had occurred under Clinton's administration, cost-benefit analysis survived as a central tool for regulatory policy within the federal government. A new executive order was enacted in 2011 (Executive Order No. 13,563), by which other welfare considerations were incorporated into the cost-benefit analysis.<sup>51</sup>

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<sup>42</sup> MICHAELA LIVERMORE & RICHARD L. REVESZ, *RETAKING RATIONALITY: HOW COST-BENEFIT ANALYSIS CAN BETTER PROTECT THE ENVIRONMENT AND OUR HEALTH* 24–29 (2008).

<sup>43</sup> *Id.*

<sup>44</sup> *Id.* at 29–30.

<sup>45</sup> *Id.* at 31.

<sup>46</sup> Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (1993).

<sup>47</sup> *Id.*

<sup>48</sup> Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (1993); Exec. Order No. 12,291, 46 Fed. Reg. 13,193 (1981).

<sup>49</sup> John D. Graham et al., *Managing the Regulatory State: The Experience of the Bush Administration*, 33 FORDHAM URB. L.J. 101, 101–02 (2006).

<sup>50</sup> LIVERMORE & REVESZ, *supra* note 42, at 24–29.

<sup>51</sup> Exec. Order No. 13,563, 76 Fed. Reg. 3821 (2011).

Finally, at the time of this Article's writing, President Donald Trump's first actions have confirmed that cost-benefit analysis will again serve the purpose of justifying a deregulatory agenda.<sup>52</sup>

## 2. Arriving in Brazil Through Paris: The Influence of the OECD

Brazil has no tradition of using cost-benefit analysis as a tool for regulatory policy.<sup>53</sup> But an evolving approximation of that country with the OECD, a highly reputed international organization based on multi-lateral cooperation and headquartered in Paris, has been challenging that framework. That intergovernmental think-tank has openly advocated for cost-benefit analysis worldwide. The issue here is how this organization might be able to influence and shape regulatory policy in Brazil.

## 3. OECD: History

As World War II ended and the Marshall Plan was implemented throughout Europe, European countries created the Organization for European Economic Cooperation ("OEEC").<sup>54</sup> The OEEC's early goals were related to managing the Marshall Plan and promoting free-market policies among national economies within Europe.<sup>55</sup>

After the end of the Marshall Plan in 1952 and the establishment of the European Economic Communities in 1957, the OEEC became the OECD.<sup>56</sup> Fostering free-market policies has become the OECD's foremost

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<sup>52</sup> President Trump issued a new executive order on January 30, 2017 (numbered 13,771) labeled "Reducing Regulation and Controlling Regulatory Costs," reinforcing concerns on overly burdensome costs created by regulations on industry. Further, the Trump Administration has proposed repealing the Clean Power Plan based on cost-benefit analysis. For an analysis of that justification and the role played by cost-benefit analysis, see Jack Lienke & Richard Revesz, *The E.P.A.'s Smoke and Mirrors on Climate*, N.Y. TIMES (Oct. 9, 2017), [https://www.nytimes.com/2017/10/09/opinion/environmental-protection-obama-pruitt.html?\\_r=0](https://www.nytimes.com/2017/10/09/opinion/environmental-protection-obama-pruitt.html?_r=0) [<https://perma.cc/A9WC-KEV8>].

<sup>53</sup> ELIANE P. DE SOUSA ET AL., REGULATORY IMPACT ANALYSIS IN BRAZIL: THEORETICAL APPROACH AND APPLICATIONS IN POLICIES FOR AGRICULTURE DEFENSE 3 (2015).

<sup>54</sup> *Marshall Plan*, ENCYCLOPEDIA BRITANNICA, <https://www.britannica.com/event/Marshall-Plan> [<https://perma.cc/K6JN-77ET>] (last visited Dec. 3, 2019).

<sup>55</sup> James Salzman, *Labor Rights, Globalization and Institutions: The Role and Influence of the Organization for Economic Cooperation and Development*, 21 MICH. J. INT'L L. 769, 774 (2000).

<sup>56</sup> *Organisation for European Economic Co-operation*, OECD, <http://www.oecd.org/general/organisationforeuropeaneconomicco-operation.htm> [<https://perma.cc/SLN5-AKQL>] (last visited Dec. 3, 2019).

agenda.<sup>57</sup> During the Cold War, this compromise with free-market ideas had an important role against planning economic ideas advocated by communist nations.<sup>58</sup>

Known as a “rich man’s club,”<sup>59</sup> the OECD was originally established by twenty wealthy industrialized countries including the United States, Canada, Western European members, and Australia. Nowadays, the OECD has thirty-six permanent members.<sup>60</sup> The only requirement for a country entering this “club” is having a market-based economy (meaning a non-communist or non-socialist nation).<sup>61</sup>

Composed mostly of economists on its payroll,<sup>62</sup> the OECD’s research covers virtually all fields of interest to the business community, including trade, environment, agriculture, technology, taxation, education, foreign assistance, and employment.<sup>63</sup> Assessing the economic impacts of all those policies is a major feature of all that research.<sup>64</sup> The regular proceedings of the OECD often occur in closed meetings<sup>65</sup> among members for sharing experiences and deciding recommendations, making detailed studies of economic performance, and producing technical reports on regulatory quality.<sup>66</sup> Documents produced by the OECD are made public only after approval by all its members; a process known as “derestriction.”<sup>67</sup>

Today, the OECD represents a low-profile but important part of the mainstream for international organizations responsible for advocating free market policies throughout the world, including other Bretton

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<sup>57</sup> OECD, THE OECD: ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (2008), <https://www.oecd.org/newsroom/34011915.pdf> [<https://perma.cc/2JN7-JJYN>].

<sup>58</sup> Salzman, *supra* note 55, at 775.

<sup>59</sup> *Id.* at 776.

<sup>60</sup> See *List of OECD Member Countries—Ratification of the Convention on the OECD*, OECD, <https://www.oecd.org/about/document/list-oecd-member-countries.htm> [<https://perma.cc/D6BS-LZTQ>] (last visited Dec. 3, 2019).

<sup>61</sup> Salzman, *supra* note 55, at 776.

<sup>62</sup> *Id.* at 777.

<sup>63</sup> See *id.* at 774.

<sup>64</sup> *Id.* at 777.

<sup>65</sup> *Id.* at 776–77 (“While it is not voiced openly, it is important to understand that many OECD country delegates think of the closed-door meetings of the OECD as a welcome alternative forum to what is often viewed as the developing country dominated and politicized United Nations system.”).

<sup>66</sup> *Id.* at 778 (“No OECD document may be released publicly without approval by all the Member countries, a process known as ‘derestriction.’ Internal documents are not publicly available and can therefore be quite explicit with pointed recommendations and detailed case studies.”).

<sup>67</sup> Salzman, *supra* note 55, at 778.

Woods institutions such as the World Trade Organization, the World Bank, and the International Monetary Fund (“IMF”).<sup>68</sup>

Among the most ambitious policy agendas advocated by the OECD, regulatory policy has been at the forefront. Alongside tax and monetary policies, the OECD reckons regulation of markets the most important policy for countries to attract foreign investors and improve their economies.<sup>69</sup> For these purposes, countries must reform their regulatory frameworks to avoid being overly burdensome on businesses. The central regulatory tool for avoiding those undue regulations is a mechanism that has long been known and used in the United States: cost-benefit analysis.

Although Brazil is not an OECD member yet, it has been considered a “Key Partner” since 2007.<sup>70</sup> Being a “Key Partner” means that the OECD has potential interest in having a country as a member.<sup>71</sup> Also, as a partner, Brazil has participated in several OECD meetings and committees, sharing experiences and being assessed in some policy fields such as economic, regulatory, and environmental policies.<sup>72</sup> But the interest does not only flow in one direction. Eager to attract foreign investments and overcome a huge economic crisis initiated in 2015,<sup>73</sup> Brazil officially sought its integration into the OECD as a permanent member in 2017,<sup>74</sup> which means accepting and officially working together on policies advocated by the OECD.

<sup>68</sup> See *WTO, IMF, World Bank and OECD Heads Call for New Focus on Trade as a Driver of Growth*, WTO (Oct. 10, 2018), [https://www.wto.org/english/news\\_e/news18\\_e/dgra\\_10oct18\\_e.htm](https://www.wto.org/english/news_e/news18_e/dgra_10oct18_e.htm) [https://perma.cc/8XWZ-M78C].

<sup>69</sup> OECD, *supra* note 4, at 44 (“In its broader definition, regulatory reform has the potential to raise GDP per capita of OECD economies by up to 25% through the implementation of structural reforms . . .”).

<sup>70</sup> *Active with Brazil*, OECD (May 2015), <http://www.oecd.org/brazil/Brazil%20brochureWEB.pdf> [https://perma.cc/JE78-CWZU].

<sup>71</sup> *Key Partners*, OECD, <http://www.oecd.org/global-relations/keypartners/> [https://perma.cc/Q5AQ-EFEV] (last visited Dec. 3, 2019).

