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## *ARTICLES*

### WHERE NATURE'S RIGHTS GO WRONG

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*There is an increasing push by environmentalists, scholars, and some politicians in favor of a form of environmental rights referred to as “rights of nature” or “nature’s rights.” A milestone victory in this movement was the incorporation of rights of nature into the Ecuadorian constitution in 2008. However, there are reasons to be skeptical that these environmental rights will have the kinds of transformative effects that are anticipated by their most enthusiastic proponents. From a conceptual perspective, a number of difficulties arise when rights (or other forms of legal or moral consideration) are extended to non-human biological aggregates, such as species or ecosystems. There are two very general strategies for conceiving of the interests of such aggregates: a “bottom-up” model that grounds interest in specific aggregates (such as particular species or ecosystems), and then attempts to compare various effects on those specific aggregates; and a “top-down” model that grounds interests in the entire “biotic community.” Either approach faces serious challenges. Nature’s rights have also proven difficult to implement in practice. Courts in Ecuador, the country with the most experience litigating these rights, have had a*

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*difficult time using the construct of nature's rights in a non-arbitrary fashion. The shortcomings of nature's rights, however, do not mean that constitutional reform cannot be used to promote environmental goals. Recent work in comparative constitutional law indicates that organizational rights have a greater likelihood of achieving meaningful results than even quite concrete substantive rights. Protection for the role of environmental groups within civil society may, then, serve as the most effective way for constitutional reform to vindicate the interests that motivate the nature's rights movement.*

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#### INTRODUCTION

One of the most basic questions in environmental law, policy, and ethics is whether human societies owe obligations to non-humans. For the most part, U.S. environmental law has embraced a human-centered perspective, which justifies environmental protection primarily on the basis of benefits delivered to human beings. But, from the beginnings of the modern environmental movement, there have been efforts to promote

an alternative, bio-centered view. Justice Douglas's dissent in *Sierra Club v. Morton*—in which he called on the Court to grant legal personhood to “valleys, alpine meadows, rivers, lakes, estuaries, beaches, ridges, groves of trees, swampland, or even air that feels the destructive pressures of modern technology and modern life”—provides a canonical expression of the path not taken.<sup>1</sup>

In recent years, this bio-centered perspective has gained renewed traction in global environmental law discourse, especially through a new generation of constitutional and statutory rights extended directly to natural entities. A particular watershed moment came in 2008 when the country of Ecuador became the first in the world to recognize rights for nature in its constitution.<sup>2</sup> These new rights have come at a time of increasing frustration with the failure of legal institutions to come to terms with grave environmental threats such as climate change.<sup>3</sup> Activists, commentators, and scholars have argued that “nature's rights” may be able to achieve the kind of sustained and transformative environmental progress that has so far proven elusive.<sup>4</sup>

In this Article, we provide a dose of skepticism.<sup>5</sup> A defining feature of environmental policy is that it touches on complex, interconnected systems. As a consequence, environmental policy tends to have effects across a large number of (at least arguably) morally relevant dimensions. Outcomes that are affected by environmental policies include many

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<sup>1</sup> *Sierra Club v. Morton*, 405 U.S. 727, 742–43 (1972) (Douglas, J., dissenting). For a discussion of the Court's reluctance to take up a biocentric view, see Jonathan Z. Cannon, *Environment in the Balance: The Green Movement and the Supreme Court* (2015).

<sup>2</sup> See *infra* Part I. We use the phrase “rights for nature” and “nature's rights” interchangeably throughout this Article.

<sup>3</sup> See, e.g., Roger Hallam, *Common Sense for the 21st Century: Only Nonviolent Rebellion Can Now Stop Climate Breakdown and Social Collapse* (2019).

<sup>4</sup> See, e.g., David R. Boyd, *The Rights of Nature: A Legal Revolution That Could Save the World* (2017); *infra* Section IV.A.