<sup>72</sup> See, e.g., *OECD Environmental Performance Review: Brazil 2015*, OECD (Nov. 4, 2015), [https://read.oecd-ilibrary.org/environment/oecd-environmental-performance-reviews-brazil-2015\\_9789264240094-en#page1](https://read.oecd-ilibrary.org/environment/oecd-environmental-performance-reviews-brazil-2015_9789264240094-en#page1) [https://perma.cc/2EDB-EN2H].

<sup>73</sup> Brazil has been in its worst economic crisis ever. Brazil’s economy shrank 3.8 percent in 2015 and 3.6 percent in 2016. Unemployment hit 12.6 percent in 2017. For a snapshot of the Brazilian economic crisis, see Silvio Cascione, *Brazil Worst Ever Recession Unexpectedly Deepens in Late 2016*, REUTERS (Mar. 7, 2017), <https://www.reuters.com/article/us-brazil-economy-gdp/brazils-worst-ever-recession-unexpectedly-deepens-in-late-2016-idUSKBN16E1EL> [https://perma.cc/F7W4-TREN].

<sup>74</sup> *A mutually beneficial relationship*, OECD, <https://www.oecd.org/latin-america/countries/brazil/> [https://perma.cc/4QPT-VG7J] (last visited Dec. 3, 2019).

#### 4. The OECD and Cost-Benefit Analysis

Called Regulatory Impact Analysis (“RIA”) by the OECD,<sup>75</sup> cost-benefit analysis has been a major tool of the OECD for proposing laissez-faire reforms of regulatory policies worldwide. An official checklist recommended by the OECD to national authorities explicitly features the idea that regulations should be based on economic consideration:

A clear assessment of total costs and benefits—including those to businesses, private citizens, and administrations—likely to be realised in practice is crucial information for decision-makers. These estimates are needed to make judgements about the reasonableness of a regulation and its practicality for those who will comply; to design an approach with the lowest costs and highest benefits; and to assess its effectiveness in solving the problem. Their objective is to enable policy and political officials to ask the right questions and reach confident judgments that a regulation is, on net, beneficial. . . . *In all cases . . . a reasonable judgment should be made that the costs of government action are justified by its benefits before action is taken.*<sup>76</sup>

As a strategy for convincing other countries of how accurate cost-benefit analysis would be, the OECD has opted to introduce that economic tool after several previous steps including formal assessments (such as the compatibility of the proposed rule with national laws and international treaties) and distributive concerns,<sup>77</sup> which essentially might not alter the final result when traditional cost-benefit analysis is required.<sup>78</sup>

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<sup>75</sup> According to OECD, RIA would be a more comprehensive methodology for assessing regulations. Beyond economic analysis, RIA would consider substitute risks (called “risk-risk”), alternative regulatory strategies (to avoid traditional command-and-control rules), and fairness issues such as distributive impact from regulations. The problem with this definition is that traditional cost-benefit analysis as applied in the United States already covers all those risk analyses. Avoiding a major reference to cost-benefit analysis seems to be just part of a broader OECD strategy for convincing countries about an essentially inaccurate difference between RIA and CBA. For an overview of OECD’s recommendations on regulatory policy, see OECD, RECOMMENDATION OF THE COUNCIL ON REGULATORY POLICY AND GOVERNANCE 4 (2012), <http://www.oecd.org/gov/regulatory-policy/49990817.pdf> [<https://perma.cc/C8VV-FD3U>].

<sup>76</sup> *Legal Instruments*, OECD, <https://legalinstruments.oecd.org/public/doc/128/body-text.en.html> [<https://perma.cc/KW3A-USZN>] (last visited Dec. 3, 2019) (emphasis added).

<sup>77</sup> OECD, *supra* note 4, at 103.

<sup>78</sup> ACKERMAN & HEINZERLING, *supra* note 2, at 37.

Further, the OECD's version of cost-benefit analysis is even more ambitious than the traditional one applied in the United States. A "whole-of-government" approach advocated by the OECD means that not only regulations enacted by agencies should pass that economic test, but also laws approved by Congress and confirmed by the President should be assessed under a cost-benefit analysis,<sup>79</sup> sort of an international version of the "Contract with America."<sup>80</sup> And this approach would be used for all future and existing laws and regulations.<sup>81</sup>

This is the version of cost-benefit analysis that Brazil would be subject as an OECD permanent member.

## 5. Brazil and Cost-Benefit Analysis

Even before Brazil became an OECD "Key Partner" in 2007, reforms of regulatory policies have been part of the institutional discourse of different administrations. At least since 1990 and the first reforms to liberalize the national economy under the guidance of the IMF, the World Bank, and the principles of the Washington Consensus,<sup>82</sup> attracting foreign investments and promoting economic development have been used to argue for reforms of regulatory policies.<sup>83</sup>

In the wake of the first national policies under the Washington Consensus and the OECD's recommendations on regulatory policy, in 2002 cost-benefit analysis was, for the first time, required by the Brazilian government. An executive order signed by President Fernando Henrique Cardoso expressly provided that any regulation proposed within the executive branch would require a cost-benefit analysis.<sup>84</sup> This executive order imposed a long list of impact analyses quite similar to those proposed by the OECD since 1995. Another executive order was issued in

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<sup>79</sup> OECD, *supra* note 75, at 6–7.

<sup>80</sup> DANIEL A. FARBER, *ECO-PRAGMATISM: MAKING SENSIBLE ENVIRONMENTAL DECISIONS IN AN UNCERTAIN WORLD* 7 (1999).

<sup>81</sup> *Id.*

<sup>82</sup> The Washington Consensus is a set of ten highly conservative economic policy prescriptions to Latin American countries, prescribed by multilateral organizations such as the World Bank and IMF, and by the U.S. Department of Treasury. One of those prescriptions suggests a radical deregulatory policy of internal markets to those countries. *See generally* JOHN WILLIAMSON, *LATIN AMERICAN ADJUSTMENT: HOW MUCH HAS HAPPENED* 90–120 (1990).

<sup>83</sup> *See* Lei No. 8.031, de 12 de Abril de 1990, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 13.4.1990 (Braz.) (The first national policy under the Washington Consensus was adopted in 1990).

<sup>84</sup> *See* Decreto No. 4.176, de 28 de Março de 2002, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 1.4.2002 (Braz.).

2017.<sup>85</sup> Notwithstanding, the practical effects of those executive orders have remained quite limited since methodologies have not been developed to assess the impacts of regulations. Further, there have not been enough trained regulators to carry out cost-benefit analysis on a large scale within the federal government (although official guidelines have been released to provide guidance to agency officials).<sup>86</sup> Although the executive order remains in place until now, its practical effects have been quite limited since methodologies have not been developed to assess the impacts of regulations.<sup>87</sup> Further, there have not been enough trained regulators to carry out cost-benefit analysis on a large scale within the federal government.

In 2008, the OECD reinforced its strategy for regulatory reforms in Brazil. For the first time, a specific and broad-based study of regulations regarding some economic sectors has resulted in a report on the state of regulatory reforms in Brazil.<sup>88</sup> Among many different recommendations provided by this study, the OECD strongly supported the development of cost-benefit analysis for the Brazilian government.<sup>89</sup>

After turbulent political events put a new administration in power in 2016,<sup>90</sup> Brazil officially applied to become a permanent member of the OECD in 2017.<sup>91</sup> In theory, this means that the country accepts and is willing to officially work to carry out reforms advocated by that international

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<sup>85</sup> Decreto No. 9.191, de 1 de Novembro de 2017, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 3.11.2017 (Braz.).

<sup>86</sup> See generally INTERMINISTERIAL GOVERNANCE COMM'N, GENERAL GUIDELINES AND GUIDANCE FOR PREPARING REGULATORY IMPACT ANALYSIS—AIR (June 2018), [http://www.gov.br/casacivil/pt-br/assuntos/governanca/regulacao/apresentacao-regulacao-pasta/comite-interministerial-de-governanca-aprova-as-diretrizes-gerais-e-roteiro-analitico-sugerido-para-analise-de-impacto-regulatorio-diretrizes-air-e-o-guia-orientativo-para-elaboracao-de-analise-de-impacto-regulatorio-guia-air/diretrizes\\_guia\\_air\\_cig\\_11junho2018.pdf](http://www.gov.br/casacivil/pt-br/assuntos/governanca/regulacao/apresentacao-regulacao-pasta/comite-interministerial-de-governanca-aprova-as-diretrizes-gerais-e-roteiro-analitico-sugerido-para-analise-de-impacto-regulatorio-diretrizes-air-e-o-guia-orientativo-para-elaboracao-de-analise-de-impacto-regulatorio-guia-air/diretrizes_guia_air_cig_11junho2018.pdf) [<https://perma.cc/48HD-EYY4>].

<sup>87</sup> Although the executive order requires cost-benefit analysis for proposing new regulations, for example, there are no procedures, standards, nor methods for assessing costs and benefits from those regulations. Key issues for cost-benefit analysis, such as putting a price on human lives, cancer rates, the environment, or discounting rates for future benefits, have not been developed yet.

<sup>88</sup> See generally OECD, OECD REVIEWS OF REGULATORY REFORM—BRAZIL STRENGTHENING GOVERNANCE FOR GROWTH (2008) (aiming to assist the Brazilian government in improving regulatory quality).

<sup>89</sup> *Id.* at 315–16.

<sup>90</sup> See Natalia Cardenas, *Michel Temer—President of Brazil*, ENCYCLOPEDIA BRITANNICA, <https://www.britannica.com/biography/Michel-Temer> [<https://perma.cc/AV8F-4MUU>] (last updated Sept. 19, 2019) (President Dilma Rousseff was impeached in 2016 by Congress and the Vice President Michel Temer, from a more conservative party (called PMDB), assumed executive branch responsibilities).

<sup>91</sup> OECD, *supra* note 74.

organization.<sup>92</sup> As regulatory policy and cost-benefit analysis are the foremost agenda within the OECD, it is expected that once Brazil becomes an official member of the OECD, efforts to effectively introduce cost-benefit analysis into the bureaucratic routines of the Brazilian administrative state will likely be part of the reform agenda of regulatory policy in Brazil.<sup>93</sup>

As the potential impacts of introducing cost-benefit analysis into environmental law and policy in Brazil are substantial, Part II of this Article will present a big picture of that field in Brazil and discuss how traditional cost-benefit analysis might negatively affect the development of that legal and policy field.

## II. ENVIRONMENTAL LAW AND POLICY IN BRAZIL

This section explores the development of environmental law and policy in Brazil to draw a big picture and point out some general features of that field. By understanding the particularities of the Brazilian dynamic for creating laws and policies protecting the environment, it will be possible to assess the risks posed by cost-benefit analysis to the development of Brazil's environmental law and policy.

### A. *Background and History*

#### 1. Before the Modern Environmental Law

An agrarian society and a nationalist government<sup>94</sup> provided the formula that created the first set of environmental laws in Brazil. Those laws, however, did not primarily seek to protect the environment. By rationalizing the use and exploitation of nature, President Vargas (1930–1937) sought to create and develop national industries based on

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<sup>92</sup> On April 30, 2019, the new Brazilian President Jair Bolsonaro proposed to Congress a law requiring regulatory impact analysis before new regulations, in order to avoid being overly burdensome on business. See Medida Provisória No. 881, de 30 de Abril de 2019, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 30.4.2019 (Braz.).

<sup>93</sup> OECD, INTRODUCTORY HANDBOOK FOR UNDERTAKING REGULATORY IMPACT ANALYSIS (RIA) 3–4 (2008).

<sup>94</sup> Nationalist because the Vargas Administration based its economic policies on the creation of new manufacturing industries owned and managed by the Brazilian government or by Brazilian citizens (not foreign investors, for example). See *The Vargas era*, ENCYCLOPEDIA BRITANNICA, <https://www.britannica.com/place/Brazil/The-Vargas-era> [<https://perma.cc/5FBH-YG9H>] (last visited Dec. 3, 2019).

natural resources being rationally managed.<sup>95</sup> Big state companies, such as *Vale do Rio Doce* (mining) and *Companhia Siderúrgica Nacional* (a steel mill), were created under President Vargas.<sup>96</sup> It was also during his administration that one of the early wells for oil and gas production was drilled (in 1939 in the state of Bahia).<sup>97</sup>

Having industrialization as a major political goal, President Vargas enacted several laws on the management and rational use of natural resources. A Forest Code, a Mining Code, a Water Code, and a law for hunting and fishing were all enacted in 1934.<sup>98</sup> Although some of those laws represented advances in environmental protection, they were not designed primarily to protect nature. Rather, their purpose was directed toward economic development by regulating the rational use of natural resources and avoiding their depletion.<sup>99</sup>

Avoiding foreign interference through exploitation of national natural resources was another concern for President Vargas's administration.<sup>100</sup> Natural resources, such as those exploited through mining, the water used as the base for an energy supply, and even the plants and animals in strategic national territories, such as the Amazon Forest, were all viewed as strategic national property.<sup>101</sup>

But, more than in any other period in Brazil's history, the events that occurred during the military government (especially the industrial policies adopted after the oil crises of 1973 and 1979) shaped the major features of the modern environmental law inaugurated during the period of transition to democracy throughout the eighties in Brazil.<sup>102</sup> Most of

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<sup>95</sup> Stanley E. Hilton, *Vargas and Brazilian Economic Development, 1930–1945: A Re-appraisal of his Attitude Toward Industrialization and Planning*, 35 *J. ECON. HIST.* 754, 755 (1975).

<sup>96</sup> VALE, VALE—OUR HISTORY 41 (2012), <http://www.vale.com/EN/aboutvale/book-our-history/Documents/livro/valehistorybook2.pdf> [<https://perma.cc/L4S3-L74A>]; *History 1941*, COMPANHIA SIDERÚRGICA NACIONAL, [http://www.csn.com.br/conteudo\\_eni.asp?idioma=1&conta=46&tipo=59573](http://www.csn.com.br/conteudo_eni.asp?idioma=1&conta=46&tipo=59573) [<https://perma.cc/QME6-4EY5>] (last visited Dec. 3, 2019).

<sup>97</sup> Luciana Braga, *Oil in Brazil Evolution of Exploration and Production*, ENCYCLOPÉDIE-DEL'ÉNERGIE (Nov. 29, 2018), <https://www.encyclopedie-energie.org/oil-in-brazil-evolution-of-exploration-production/> [<https://perma.cc/6X9J-66TR>].

<sup>98</sup> Jose Augusto Drummond & Ana Flavia Barros-Platiau, *Brazilian Environmental Laws and Policies, 1934–2002: A Critical Overview*, *LAW & POL'Y* 83, 87–88 (2006).

<sup>99</sup> See VALE, *supra* note 96, at 42–44.

<sup>100</sup> *Id.* at 44.

<sup>101</sup> *Id.* at 43, 45.

<sup>102</sup> See Jose Augusto Padua, *Environmentalism in Brazil: A Historical Perspective*, in *A COMPANION TO GLOBAL ENVIRONMENTAL HISTORY* 468 (J. R. McNeill & Erin Stewart Mauldin eds., 2012).

the first laws and regulations for environmental protection (particularly the Constitutional provision of an environmental impact assessment)<sup>103</sup> designed during the democratic transition were direct responses to environmental concerns raised after the policies adopted in the 1970s.<sup>104</sup>

It was during the military government that vast infrastructure projects with meaningful environmental impacts were created and implemented. Some examples are: (a) the second largest hydroelectric power plant in the world (called *Itaipú*);<sup>105</sup> (b) the fifth largest hydropower plant in the world, built in the Amazon Forest (called *Tucuruí*);<sup>106</sup> (c) the initial plan to build another large hydropower plant in the Amazon Forest (called *Belo Monte*);<sup>107</sup> (d) the longest bridge in the Southern Hemisphere, with 8.25 miles of length (called *Ponte Rio—Niterói*);<sup>108</sup> (e) a highway to link Northeast Brazil and the Amazon (called *Transamazônica*);<sup>109</sup> (f) an ambitious project to develop mining and steel industries, called *Projeto Carajás*, covering 222,394,843 acres of the Amazon Forest;<sup>110</sup> and (g) the first two nuclear plants in Rio de Janeiro.<sup>111</sup>

But, especially after the oil shocks of 1973 and 1979, Brazil again dealt with enormous difficulties regarding its balance of payments. To

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<sup>103</sup> See KATHRYNE HOCHSTETLER & MARGARET E. KECK, GREENING BRAZIL: ENVIRONMENTAL ACTIVISM IN STATE AND SOCIETY 36 (2007); Caroline Fan Rocha et al., *Manufacturing Pre-Decisions: A Comparative Analysis of Environmental Impact Statement (EIS) Reviews in Brazil and Portugal*, 11 SUSTAINABILITY 3235, 3240 (2019).

<sup>104</sup> HOCHSTETLER & KECK, *supra* note 103, at 63.

<sup>105</sup> Saoirse Kerrigan, *Top 21 Dams In the World That Generate the Highest Amount of Electricity*, INTERESTING ENGINEERING (July 1, 2018), <https://interestingengineering.com/top-21-dams-in-the-world-that-generate-the-highest-amount-of-electricity> [<https://perma.cc/D3DE-N78B>].

<sup>106</sup> *Id.*

<sup>107</sup> See *Belo Monte Hydropower Project*, NS ENERGY, <https://www.nsenergybusiness.com/projects/belo-monte-hydropower-project-brazil/> [<https://perma.cc/7XKU-HD3A>] (last visited Dec. 3, 2019) (The project was finished only in 2015, after decades of critiques about environmental and social problems related to native populations in the Amazon Forest. Today, Belo Monte is the fourth largest hydropower plant in the world.).

<sup>108</sup> *The longest, tallest and oldest bridges in the world*, TELEGRAPH, <https://www.telegraph.co.uk/news/picturegalleries/worldnews/8611082/The-longest-tallest-and-oldest-bridges-in-the-world.html?image=8> [<https://perma.cc/AUZ6-S9PJ>] (last visited Dec. 3, 2019).

<sup>109</sup> Kaushik Patowary, *The Trans-Amazonian Highway: An Ecological Disaster*, AMUSING PLANET (Nov. 24, 2014), <https://www.amusingplanet.com/2014/11/the-trans-amazonian-highway-ecological.html> [<https://perma.cc/P6V2-9V2M>].