<sup>5</sup> Other scholars have raised a number of general problems with substantive environmental rights. See, e.g., James R. May & Erin Daly, *Global Environmental Constitutionalism* 59 (2015) (collecting sources critical of constitutionalizing environmental rights); Tim Hayward, *Constitutional Environmental Rights* 74–75 (2004) (noting that substantive environmental rights might have an atomizing effect as collective demands for justice become fragmented into individual litigation and claims); César Rodríguez-Garavito, *A Human Right to a Healthy Environment?*, in *The Human Right to a Healthy Environment* 155, 166 (John H. Knox & Ramin Pejan eds., 2018) (arguing that substantive environmental rights “fall[] short of . . . transformational promises, as the language of rights tends to be more definitive than the complications of implementation warrant”). In this Article, we focus on the subclass of environmental rights that grant cognizable legal rights and remedies to non-human entities, especially aggregates such as species, ecosystems, or rivers.

features of human health and well-being, biodiversity and extinction, the protection of wilderness, and the stability of ecosystems. The natural world is not a monolithic “it,” but a “they” in the broadest possible understanding of that term.<sup>6</sup> This basic, pragmatic reality means that the process of environmental policymaking often requires that comparisons be made across alternatives that have both positive and negative effects on human beings and the non-human world.<sup>7</sup>

A common example of an environmental policy choice that governments have faced many times is whether or not to grant a permit for a hydroelectric dam. Granting a permit may further economic development for some while destroying the property of others; the dam may reduce carbon dioxide emissions by displacing fossil fuel electricity generation, but its construction may also wipe out the habitat of an endangered species. If the concept of nature’s rights is not to be entirely paralyzing, it must admit of some way for these heterogeneous effects to be balanced against each other to decide whether, all things considered, it is better to grant the permit or not.

This balancing analysis requires that the various entities that are affected by a policy be defined and that the effects of the policy on these entities be compared. Each of these steps raises difficulties for a nature’s rights framework. At the definitional step, the entities in question will frequently be aggregates, such as ecosystems or species.<sup>8</sup> There may be

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<sup>6</sup> Cf. Kenneth A. Shepsle, Congress Is a “They,” Not an “It”: Legislative Intent as Oxymoron, 12 *Int’l Rev. L. & Econ.* 239 (1992) (examining the difficulty of attributing intentionality to collective entities in the context of statutory interpretation).

<sup>7</sup> As is discussed in more detail below, the use of the language of rights does not obviate the need for comparison. See *infra* Part II. If anything, the notion of legal or moral rights simply makes the notion of comparison more complicated by introducing ideas such as lexical priority. See generally Jeremy Waldron, Rights in Conflict, 99 *Ethics* 503 (1989) (exploring possibilities of moral reasoning in cases of rights conflict).

<sup>8</sup> For purposes of this Article, we focus on an understanding of nature’s rights that involves biological aggregates such as species. An alternative formulation of nature’s rights could ignore such aggregates and instead deal exclusively with individual organisms. Such a view could largely, or entirely, overlap with the animal welfare perspective promoted by figures such as Peter Singer. See Peter Singer, *Animal Liberation* (1975). Some efforts have been made to articulate a framework for considering animal welfare in this manner. See, e.g., Alexis Carlier & Nicolas Treich, Directly Valuing Animal Welfare in (Environmental) Economics, 14 *Int’l Rev. Env’t & Res. Econ.* 113 (2020); Gary E. Varner, *Personhood, Ethics, and Animal Cognition: Situating Animals in Hare’s Two Level Utilitarianism* (2012). But nature’s rights, at least as it has been articulated so far, generally take as rights bearers aggregates such as species, ecosystems, rivers, and even the totality of nature. This makes them very different from an expanded welfarism that accounts for the pain and pleasures of non-human organisms. See *infra* notes 93–101 and accompanying text.

multiple ways of drawing lines around these aggregates, and estimates of the net consequences of a policy may be sensitive to these definitions. If there is no principled way to decide how to define the relevant entities, the decision of whether a policy is, on balance, desirable will be contingent on arbitrary line-drawing choices.