<sup>110</sup> See Philip M. Fearnside, *The Charcoal of Carajás: Pig-Iron Smelting Threatens the Forests of Brazil's Eastern Amazon Region*, 18 AMBIO 141, 141 (1989).

<sup>111</sup> *Nuclear Power in Brazil*, WORLD NUCLEAR ASS'N, <https://www.world-nuclear.org/information-library/country-profiles/countries-a-f/brazil.aspx> [<https://perma.cc/DX92-42M3>] (last updated Apr. 2019).

remedy this situation, agriculture once more became a strategic sector to be officially protected. Then, the military government planned the expansion of not only agriculture, but also livestock, to raise the export rates.<sup>112</sup> Exploring new frontiers toward the Amazon Forest became an official goal.<sup>113</sup> It was the seed of a lingering era of vast deforestation rates over the eighties in the Amazon Forest and of the flourishing of a new environmental law and policy agenda.

As the military regime sought unprecedented economic development, there was strong pressure from the international community for environmental protection in Brazil, particularly concerned with the preservation of the Amazon Forest.<sup>114</sup> This was at the time of the Stockholm Conference on Environment (held in 1972), and the military regime was particularly skeptical about environmental concerns.<sup>115</sup>

At the same time, conservationist groups in Brazil were able to influence the enactment of several environmental laws to regulate the use of natural resources such as forests, fishing, and mining.<sup>116</sup> Even a law on pollution control was adopted and the first environmental agency in the federal government was established in 1976.<sup>117</sup>

Those conservationist efforts during the military regime's bureaucracy were the main drivers of new strict laws such as the new Forest Code of 1965<sup>118</sup> and a law to protect wild animals in 1967.<sup>119</sup> The Forest

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<sup>112</sup> HOCHSTETLER & KECK, *supra* note 103, at 140–41.

<sup>113</sup> *Id.*

<sup>114</sup> Padua, *supra* note 102, at 467, 469.

<sup>115</sup> An illustration of the particular difficulties for the development of the environmental agenda under the military regime was a written statement made by the Brazilian Secretary of Interior at the United Nations Conference on the Human Environment held in Stockholm in 1972. See HOCHSTETLER & KECK, *supra* note 103, at 112–13.

<sup>116</sup> See Drummond & Barros-Platíau, *supra* note 98, at 89–95. Since the military regime did not easily accept foreign pressure that could put at risk its plans for economic development, internal organizations became essential to push the environmental agenda. With Congress closed or immobilized by the military and no democratic rights of action for groups and citizens, the official channels to dispute new environmental laws and policies could be only found within the federal bureaucracy. For that purpose, personal networks were critical to allow national conservationist groups to influence the military government's environmental agenda. See Dom Phillips & Nick Miroff, *Brazil's new government may be less likely to protect the Amazon, critics say*, WASH. POST (May 22, 2016), [https://www.washingtonpost.com/world/the\\_americas/brazils-new-government-may-be-less-likely-to-protect-the-amazon-critics-say/2016/05/21/22cbce08-1c7d-11e6-82c2-a7db313287d\\_story.html](https://www.washingtonpost.com/world/the_americas/brazils-new-government-may-be-less-likely-to-protect-the-amazon-critics-say/2016/05/21/22cbce08-1c7d-11e6-82c2-a7db313287d_story.html) [<https://perma.cc/EHP9-82PF>].

<sup>117</sup> HOCHSTETLER & KECK, *supra* note 103, at 26–27.

<sup>118</sup> See Lei No. 4.771, de 15 de Setembro de 1965, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 16.9.1965 (Braz.).

<sup>119</sup> See Lei No. 5.197, de 3 de Janeiro de 1967, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 5.1.1967 (Braz.).

Code of 1965 provided, for example, that all owners of unexploited forests should conserve at least 50 percent of their forested area.<sup>120</sup> This rule especially affected the large unexplored areas of the Amazon Forest.<sup>121</sup> Further, several ecologically important areas, such as riparian forests, were also specially protected by that Code.<sup>122</sup> Even environmental education programs for schools became mandatory under that Code.<sup>123</sup> Many of these provisions created the conceptual basis for later improvements that survive up to now in laws dealing with forest protection.

Apart from environmental laws on forests, an environmental agency (called SEMA) was created in 1973.<sup>124</sup> With a limited structure, that agency could do little to prevent harm to the environment caused by all of the industry and infrastructure projects strongly supported by the military regime. Despite its limitations, SEMA was very influential for later designs of environmental laws and policies over the democratic transition period. The national policy for environmental protection promulgated in 1981, a landmark environmental law in Brazil (similar to the National Environmental Policy Act in the United States), was originally proposed by SEMA.<sup>125</sup>

The military regime represented the last term of successive policies on economic planning to promote the development of broad industrial sectors in Brazil. Following the patterns for economic policy initiated by President Vargas, the military regime initiated an unprecedented expansion in economic sectors such as energy, steel, transportation, and chemicals.<sup>126</sup> But, contrary to the early policies on economic development, the military regime reinserted agriculture and cattle raising as strategic economic sectors to be officially supported and expanded, mainly through financial subsidies and public land concessions in the Amazon Forest region.<sup>127</sup> This circumstance would be quite influential for the shape of modern environmental law in Brazil.

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<sup>120</sup> Lei No. 4.771, de 15 de Setembro de 1965, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 16.9.1965 (Braz.).

<sup>121</sup> *Id.*

<sup>122</sup> *Id.*

<sup>123</sup> *Id.*

<sup>124</sup> LESLEY MCALLISTER, MAKING LAW MATTER: ENVIRONMENTAL PROTECTION AND LEGAL INSTITUTIONS IN BRAZIL 22 (2008).

<sup>125</sup> *See id.* at 22–23.

<sup>126</sup> *See* Jeffrey A. Frieden, *The Brazilian Borrowing Experience: From Miracle to Debauch and Back*, 22 *LATIN AM. RES. REV.* 95, 101–06 (1987).

<sup>127</sup> HOCHSTETLER & KECK, *supra* note 103, at 140, 145–46.

## 2. Democratic Transition: The Flourishing of Modern Environmental Law

The particular model of economic development adopted by the military regime was associated with environmental problems. Not surprisingly, major infrastructure projects implemented by the military regime triggered the first public demonstrations by socio-environmental organizations in Brazil throughout the '70s.<sup>128</sup> The Campaign in Defense of the Amazon (1978), the Campaign against the Use of Nuclear Energy (1980), and a protest called “Goodbye, Seven Falls” (1985) were the most influential rallies led by environmentalist organizations during the military regime.<sup>129</sup> As conservationist groups had traditionally opted to influence government by occupying internal posts in federal agencies, socio-environmental groups preferred public campaigns and demonstrations.<sup>130</sup>

After intense popular pressure, the period of the 1980s and early 1990s marked the transition to democracy and the beginning of modern environmental law and policy in Brazil.<sup>131</sup> From the first national policy for environmental protection in 1981 through the Constitution of 1988, the influence of social movements was meaningful.<sup>132</sup> Indeed, after years of military dictatorship in Brazil, environmentalists were eager to participate and influence new public policies to deal with all the transformations which the country had gone through under the military regime.

The environmental impacts of large infrastructure projects and policies on exploitation of the Amazon Forest, both carried out by the military, were still present in the environmentalists' minds and influenced their priorities for the political agenda over the '80s.<sup>133</sup> To deal with the environmental impacts caused by infrastructure projects and intensive land use for agriculture and cattle raising, laws and policies for natural resource conservation became a political priority during the constitutional debates.

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<sup>128</sup> See LISA THOMPSON & CHRIS TAPSCOTT, *CITIZENSHIP AND SOCIAL MOVEMENTS: PERSPECTIVES FROM THE GLOBAL SOUTH* 142–43 (2014).

<sup>129</sup> See *id.*

<sup>130</sup> See HOCHSTETLER & KECK, *supra* note 103, at 99–110.

<sup>131</sup> EDUARDO BUENO, *BRASIL: UMA HISTÓRIA* 396 (2005) (More than one million people took to the streets in Rio de Janeiro and São Paulo in 1984 in a movement called *Diretas-Já*, putting pressure for general elections in Brazil. Further, the eighties marked the decline of communist countries and the end of the Cold War, easing the pathway for democracy in Brazil).

<sup>132</sup> See Padua, *supra* note 102, at 465.

<sup>133</sup> *Id.* at 466–68.

a. The Environmentalist Agenda and the Constitution of 1988

Environmentalists were successful during the constitutional process by lobbying for the inclusion of an unprecedented and exclusive chapter for environmental protection in the Constitution of 1988. Among other provisions, the constitutional text provided: (a) a fundamental right to a balanced environment; (b) special legal status to some biomes such as the Amazon Forest and the Atlantic Forest; (c) mandatory environmental impact assessments for all potentially harmful infrastructure projects; (d) protection to endangered species; (e) the prohibition of actions of cruelty against animals; and (f) the imposition to federal lawmakers of the duty to create a criminal code for environmental violations.<sup>134</sup> Further, the Constitution provides that all economic activities should take into consideration environmental concerns.<sup>135</sup>

Importantly, the final result of the constitutional process in 1988 reaffirmed a common pattern for environmental law and policy in Brazil since the earliest laws enacted over the '30s: a preference for rule-making on conservation of natural resources rather than pollution control.<sup>136</sup>

b. Environmental Regulation: Building Environmental Agencies

Environmental agencies are fundamental for the success of environmental law and policy. Enforcing laws refers to the rule of law. Without an official structure to monitor and apply the law, every aspect of a given legal field loses its credibility. This is especially important for environmental law.