Even if the entities could be defined in a satisfactory fashion, making comparisons across entities raises additional challenges. Policy analyses limited just to effects on humans raise the classic problem of *interpersonal comparisons*. Solutions to this problem are generally grounded in the mutual intelligibility of people's motivations, interests, and reasons. A shared and comprehensible intersubjectivity that allows for deliberation and bargaining undergirds notions such as the social welfare function and the social contract, which are the dominant approaches for evaluating public policy choices. An equivalent shared understanding with entities like species, ecosystems, and landscapes is missing, leaving no clear foundation for an analytic structure capable of rendering effects across these entities comparable.<sup>9</sup>

This problem can be restated as one arising from multi-dimensionality. In standard forms of environmental policy analysis, the heterogeneous effects associated with a government decision are reduced to a single dimension along which comparisons can be made.<sup>10</sup> As practiced in the United States, that dimension is often a monetary metric based on the affected parties' willingness to pay.<sup>11</sup> If non-human entities have their own intrinsic value, above and apart from the value assigned to them by people, then effects on those entities must also be measured along a common dimension to make them comparable. But none of the tools or

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<sup>9</sup> By contrast, for ethical systems that embrace animals as worthy of moral consideration, the shared experience of pain and pleasure is a natural starting place for a balancing analysis. See Singer, *supra* note 8, at 8 (“The capacity for suffering and enjoyment is a *prerequisite for having interests at all . . .*”). Of course, profound differences between humans and non-human animals also raise a host of challenges in attempting to make moral judgment in the face of trans-species effects. See Douglas A. Kysar, *Regulating from Nowhere: Environmental Law and the Search for Objectivity* 195 (2010) (noting a “sense of awe and incomprehension regarding the other’s being”). See generally Matthew Calarco, *Zoographies: The Question of the Animal from Heidegger to Derrida* (2008) (illustrating difficulties in moral reasoning about animals).

<sup>10</sup> See generally EPA, *Guidelines for Preparing Economic Analyses* 7-1 (2010) (“Estimating benefits in monetary terms allows the comparison of different types of benefits in the same units, and it allows the calculation of net benefits—the sum of all monetized benefits minus the sum of all monetized costs—so that proposed policy changes can be compared to each other and to the baseline scenario.”).

<sup>11</sup> *Id.* at 7-6.

concepts that are used to translate effects on people to a single dimension can readily be applied to all of the relevant non-human entities. This leaves policymakers with a highly multi-dimensional space where policy comparisons will often be indeterminate. Unless there is some sensible way to reduce the dimensionality used to describe outcomes, then it will often be unclear whether a policy infringes on, promotes, or is neutral with respect to the interests that undergird nature's rights.<sup>12</sup>

Moving from the theoretical to the practical, experience with rights for nature has shown that their conceptual deficiencies have led to confusion, inefficiency, and arbitrariness—without any obvious environmental benefit. Multiple litigants pursuing conflicting goals have come to court claiming to speak on behalf of nature's rights, forcing courts not only to balance heterogeneous effects of policy choices but also to arbitrate between alternative plausible representational claims. Where nature's rights have been litigated, courts have struggled mightily to make sense of the inquiry before them.<sup>13</sup>

For all these reasons, rights for nature are unlikely to provide the solution that frustrated environmentalists seek.<sup>14</sup> But that does not mean that constitutional rights and courts are a dead-end for environmental progress. Recent work in comparative constitutional law has focused on the characteristics of constitutional rights that are most associated with success. In general, that literature finds that provisions that protect

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<sup>12</sup> Comparisons of effects on various interests need not be quantitative in nature, but to avoid paralysis, the interpretation of the interests implicated by environmental policy cannot imply that those interests are so strongly incommensurable that it is impossible to evaluate policies with diverse effects.

<sup>13</sup> These early struggles do not necessarily mean that courts will never land on a well-founded and workable understanding of nature's rights. Indeed, one way that nature's rights provisions could be defended is that they pose the question to courts of how best to articulate the obligations of human societies to the natural world. On this account, at this stage in their development, nature's rights provisions are not intended to have determinate substantive content. Rather, they initiate a deliberative process involving courts, as well as other social actors, focused on the appropriate relationship between humans and nature. The substantive content will emerge from this process over time. But, inasmuch as the concept of nature's rights continues to involve intrinsic value placed on biological aggregates such as species, ecosystems, or nature itself, it will face the challenges raised in Parts II and III below.

<sup>14</sup> We draw a sharp distinction between nature's rights and animal rights. See *supra* note 8. Under the former, biological aggregates of various sorts—including species, ecosystems, rivers, landscapes, or all of nature—are understood as having rights or interests. Under the latter, individual organisms (typically animals) are understood as having rights or interests. Our critique is focused on nature's rights and leaves to the side the question of whether and how the rights, interests, or well-being of individual organisms could or should be considered when evaluating the desirability of environmental policy.

organizations are most likely to be effective.<sup>15</sup> There is a lesson here for efforts to use constitution-making to achieve environmental goals. Concrete rights for the people and organizations that seek to promote a healthy relationship with the environment are more likely to lead to results than guarantees to abstract non-human entities.

The remainder of this Article proceeds as follows. Part I discusses the spread of rights for nature as part of a more general trend toward the expansion of environmental rights. Many activists, commentators, and courts have enthusiastically embraced rights for nature, in part due to frustration with traditional forms of environmental governance. Starting from their origin in Ecuador, rights for nature have been adopted in a variety of jurisdictions at the international, national, and local levels. These rights are now the topic of serious discussion by international institutions and have been promoted by many academics and environmental organizations.

Part II focuses on conceptual challenges that arise when rights for nature are understood in a *bottom-up* manner, as arising from the rights (or interests) of biological aggregates such as species or ecosystems.<sup>16</sup> The core issue is that environmental disagreements often involve conflicts within the domain of nature, implying that any option selected by a decision maker will create both benefits and harms for entities—such as species, ecosystems, and landscapes—that make up the natural world. When such conflicts arise between the rights (or interests) of some entities and others, decision makers must engage in some form of balancing. Drawing from work in moral philosophy and welfare economics, we examine the difficulties of deriving a coherent framework for this balancing inquiry. In particular, we raise difficulties associated with defining the relevant entities and their interests. Without a framework for balancing harms against each other when rights (or interests) conflict,

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<sup>15</sup> See Kevin L. Cope, Cosette D. Creamer & Mila Versteeg, *Empirical Studies of Human Rights Law*, 15 *Ann. Rev. L. & Soc. Sci.* 155, 171 (2019) (summarizing relevant research); Georg Vanberg, *Substance vs. Procedure: Constitutional Enforcement and Constitutional Choice*, 80 *J. Econ. Behav. & Org.* 309, 317 (2011). See generally Adam S. Chilton & Mila Versteeg, *Do Constitutional Rights Make a Difference?*, 60 *Am. J. Pol. Sci.* 575 (2016) (providing an in-depth empirical examination of the effectiveness of constitutional rights).

<sup>16</sup> As is discussed below, we borrow from Raz to treat nature's rights as implying that entities of some kind are the bearers of interests of sufficient moral weight to justify assigning a duty to some other. See Joseph Raz, *The Morality of Freedom* 166 (1988). For our purposes, we set aside the additional complications associated with legal or moral reasoning about rights, and instead assume that if the underlying interests can be articulated in a meaningful way, then those additional difficulties can be addressed. See *infra* Part II.

decision makers are left with no criteria that can be used to arbitrate disputes in many concrete cases.

Part III examines whether some of the problems discussed in Part II can be resolved by understanding nature's rights not as the aggregation of the rights of other entities, such as species or ecosystems, but in a *top-down* manner that begins with the biotic community as a whole.<sup>17</sup> We raise some initial objections to this approach, which are grounded in the problem of separation: both the need to respect the separate interests of at least some non-human entities and the conceptual difficulty of separating human activity from nature. We then use data from the Yale Environmental Performance Index to test whether there is a single dimension that captures existing metrics for environmental performance. We find that there is not. Finally, we discuss the possibility for a relatively low-dimensional representation of environmental performance to derive a set of "frontiers" that represent a space for nature's rights. Although this may be the most promising existing path forward, we examine some of its deficiencies.