Instead of the American legal tradition on administrative law, which assigns the regulatory power for industries almost exclusively to agencies, Brazil has a different background for the legal framework dealing with the relationship between government and industries. While the United States has regulated industries since the creation of its early regulatory agencies in the 19th century,<sup>137</sup> regulation of private markets in Brazil only became a widespread practice by agencies after the administrative reforms and their privatization programs introduced during the

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<sup>134</sup> CONSTITUIÇÃO FEDERAL [C.F.] [CONSTITUTION] art. 225 (Braz.).

<sup>135</sup> *Id.* art. 170.

<sup>136</sup> Roger W. Findley, *Pollution Control in Brazil*, 1 *ECOLOGICAL L.Q.* 1, 6–7 (1988).

<sup>137</sup> See *A Brief History of Administrative Government*, CTR. FOR EFFECTIVE GOV'T, <https://www.foreffectivegov.org/node/3461> [<https://perma.cc/A7FG-5JTC>] (last visited Dec. 3, 2019).

nineties.<sup>138</sup> In Brazil, environmental laws and regulations had mostly been designed by Presidents since the earliest laws of the thirties.<sup>139</sup>

*B. CONAMA—The New Environmental Regulator*

Historically, laws and policies for environmental protection were the result of successful lobbies from conservationist groups within the governments.<sup>140</sup> However, the presidential influence over the environmental agenda also imposed meaningful limits on the development of environmental law and policy in Brazil, particularly for national policies on pollution control.<sup>141</sup> In this context, the creation of the National Council of the Environment (“CONAMA”) in 1981<sup>142</sup> as a council integrated by different social groups and responsible for rule-making on environmental protection opened the real possibility of an institutional experiment based on collaborative governance.

With CONAMA, Brazil diverged from its tradition of administrative state institutions. Rather than an agency strictly subordinated to an administration’s agenda, CONAMA could lead a deep transformation of environmental law and policy in Brazil through a technical, participative, transparent, and accountable new regulatory dynamic.

CONAMA’s outset was promising. The eighties were dominated by environmental regulations promulgated by that council.<sup>143</sup> Rules on nature conservation, environmental impact assessment requirements and procedures, air pollution, and chemicals were all the result of broad consensus within CONAMA, and some of them have been the most consequential

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<sup>138</sup> Padua, *supra* note 102, at 469–70.

<sup>139</sup> By 1984, the traditional authorities for environmental policymaking in Brazil had been Congress and the president. *See* HOCHSTETLER & KECK, *supra* note 103, at 34–35. Statutes and executive orders were the most usual instruments to transform ideas into practice for environmental protection. Laws on forest conservation, mining and water regulation, among others, were enacted after internal political decisions which were made under quite limited scrutiny. *See generally* Gonçalves et al., *Environmental law and practice in Brazil: overview* (Oct. 1, 2012), [https://content.next.westlaw.com/Document/I203078f21cb611e38578f7ccc38dcbec/View/FullText.html?coGoncalves%20et%20al.,%20Environmental%20Law%20and%20Practice%20in%20Brazil:%20Overview&textData=\(sc.Default\)&transitionType=Default&firstPage=true&bhcp=1&contextData=\(sc.Default\)](https://content.next.westlaw.com/Document/I203078f21cb611e38578f7ccc38dcbec/View/FullText.html?coGoncalves%20et%20al.,%20Environmental%20Law%20and%20Practice%20in%20Brazil:%20Overview&textData=(sc.Default)&transitionType=Default&firstPage=true&bhcp=1&contextData=(sc.Default)).

<sup>140</sup> *See generally* HOCHSTETLER & KECK, *supra* note 103.

<sup>141</sup> *See generally id.*

<sup>142</sup> *See* Lei No. 6.938, de 31 de Agosto de 1981, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 2.9.1981 (Braz.).

<sup>143</sup> *See* HOCHSTETLER & KECK, *supra* note 103, at 32–36.

for environmental law and policy in Brazil.<sup>144</sup> National policies on desertification and air pollution were promulgated.<sup>145</sup> Protected areas were established as well.<sup>146</sup> It is indicative of the environment of this new era that, after CONAMA's effective inauguration in 1984,<sup>147</sup> only two laws promulgated by Congress and signed by the President over the eighties dealt with environmental issues.<sup>148</sup>

According to one of CONAMA's founders, that agency was "in fact, one of the rare environmental parliaments in the world,"<sup>149</sup> meaning that different social groups would have room to actively participate in new environmental regulations.

However, subsequent developments discussed later in this Article demonstrate that a traditional Brazilian-style presidential dominance over agencies would fight to reassert its influence on environmental law and policy.<sup>150</sup> CONAMA's authority as a primary source of environmental law and policy in Brazil would be directly challenged.

## 1. Enforcing the Law

While CONAMA was responsible for rule-making on environmental protection, another new environmental agency was created in 1989 to enforce the law.<sup>151</sup> That agency was called IBAMA and replaced previously separate structures throughout the federal government responsible

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<sup>144</sup> See Gonçalves et al., *supra* note 139 (Regulations enacted over the eighties on environmental impact assessments have been particularly influential in Brazil).

<sup>145</sup> See Resolução No. 238, de 22 de Dezembro de 1997, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 23.12.1997 (Braz.).

<sup>146</sup> See Resolução No. 18, de 7 de Dezembro de 1989, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 24.1.1990 (Braz.); Resolução No. 11, de 14 de Setembro de 1989, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 18.12.1989 (Braz.); Resolução No. 27, de 3 de Dezembro de 1986, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 22.1.1987 (Braz.); Resolução No. 17, de 18 de Dezembro de 1984, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 25.1.1985 (Braz.); Resolução No. 14, de 18 de Dezembro de 1984, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 23.11.1984 (Braz.); Resolução No. 11, de 26 de Setembro de 1984, BOLETIM DE SERVIÇO/MI de 1.11.1984 (Braz.).

<sup>147</sup> HOCHSTETLER & KECK, *supra* note 103, at 34–35.

<sup>148</sup> "Those laws dealt with domestic liquid wastes, the prohibition of whale hunting, and a national plan for managing the Brazilian coast." RÔMULO SILVEIRA DA ROCHA SAMPAÍO, DIREITO AMBIENTAL: DOUTRINA E CASOS PRÁTICOS 134 (2011).

<sup>149</sup> CONSELHO NACIONAL DO MEIO AMBIENTE (BRASIL), MINISTÉRIO DO MEIO AMBIENTE, RESOLUÇÕES DO CONAMA: RESOLUÇÕES VIGENTES PUBLICADAS ENTRE SETEMBRO DE 1984 E JANEIRO DE 2012, at 9 (2012).

<sup>150</sup> See discussion *infra* Section II.B.2.

<sup>151</sup> See Lei No. 7.735, de 22 de Fevereiro de 1989, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 23.2.1989 (Braz.).

for natural resources protection.<sup>152</sup> Although IBAMA's functions covered all national territory, special concerns about the Amazon Forest arose as deforestation reached historically high levels at the end of the eighties ("[b]y 1990, deforestation had destroyed about 10 to 15 percent of the Brazilian Amazon").<sup>153</sup> Furthermore, IBAMA was responsible for monitoring and managing protected areas such as the national parks.<sup>154</sup>

Another important responsibility of IBAMA deals with issuing permits for (a) industries after analyzing environmental impact assessments (EIA) of infrastructure projects and (b) industries interested in the production and selling of pesticides.<sup>155</sup>

The creation of IBAMA in 1989 provided Brazil with an unprecedented structure to enforce environmental law in the field.<sup>156</sup> Historically low levels of enforcement of environmental laws had definitively shifted its historical course.<sup>157</sup> The challenges were enormous for a developing country with a huge territory and the largest tropical forest in the world to oversee.

## 2. Subsequent Developments and Current Framework

### a. Presidential Rule-Making Dominance: Regaining Control

Brazil has a long history of laws and regulations on environmental protection promulgated by different administrations. Forest and mining codes, water and animal laws, and laws regarding protected areas have all been regulated mostly by presidents.<sup>158</sup>

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<sup>152</sup> Renata Garcia, *Introduction to IBAMA*, BRAZ. BUS., <https://thebrazilbusiness.com/article/introduction-to-ibama> [<https://perma.cc/X5DE-ZTK2>] (last updated June 16, 2015).

<sup>153</sup> MARSHALL EAKIN, BRAZIL: THE ONCE AND FUTURE COUNTRY 94 (1998); HOCHSTETLER & KECK, *supra* note 103, at 36.