Part IV examines the application of nature's rights in practice. We focus on Ecuador, the country with the most practical experience in this area. What we find is not heartening. In the limited number of cases where they have been applied, rights for nature have been used by a variety of groups and individuals, all speaking on behalf of nature, to bring conflicting claims. Facing an impossible situation, courts have done their best, but the results they reach have largely been arbitrary and ungrounded in any meaningful normative criteria. We then offer some justifications for nature's rights that are not grounded in their immediate practical effect, but rather for their symbolic, expressive, or cultural reform function. This may be the best justification for nature's rights, although many proponents of these rights focus on more short-term practical effects. We finally conclude with a discussion of lessons that can be learned from recent work in comparative constitutional law for the design of environmental rights. In applying those lessons, we argue that, although there may be a place for nature's rights in the toolkit as a means of communicating social values and commitments, more targeted rights that provide tangible protections for a robust civil society presence for environmental advocates may be more likely to lead to tangible results.

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<sup>17</sup> The distinction between a bottom-up and a top-down understanding of nature's rights tracks the concepts of biocentrism and ecocentrism from the environmental ethics literature. See Dale Jamieson, *Ethics and the Environment: An Introduction* 145–53 (2008).



## I. THE DIFFUSION OF RIGHTS FOR NATURE

Environmental rights are now a mainstay of constitutions around the world, with the vast majority of countries adopting constitutional language pertaining to the protection of the environment, environmental health, or nature.<sup>18</sup> Many of the constitutions contain judicially enforceable environmental rights, and, in a number of jurisdictions, courts have issued judgments against governments and private parties based on these provisions.<sup>19</sup> At the international level, the United Nations has promoted environmental rights,<sup>20</sup> and even in the United States, where no explicit constitutional environmental right exists at the national level, environmental groups have argued that the Constitution includes implicit environmental rights.<sup>21</sup> Environmentalists have celebrated the spread of environmental rights, arguing that they communicate a societal commitment to environmental protection and deliver real-world results.<sup>22</sup> In this latter claim, they have been supported by a small body of scholarship that focuses on the efficacy of environmental rights.<sup>23</sup>

Conceptually, the category of *environmental rights* is quite broad and could comprise many different legal approaches to structuring human relations with the environment. For example, although the United States does not have explicit environmental rights in its Constitution, U.S. statutory law includes many provisions that give parties with a stake in environmental matters the right to sue and receive a remedy in federal

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<sup>18</sup> See generally May & Daly, *supra* note 5 (examining trends in constitutional discourse on environmental rights).

<sup>19</sup> See generally David R. Boyd, *The Environmental Rights Revolution: A Global Study of Constitutions, Human Rights, and the Environment* 45–77, 117–65, 192–231 (2012) (discussing the issue of enforceability and examining the use of environmental rights in Latin America, Africa, and Europe).

<sup>20</sup> See U.N. Secretary-General, *Harmony with Nature*, U.N. Doc. A/71/266 (Aug. 1, 2016); U.N. Secretary-General, *Harmony with Nature*, U.N. Doc. A/70/268 (Aug. 4, 2015).

<sup>21</sup> See generally *Juliana v. United States*, 947 F.3d 1159 (9th Cir. 2020) (dismissing a substantive due process challenge against U.S. government inaction on climate change for lack of standing). There is also a movement in the United States toward the adoption of nature's rights at the municipal level. See generally Marsha Jones Moutrie, *The Rights of Nature Movement in the United States*, 10 *Env't & Earth L.J.* 5 (2020) (surveying and praising local nature's rights campaigns).

<sup>22</sup> See generally Boyd, *supra* note 4.

<sup>23</sup> See, e.g., Chris Jeffords & Lanse Minkler, *Do Constitutions Matter? The Effects of Constitutional Environmental Rights Provisions on Environmental Outcomes*, 69 *Kyklos* 294 (2016).

court.<sup>24</sup> In addition to such statutory rights that pertain to the environment—which have existed in many countries for decades—there are now many diverse constitutional environmental rights. These rights span a range from hortatory to fully enforceable and attach to a variety of environmental features, from a country’s heritage of natural resources to individuals’ environmental health.<sup>25</sup> Some of these constitutional rights are themselves longstanding, with early examples appearing as far back as the 1970s.<sup>26</sup>

But recent environmental rights-making has some defining characteristics that separate it from prior approaches. Perhaps most important is *generality*—the most distinctive new environmental rights tend to attach to nature (or a similar construct) in general, as opposed to a specific environmental condition, such as air quality that is protective of public health. Because they are unbounded, these general “rights for nature” at least theoretically admit of expansive judicial enforcement power. The statutory rights found in U.S. environmental laws serve as a useful contrast: where the rights created by the Clean Water Act or the National Environmental Policy Act are specific and give rise to limited forms of judicial relief, rights for nature have no boundaries in their scope or their associated remedies.

The recently adopted constitution in Ecuador provides a paradigmatic case of rights for nature.<sup>27</sup> Chapter seven of the constitution sets out the relevant provisions, first stating that “[n]ature . . . has the right to integral respect for its existence and for the maintenance and regeneration of its life cycles, structure, functions and evolutionary processes.”<sup>28</sup> The

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<sup>24</sup> These include citizen-suit provisions in the Clean Water Act, 33 U.S.C. § 1365 (2018), and the Clean Air Act, 42 U.S.C. § 7604; the requirements of environmental assessment in the National Environmental Policy Act, 42 U.S.C. § 4321; and provisions concerning the listing and protection of species in the Endangered Species Act, 16 U.S.C. § 1540. There are also important differences between citizen-suit provisions and environmental rights. The former are, in essence, an enforcement mechanism, whereas the latter create substantive obligations to specific entities. That is why judgments in such citizen-suit cases are rendered to the U.S. Treasury rather than as damages to the plaintiff.

<sup>25</sup> See generally Boyd, *supra* note 19 at 299 (link to online appendix of constitutional provisions related to environmental rights). Boyd’s *The Environmental Rights Revolution* uses online appendices. The appendix above can be found at <https://open.library.ubc.ca/cIRcle/collections/ubcpres/641/items/1.0058133> [<https://perma.cc/5HJZ-VXUX>].

<sup>26</sup> *Id.*

<sup>27</sup> Constitution of the Republic of Ecuador, Oct. 20, 2008. The right to nature is one of several environmental rights that are recognized in the Ecuadorian constitution—others include a right to water, *id.* art. 12, and a right to a healthy environment, *id.* arts. 14, 66.

<sup>28</sup> *Id.* art. 71.

chapter further states that “nature has the right to be restored” when it has been degraded and creates a duty for the state to “apply preventative and restrictive measures on activities that might lead to the extinction of species, the destruction of ecosystems and the permanent alteration of natural cycles.”<sup>29</sup> In addition to the broad substantive scope of these rights for nature, there are also quite broad procedures for judicial enforcement. The constitution includes general provisions that give all constitutional rights direct effect, without the need for enabling statutes.<sup>30</sup> The right of nature specifically provides for broad standing to bring challenges, stating, “[a]ll persons, communities, peoples and nations can call upon public authorities to enforce the rights of nature.”<sup>31</sup> The constitution further describes interpretive norms, such as a requirement to resolve ambiguity in favor of nature and the precautionary principle.<sup>32</sup>

Rights for nature akin to those found in the Ecuadorian constitution have generated considerable enthusiasm.<sup>33</sup> Most importantly, several countries have followed Ecuador in adopting either constitutional or statutory provisions to create rights for nature. In 2010, Bolivia adopted provisions that are fairly close to the Ecuadorian model in their scope, but include novel enforcement mechanisms.<sup>34</sup> The Bolivian Law of the Rights of Mother Earth defines Mother Earth as a “dynamic living system formed by the indivisible community of all life systems and living beings who are

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<sup>29</sup> Id. arts. 72, 73.

<sup>30</sup> Id. art. 11.