<sup>154</sup> Marina Silva, *The Brazilian Protected Area Programs*, 19 CONSERVATION BIOLOGY 608, 608 (2005). These functions were transferred to another environmental agency created later. Lei No. 11.516, de 28 de Agosto de 2007, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 28.8.2007 (Braz.).

<sup>155</sup> *See Brazil has good procedures for estimating environmental impacts of enterprises, but putting them in practice is difficult*, RES. CTR. FOR GAS INNOVATION (May 2, 2017), <https://www.rcgi.poli.usp.br/brazil-has-good-procedures-for-estimating-environmental-impacts-of-enterprises-but-putting-them-in-practice-is-difficult/> [<https://perma.cc/35KR-XM5F>]; *Pesticides*, AGENCIA NACIONAL DE VIGILANCIA SANITARIA, <http://portal.anvisa.gov.br/en/pesticides> [<https://perma.cc/5TEB-68PR>] (last visited Dec. 3, 2019).

<sup>156</sup> *See* Garcia, *supra* note 152.

<sup>157</sup> *See* HOCHSTETLER & KECK, *supra* note 103, at 24–26.

<sup>158</sup> *See* Drummond & Barros-Platíau, *supra* note 98, at 86.

Even after the creation of CONAMA in 1981, presidents have remained highly influential on environmental law and policy. Apart from directly promulgating laws and executive orders, different administrations have nudged CONAMA's regulations by controlling its agenda. Thus, this section deals with the effects of that ongoing control of the environmental law and policy agenda by presidential influence over regulatory matters.

As seen before, the creation of CONAMA as a powerful regulatory board to produce general rules for industries and private citizens regarding environmental protection was a deep institutional experiment for the Brazilian administrative state tradition. Although several important regulations have been enacted by CONAMA, its powers have been continuously challenged by traditional presidential dominance of the administrative state.<sup>159</sup>

Presidential control of CONAMA's policymaking agenda might be realized by the different patterns of regulatory production over time. By law, for example, the president of CONAMA has been the Secretary of Environment (a cabinet member), which means that this authority presides over all the council meetings and has large control over its political agenda,<sup>160</sup> triggering grievances among CONAMA's members.<sup>161</sup>

This difficulty is explained by the Brazilian tradition of presidential dominance over the administrative state. At least since the promulgation of the current Brazilian constitution, the control of the political agenda has been dominated by the president.<sup>162</sup> Even after business-friendly reforms during the '90s that created independent regulatory agencies, presidential dominance remained preserved.<sup>163</sup> Economic regulation of private activities in Brazil has been historically linked to laws and regulations enacted by presidents, not decided by administrative

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<sup>159</sup> For information about presidential dominance over agencies in Brazil, see generally Mariana Mota Prado, *Presidential Dominance from a Comparative Perspective: The Relationship Between the Executive Branch and Regulatory Agencies in Brazil*, 3 BRAZ. J. EMPIRICAL LEGAL STUD. 74 (2016).

<sup>160</sup> See *Social and environmental policy in IDB Annual Meeting*, INTER-AM. DEV. BANK (Mar. 12, 2002), <https://www.iadb.org/en/news/news-releases/2002-03-12/social-and-environmental-policy-in-idb-annual-meeting,1681.html> [<https://perma.cc/2VWE-4FXS>]. Also by law, the Deputy Secretary of Environment is the main executive official to organize CONAMA's activities. Decreto No. 99.274, de 6 de Junho de 1990, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 7.6.1990 (Braz.).

<sup>161</sup> HOCHSTETLER & KECK, *supra* 103, at 42.

<sup>162</sup> See generally Prado, *supra* note 159.

<sup>163</sup> *Id.*

agencies.<sup>164</sup> Even during democratic periods over the 20th century, the Brazilian administrative tradition limited agencies' roles to the enforcement of laws and regulations.<sup>165</sup>

On regulation of chemicals, the presidential dominance has been particularly evident. Asbestos, a hazardous chemical partially banned in the United States since 1973 by the Environmental Protection Agency ("EPA"), was regulated—not completely banned—by a federal law<sup>166</sup> and a resolution by CONAMA.<sup>167</sup> It was only in 2009 that a law approved by Congress and signed by the President prohibited the use of DDT.<sup>168</sup> Further, pesticides are regulated by a federal law<sup>169</sup> and an executive order,<sup>170</sup> not by CONAMA.

Subjects such as conserving nature, controlling pollution, and regulating chemicals share a similar feature: they rest on a scientific basis. If environmental agencies exist to provide technical decisions on subjects where handling should not rely on political or random motivations, Presidents should not undermine agencies' authority on a permanent basis. Notwithstanding, in the case of Brazil, CONAMA's authority remains directly challenged by presidential influence.

#### b. Reinforcing a Preference for Natural Resource Conservation

The preference for natural resources rather than pollution control laws has been a historical feature of environmental law and policy in Brazil.<sup>171</sup> Forest codes, laws on water management and protection, and extensive protected areas have been central features of the policymaking landscape on environmental protection. Even the Constitution of 1988's

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<sup>164</sup> See *id.* at 80–81 (detailing the historical large grant of authority to the Brazilian President by the country's constitution).

<sup>165</sup> See *id.* at 81–85 (explaining the Brazilian President's control over the legislative branch).

<sup>166</sup> See Lei No. 9.055, de 1 de Junho de 1995, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 2.6.1995 (Braz.).

<sup>167</sup> See Resolução No. 7, de 16 de Setembro de 1987, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 22.10.1987 (Braz.).

<sup>168</sup> Lei No. 11.936, de 14 de Maio de 2009, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 15.5.2009 (Braz.).

<sup>169</sup> See Lei No. 7.802, de 11 de Julho de 1989, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 12.7.1989 (Braz.).

<sup>170</sup> See Decreto No. 4.074, de 4 de Janeiro de 2002, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 8.1.2002 (Braz.).

<sup>171</sup> By conservation of natural resources, I mean rules that intend to protect pristine or non-urban areas. Rules on urban pollution, for example, are not included in that concept. Estela Neves, *Institutions and Environmental Governance in Brazil: The Local Governments' Perspective*, 20 REVISTA DE ECONOMIA CONTEMPORÂNEA 492, 495–97 (2016).

provisions on environmental protection were based on natural resource conservation.<sup>172</sup> This regulatory landscape has not essentially changed since then. Several laws promulgated by Congress and the President, more than a hundred regulations enacted by CONAMA, the daily law enforcement by IBAMA, legal academic debates, federal court decisions (some of the most innovative legal principles on environmental law developed in Brazil have been linked to conservation purposes),<sup>173</sup> and most of the real world of environmental law and policy in Brazil have dealt with rules on nature conservation.<sup>174</sup>

Forest protection, in particular, has been the most traditional field of environmental law and policy in Brazil. Due to this tradition, new legal strategies on forest management and protection have been developed beyond those provided by the Forest Code. Besides the Forest Code, the Atlantic Forest Act, and Protected Areas Act, a new law promulgated in 2006<sup>175</sup> (later detailed by the President through an executive order)<sup>176</sup> has created a leasing program for forests on government lands.<sup>177</sup> As the federal and state governments have had difficulty in monitoring vast portions of the forests in the Amazon, that law was intended to avert clandestine logging and mining (common practices in the Amazon Forest) by improving the rational occupation and use of natural resources in forests by industries.<sup>178</sup>

Further, a fairly strict Criminal and Administrative Code on Environmental Infractions was promulgated in 1998 and regulated by presidential executive orders in 1999 and 2008.<sup>179</sup> Mostly concerned with

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<sup>172</sup> See *Brazil Complete New Constitution*, N.Y. TIMES (Sept. 3, 1988), <https://www.nytimes.com/1988/09/03/world/brazil-complete-new-constitution.html> [<https://perma.cc/UQN2-RP7V>].

<sup>173</sup> The legal doctrine of *in dubio pro nature* established by the Brazilian High Court (Superior Tribunal de Justiça) and the “prohibition against regression” principle developed by scholars are both linked to conservation purposes. See *generally* PAULO DE BESSA ANTUNES, DIREITO AMBIENTAL (15th ed. 2013).

<sup>174</sup> See Gonçalves et al., *supra* note 139.

<sup>175</sup> See Lei No. 11.284, de 2 de Março de 2006, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 3.3.2006 (Braz.).

<sup>176</sup> See Decreto No. 6.063, de 20 de Março de 2007, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 21.3.2007 (Braz.).

<sup>177</sup> Since then, private companies might have a concession for a defined term to explore forests under strict sustainable requirements. Lei No. 11.284, de 2 de Março de 2006, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 3.3.2006 (Braz.).

<sup>178</sup> See Lei No. 11.284, de 2 de Março de 2006, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 3.3.2006 (Braz.); Scott Wallace, *Inside the faltering fight against illegal Amazon logging*, NAT'L GEOGRAPHIC (Aug. 28, 2019), <https://www.nationalgeographic.com/environment/2019/08/brazil-logging/> [<https://perma.cc/YHM9-UQ6V>].