<sup>31</sup> Id. art. 71. But see Michelle P. Bassi, *La Naturaleza O Pacha Mama de Ecuador: What Doctrine Should Grant Trees Standing?*, 11 *Or. Rev. Int'l L.* 461, 464 (2009) (arguing that Ecuador's constitution is unclear about the requirements for standing).

<sup>32</sup> There are three provisions in the Constitution related to this statement:

Article 11.5. In terms of rights and constitutional guarantees, public, administrative or judicial servants must abide by the most favorable interpretation of their effective force.

Article 73. The State shall apply preventive and restrictive measures on activities that might lead to the extinction of species, the destruction of ecosystems and the permanent alteration of natural cycles.

Article 396. The State shall adopt timely policies and measures to avoid adverse environmental impacts where there is certainty about the damage. In the case of doubt about the environmental impact stemming from a deed or omission, although there is no scientific evidence of the damage, the State shall adopt effective and timely measures of protection.

<sup>33</sup> May & Daly, *supra* note 5, at 255, 344 (reviewing the countries that had recognized rights or duties to nature as of 2015).

<sup>34</sup> *Ley de Derechos de la Madre Tierra [Law of the Rights of Mother Earth] No. 71* (2010) (Bol.); see also Brandon Keim, *Nature to Get Legal Rights in Bolivia*, *Wired* (Apr. 18, 2011), <https://www.wired.com/2011/04/legal-rights-nature-bolivia/> [<https://perma.cc/HZ3G-3HL4>].

interrelated, interdependent, and complementary, which share a common destiny”<sup>35</sup> and grants nature the rights to life, to diversity of life, to water, to clean air, to equilibrium, to restoration, and to live free of contamination.<sup>36</sup> In terms of enforcement, article 10 of the law creates the Defensoría de la Madre Tierra, an ombudsman office for the protection of nature, to enforce those rights.<sup>37</sup> More recently, the Parliament of Uganda recognized nature’s rights in terms similar to those of the Ecuadorian constitution.<sup>38</sup> France, a country with worldwide civil law influence, is currently considering a constitutional amendment that would elevate nature to the status of rights bearer in terms that are almost a verbatim transcription of the articles of the Ecuadorian constitution.<sup>39</sup>

Local jurisdictions inside countries have also started to pass laws and regulations granting rights for nature. In Mexico, the constitutions of the State of Guerrero and Mexico City recognize rights of nature, defining it as “formed by all its ecosystems and species, as a collective entity with collective rights.”<sup>40</sup> In Argentina, the City of Santa Fé also elevated nature to the category of a rights holder.<sup>41</sup> In Brazil, the municipalities of

<sup>35</sup> Ley de Derechos de la Madre Tierra [Law of the Rights of Mother Earth] No. 71, art. 3 (2010) (Bol.) (translation by the author).

<sup>36</sup> Id. art. 7; Boyd, *supra* note 19, at 126; see also John Vidal, Bolivia Enshrines Natural World’s Rights with Equal Status for Mother Earth, *Guardian* (Apr. 10, 2011), <https://www.theguardian.com/environment/2011/apr/10/bolivia-enshrines-natural-worlds-rights> [<https://perma.cc/7E4V-RZJM>].

<sup>37</sup> Ley De Derechos de la Madre Tierra [Law of The Rights of Mother Earth] No. 71, art. 10 (2010) (Bol.); Maria Antonia Tigre, Implementing Constitutional Environmental Rights in the Amazon Rainforest, *in* *Implementing Environmental Constitutionalism: Current Global Challenges* 75 (Erin Daly & James R. May eds., 2018). To date, no Defensoría de la Madre Tierra office has been created. Tigre argues that the failure to fill the new office indicates that “the rights are more symbolic rather than practical.” Id. But see Boyd, *supra* note 19, at 140 (referring to two 2010 cases in which the Constitutional Court of Bolivia referred to the right to a healthy environment and concluded that it includes the right to potable water).

<sup>38</sup> National Environment Act (2019), § 4 (Uganda), available at <http://files.harmonywithnatureun.org/uploads/upload834.pdf> [<https://perma.cc/B54A-CTHT>].