<sup>179</sup> See Decreto No. 6.514, de 22 de Julho de 2008, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de

conserving natural resources, five different groups of crimes were listed according to the following classification: (a) crimes against animals; (b) crimes against plants; (c) crimes against environmental authorities; (d) crimes committed by polluters; and (e) crimes against protected monuments.<sup>180</sup> An empowered *Ministério Público* (the official prosecutor in Brazil) has been particularly important for enforcing this law.<sup>181</sup>

Instead of the broad sets of laws and regulations in the United States on air and water pollution, environmental concerns more connected to urban issues have been only a marginal portion of environmental law and policy at the federal level in Brazil. Though CONAMA has enacted some important regulations setting forth water quality standards and limits on industrial and vehicular air pollution, there have been no clear goals nor effective implementation and monitoring plans to guide local or state governments.<sup>182</sup>

Air and water pollution remains primarily a local or state issue for environmental law and policy. This trend has led a highly influential scholar in Brazil to advocate for a separate legal field called urban law, dealing mostly with local or state regulations on environmental problems (such as water and air pollution) triggered mostly by housing, sanitation, and transportation issues.<sup>183</sup>

But the point to be reinforced here is that pollution control, though legally more connected to local and state governments, continues to require a national strategy. National standards fixed and updated on a regular basis, clear national goals and deadlines, production of scientific data on a national scale, and implementation plans should all be part of a national strategy for dealing with pollution control.

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23.7.2008 (Braz.); Lei No. 9.605 de 12 de Fevereiro de 1998, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 13.2.1998 (Braz.).

<sup>180</sup> See Lei No. 9.605, de 12 de Fevereiro de 1998, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 13.2.1998 (Braz.).

<sup>181</sup> See generally MCALLISTER, *supra* note 124; *Brazilian Ministerio Publico's Environmental Actions*, ENVTL. RTS. DATABASE, <http://environmentalrightsdatabase.org/brazilian-ministerio-publicos-environmental-actions/> [<https://perma.cc/TF85-CLEU>] (last visited Dec. 3, 2019).

<sup>182</sup> See DAVID G. VICTOR ET AL., LAB. ON INT'L LAW & REGULATION, WATER MANAGEMENT POLICY IN BRAZIL 7–17 (Mar. 2015); Bruno Felin, *Air quality in Brazil: what's at stake with the change in standards*, WRI BRAZ. (June 21, 2018), <https://wribrasil.org.br/en/blog/2018/06/air-quality-in-brazil> [<https://perma.cc/P5RC-765F>]. *But see* Meghie Rodrigues, *Brazil launches air-quality-monitoring program*, CHEMICAL & ENGINEERING NEWS (June 20, 2019), <https://cen.acs.org/environment/pollution/Brazil-launches-air-quality-monitoring/97/i25> [<https://perma.cc/M2VA-HXTX>].

<sup>183</sup> See generally JOSÉ AFONSO DA SILVA, DIREITO URBANÍSTICO BRASILEIRO (2012).

### C. *Potential Impacts from Cost-Benefit Analysis*

As cost-benefit analysis advocated by the OECD entails a whole-of-government approach, which means applying cost-benefit analysis to all environmental laws and regulations to be imposed on industries, the potential impacts of that economic tool for the development of environmental law and policy in Brazil are addressed in this subpart.

#### 1. On Natural Resources

Considering that Brazil has in its territory the largest rainforest in the world (the Amazon Forest), a huge savanna (Cerrado), and the Atlantic Forest with its high biodiversity, regulatory strategies on forest protection have been a major concern for environmental law and policy in this country.<sup>184</sup> Not surprisingly, the Forest Code, the Atlantic Forest Act, and the Protected Areas Act have been three of the most debated environmental laws in Brazil.<sup>185</sup> As cost-benefit analysis advocated by the OECD entails a whole-of-government approach, it means that all policies and regulations (new and existing) provided by those laws would be subject to that economic test.

The Forest Code, for instance, assigns express preservation duties to non-urban landowners in areas located within forests.<sup>186</sup> A property located in the Amazon Forest, for example, must have at least 80 percent of its total size preserved.<sup>187</sup> In other words, if a firm or a citizen has a farm property located in the Amazon Forest, only 20 percent of its real estate can be exploited.

As a law created to prevent the extinction of a global biodiversity hotspot, the Atlantic Forest Act is a fairly detailed law that seeks to

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<sup>184</sup> See *Brazil 'invites deforestation' with overhaul of environmental laws*, GUARDIAN (Mar. 1, 2018), <https://www.theguardian.com/world/2018/mar/01/brazil-amazon-protection-laws-in-vite-deforestation-ngo> [<https://perma.cc/9FFU-BMKV>]; *What is Happening?*, WORLD WILDLIFE FUND, [https://wwf.panda.org/wwf\\_news/brazil\\_forest\\_code\\_law.cfm](https://wwf.panda.org/wwf_news/brazil_forest_code_law.cfm) [<https://perma.cc/CAN5-Z5YJ>] (last visited Dec. 3, 2019).

<sup>185</sup> See *Untangling Brazil's Controversial New Forest Code*, WOODS HOLE RES. CTR. (Apr. 24, 2014), <https://whrc.org/untangling-brazils-controversial-new-forest-code/> [<https://perma.cc/SSH2-FV2C>] (The last reform of the Forest Code, for example, witnessed a large battle among different groups but particularly between industries based on agriculture and livestock, on one side, and environmentalist organizations, on the other.).

<sup>186</sup> See Lei No. 12.651, de 25 de Maio de 2012, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 26.5.2012 (Braz.).

<sup>187</sup> See *id.*; FREDERICO MACHADO & KATE ANDERSON, BRAZIL'S NEW FOREST CODE: A GUIDE FOR DECISION-MAKERS IN SUPPLY CHAINS AND GOVERNMENTS 18, 43 (Marcel Viergever trans., 1st ed. 2016).

regulate almost every economic use of that forest and its resources.<sup>188</sup> For example, portions of areas located in the Atlantic Forest are classified by CONAMA as original or restored vegetation according to their previous use.<sup>189</sup> The original vegetation in the Atlantic Forest cannot be suppressed, except in quite strict situations.<sup>190</sup>

According to the whole-of-government approach advocated by the OECD, meaningful provisions of the Forest Code, the Atlantic Forest Act, and the Protected Areas Plan would enter into the scope of cost-benefit analysis. Putting a price value on forests, such as the Amazon Forest and the Atlantic Forest, would be the ultimate goal for cost-benefit analysis.

When dealing with benefits provided by the Amazon Forest or the Atlantic Forest, traditional cost-benefit analysis would entail obscure and highly speculative calculations for monetary quantification of plants and animals (many of them still unknown), human lives, and ecosystems. For a pristine region such as the Amazon Forest, the lungs of the world, those calculations become even more complex, if not impossible.

It is intriguing to consider how the “willingness to pay” method traditionally used by cost-benefit analysis could give monetary values for all the benefits provided by the Amazon Forest. Indigenous populations who live there have extraordinary knowledge about the value of all plants and animals located in the Amazon Forest, but they have no idea about their prices. Nevertheless, it is very likely that this accidental circumstance would not trigger any limitation for traditional cost-benefit analysis since its “scientific findings” on prices for “products” supplied by the Amazon Forest could be reached through surveys with people working in refrigerated offices on the *Avenida Paulista* or playing soccer on *Copacabana Beach*.

## 2. On Pollution Control

As several regulatory gaps can be noticed in the federal government for dealing with pollution control, traditional cost-benefit analysis

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<sup>188</sup> See Lei No. 11.428, de 22 de Dezembro de 2006, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 26.12.2006 (Braz.).

<sup>189</sup> Primary vegetation means a portion of forest never exploited before by human action. In turn, restored vegetation means those areas exploited in the past but under a process of restoration. For restored areas, the Atlantic Forest Act sets out two different degrees of restoration: medium and advanced. Vegetation under advanced degree of restoration is better protected by the Atlantic Forest Act than those classified as medium degree. See Lei No. 12.651, de 25 de Maio de 2012, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 26.5.2012 (Braz.).

<sup>190</sup> For portions of the Atlantic Forest surrounding traditional protected areas such as national parks, no human intervention is allowed by the Atlantic Forest Act. See *id.*

might constitute an important barrier to overcoming those deficiencies. In this sense, this section analyzes the potential impacts that cost-benefit analysis might trigger for the future environmental policymaking agenda for controlling pollution.

Currently, neither CONAMA nor the President use any specific economic tool for decision-making processes on environmental laws and regulations.<sup>191</sup> Indeed, under the current decision-making process at CONAMA, it is common that environmentalist organizations in that council play a role in ratifying previous policy decisions taken by federal authorities.<sup>192</sup>

A new language from economics—familiar to the business community but obscure to all other interested parties—would dominate the debates at CONAMA and IBAMA as the new “rationale” for regulatory policy on environmental protection. Economic terms such as “discount rate,” “contingent valuation,” or “statistical life” would replace ordinary language as the major source for solving complex challenges on protecting the environment.

Still, as most of the decision-making processes at IBAMA deal with licensing infrastructure projects,<sup>193</sup> an obscure set of calculations would be required for each agency’s step in those proceedings. So, in order to decide whether to give a permit for a polluting plant, the traditional cost-benefit analysis would consider the economic gains from an infrastructure project as the benefits side. The cost side would consist first of the price of equipment, machines, and workforce, among other ordinary transaction costs related to the construction and operation of the business,<sup>194</sup> but

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<sup>191</sup> See Natalie Unterstell, *Brazil Doesn't Have to Choose Between the Environment and the Economy*, AMS. Q. (June 6, 2019), <https://www.americasquarterly.org/content/brazil-doesnt-have-choose> [<https://perma.cc/7R7W-K6UR>]; *Regulation of Air Pollution: Brazil*, LIBR. CONGRESS, <https://www.loc.gov/law/help/air-pollution/brazil.php> [<https://perma.cc/G4KF-9F6X>] (last visited Dec. 3, 2019).

<sup>192</sup> HOCHSTETLER & KECK, *supra* note 103, at 42–43.

<sup>193</sup> See Garcia, *supra* note 152. IBAMA issues other important licenses such as those for producing or importing pesticides and for exporting species labeled as endangered under the CITES Convention. EDITH BROWN WEISS & HAROLD K. JACOBSEN, *ENGAGING COUNTRIES: STRENGTHENING COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL ACCORDS* 491 (1998); Jenny Gonzales, *Brazil's fundamental pesticide law under attack*, MONGABAY (Feb. 20, 2018), <https://news.mongabay.com/2018/02/brazils-fundamental-pesticide-law-under-attack/> [<https://perma.cc/T2AT-4DGD>].

<sup>194</sup> But when IBAMA imposes a precaution measure, cost-benefit analysis would place the infrastructure project as costs and the benefits would come from the precaution measures adopted. See, e.g., Apartim Guatam et al., *Brazil's Belo Monte: A Cost Benefit Analysis*, ENERGY & ENERGY POL'Y, <http://franke.uchicago.edu/bigproblems/BPRO29000-2014/Team09-EnergyPolicyPaperBeloMonte.pdf> [<https://perma.cc/4KKH-MBKL>].

the main source of costs—environmental harms—would remain unquantifiable.

*D. Reducing Transparency and Accountability*

Cost-benefit analysis entails the creation of an oversight authority to supervise agencies' proposed regulations. In the United States, the oversight office for reviewing cost-benefit analysis from agencies is OIRA and it is located in the central government (the White House's official structure).<sup>195</sup>

As OIRA has increased its influence on agencies' decision-making processes, the notice-and-comment process in the United States has been challenged as the major institutional channel for organized groups to influence final rules within agencies.<sup>196</sup> Some actual justification for regulatory decisions might be tracked through informal talks between OIRA and agencies rather than notice-and-comment proceedings held by agencies.<sup>197</sup> Furthermore, besides the comment period before agencies, affected industries and their powerful lobbying structures have gained other official instances for influencing regulatory decisions.<sup>198</sup> Ultimately, agencies' notice-and-comment processes have been directly challenged as the foremost opportunity for interested groups to discuss and to influence agencies' final decisions.

Following that pattern, the OECD has advocated for the creation of oversight offices to supervise regulations proposed by agencies in its member countries. The OECD suggests that those oversight offices would be better located within central government instances such as the office of the president or prime minister.<sup>199</sup> Furthermore, as in the United States, the OECD recommends that the main purpose for oversight offices should be related to economic assessment through cost-benefit analysis of the proposed regulations.<sup>200</sup>

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<sup>195</sup> ACKERMAN & HEINZERLING, *supra* note 2, at 42.

<sup>196</sup> Farber & O'Connell, *supra* note 37, at 1138.

<sup>197</sup> Heinzerling, *supra* note 36, at 328–29.

<sup>198</sup> *Id.* at 343.

<sup>199</sup> *See generally* OECD, *supra* note 4 (A majority of countries (twenty-six out of thirty-five) have at least one oversight body located at the center of government (*e.g.*, the prime minister's office or cabinet office). In addition, many countries have at least one body based in the Ministry of Economy, Finance or Business (thirteen countries) which reflects a focus on monitoring and reducing administrative burdens.).

<sup>200</sup> According to OECD, another major mission for oversight offices is related to avoiding conflicting rules among different agencies and departments, or even to assess their

In Brazil, creating an oversight office to supervise the decision-making process at CONAMA will not be helpful to improve CONAMA's current transparency and accountability patterns. On the contrary, the American experience has demonstrated that an oversight office is more inclined to create unaccountable institutional channels that undermine transparency and accountability expected from notice-and-comment processes, particularly for environmental regulation.<sup>201</sup>

But those new informal channels would not be restricted to the oversight office. Several governmental structures traditionally more connected to powerful industries would become major players in the decision-making process for environmental regulations. As the oversight office would consult other departments about proposed rules by CONAMA, those departments would probably use the oversight office to put a halt to rules. The Brazilian Department of Agriculture and the Department of Mining and Energy,<sup>202</sup> for example, would likely become decisively influential on CONAMA's regulations by pressing not that agency, but the oversight office against new rules affecting their regulated industries.

Another problem from the introduction of a strict tool for economic analysis is that it would create even more difficulty for environmental organizations in Brazil. With already limited resources for tackling the enormous environmental challenges in a large country such as Brazil, environmental organizations would need to split their limited quantity of energy and resources to hire an army of economists just to have a dialogue with the business community on monetary terms. All of this endeavor would only be to translate cost-benefit language for the general public and to dispute arguments with the business organizations before CONAMA and the oversight office.

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appropriation with international treaties ratified by the country. *See generally* OECD, *supra* note 75.

<sup>201</sup> *See* Heinzerling, *supra* note 36, at 329 (“[T]he cost-benefit lens through which OIRA viewed agency rules proved to skew against some kinds of rules, in particular environmental rules, since so many of the benefits of environmental rules are difficult or impossible to quantify and monetize, and since so many of these benefits occur in the future while the settled practice of cost-benefit analysis is to steeply discount future consequences.”).

<sup>202</sup> *See, e.g.,* *Brazil's Farming Lobby Wields Its Growing Power*, STRATFOR (Aug. 29, 2018), <https://worldview.stratfor.com/article/brazils-farming-lobby-wields-its-growing-power> [<https://perma.cc/PL9V-ES23>]; Joe Sandler Clarke, *International trade minister lobbied Brazilian government on behalf of BP and Shell*, UNEARTHED (Nov. 19, 2017), <https://unearthed.greenpeace.org/2017/11/19/brazil-shell-bp-greg-hands-liam-fox/> [<https://perma.cc/U9CC-CFNE>] (Both departments have been fairly influenced by lobbies from their linked industries such as agriculture, livestock, mining, and energy. These departments frequently advocate openly for business interests within other government instances.).

## CONCLUSION

The conventional definition of regulation is government activity that is intended to affect directly the behaviors of private sector agents in order to align them with the “public interest.”<sup>203</sup> Regulatory policies, therefore, deal with political choices or preferences as to the extension of how, where, and when governments might interfere in the economy to accomplish a public interest agenda.

Reforms of regulatory policy based on laissez-faire ideas have been “sold” by the OECD to countries such as Brazil as rational because they would be politically neutral. But the crude reality is that those ideas have origins in conservative groups and administrations in the United States, which advocate deregulatory agendas on markets. Intriguingly, regulatory policies born from progressive periods in the United States (such as the New Deal and its notice-and-comment period or the ’70s and their revolutions in environmental regulation) have not been able to exert similar influence on OECD.

It is as if in the United States there were only free-market institutions and mechanisms for regulatory policies on environmental, consumer, or health protection issues. The truth, however, is that the laissez-faire agenda against regulations often has been more envisioned by the conservative groups than practiced by administrations and agencies. For environmental law and policy in the United States, for instance, there is an incredible history of the development of laws and regulations<sup>204</sup> whose progressive ideas behind them are just ignored by those laissez-faire “sellers” throughout the world.

As Brazil and the OECD become more closely associated on regulatory policy, the debates on the introduction of cost-benefit analysis in Brazil cannot just be separated from that background. Cost-benefit analysis has been a major political instrument for implementing a broader laissez-faire agenda which reflects highly unsympathetic views of the weight of governments in society. Simply using different names such as “Regulatory Impact Analysis” or soft adjectives for those radical reforms such as “regulatory quality,” “smart regulation,” or “better regulation,” does not change the essence of those laissez-faire ideas. Thus, before introducing such reactionary policies and mechanisms into environmental law and

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<sup>203</sup> See generally Ha-Joon Chang, *The Economics and Politics of Regulation*, 21 CAMBRIDGE J. ECON. 703 (1997).

<sup>204</sup> See generally RICHARD J. LAZARUS, *THE MAKING OF ENVIRONMENTAL LAW* (2004).

policy in Brazil, citizens, government officials, and public interest groups should at least be aware of the politics of cost-benefit analysis and the risks that it represents to that field.

For any reform of regulatory policy of environmental law and policy in Brazil, one condition should be present: economic consideration should be part of a broad institutional arrangement which includes several regulatory tools and proceedings dealing with accountability, transparency, participation, collaborative governance, political independence, and improved research in science. The combination of institutional elements from CONAMA's plural composition and democratic dynamic and the American notice-and-comment rule-making process might be a useful clue for an improved model of the decision-making process on environmental law and policy in Brazil.