<sup>39</sup> Assemblée Nationale [National Assembly], Amendment CL786, du 22 juin 2018 (Fr.), [https://www.assemblee-nationale.fr/dyn/15/amendements/0911/CION\\_LOIS/CL786.pdf](https://www.assemblee-nationale.fr/dyn/15/amendements/0911/CION_LOIS/CL786.pdf) [<https://perma.cc/6R6D-7LUM>] (rejected amendment).

<sup>40</sup> U.N. Secretary-General, *Harmony with Nature*, ¶ 32, U.N. Doc. A/72/175 (July 19, 2017) (describing the rights of nature provisions included in Article 13 of the constitution of Mexico City and Article 2 of the constitution of the State of Guerrero).

<sup>41</sup> Ciudad de Santa Fe, Santa Fe, Ordenanza No. 12541 (30 de agosto del 2018) (Arg.), [https://www.concejosantafe.gov.ar/Legislacion/ordenanzas/ORDE\\_12541.pdf](https://www.concejosantafe.gov.ar/Legislacion/ordenanzas/ORDE_12541.pdf) [<https://perma.cc/D94Q-LZB2>].

Florianópolis,<sup>42</sup> Paudalho,<sup>43</sup> and Bonito<sup>44</sup> also recognized nature's rights. In the United States, Pittsburgh and Santa Monica have recognized rights for nature to exist and flourish, along with people's rights to a healthy environment and a sustainable climate.<sup>45</sup> Other cities in the states of California,<sup>46</sup> Minnesota,<sup>47</sup> Maryland,<sup>48</sup> New Mexico,<sup>49</sup> New York,<sup>50</sup>

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<sup>42</sup> Altera o Art. 133, de 12 de novembro de 2019, Diário Oficial Eletrônico Do Município de Florianópolis [DOF] de 20-11-2019 (Braz.).

<sup>43</sup> Lei No. 878/2018, de 20 de dezembro de 2018, Diário Oficial Eletrônico Dos Municípios de Pernambuco [DOP], de 04-02-2019 (Braz.).

<sup>44</sup> Altera o Art. 1 o decreto No. 001/2017, de 21 de dezembro de 2017, Diário Oficial Eletrônico Dos Municípios de Pernambuco [DOP], de 08-03-2018 (Braz.).

<sup>45</sup> Pittsburgh, Pa., Code of Ordinances art. 1, § 104 (2011); Santa Monica, Cal., Mun. Code ch. 12 (2019); Santa Monica, Cal., Mun. Code ch. 7.18 (2018); Santa Monica, Cal., Mun. Code ch. 4.75 (2013) (repealed and reinstated as chapter 12 in 2019).

<sup>46</sup> See Santa Monica Mun. Code ch. 12; Santa Monica Mun. Code ch. 7.18; Santa Monica Mun. Code ch. 4.75 (repealed and reinstated as chapter 12 in 2019).

<sup>47</sup> White Earth, Minn., Ordinance to Establish Rights of Manoomin on White Earth Reservation and Throughout 1855 Ceded Territory § 1(a) (Jan. 11, 2019) (codifying the right of manoomin rice to "pure water and freshwater habitat; the right to a healthy climate system and a natural environment free from human-caused global warming impacts and emissions" and more).

<sup>48</sup> Mountain Lake Park, Md., Ordinance No. 2011-01 (Apr. 15, 2011) (regulating the extraction of natural gas within the town of Mountain Lake Park).

<sup>49</sup> Mora County, N.M., Ordinance 2013-01 (Apr. 29, 2013) (establishing a local bill of rights that protects the natural sources of water from damage related to the extraction of oil, natural gas, and other hydrocarbons).

<sup>50</sup> Wales, N.Y., Local Law No. 3-2011, § 4(b) (2011) (establishing "Rights of Natural Communities" wherein "[e]cosystems and natural communities possess the right to exist and flourish within the Town").

Ohio,<sup>51</sup> Pennsylvania,<sup>52</sup> Virginia,<sup>53</sup> New Jersey,<sup>54</sup> and New Hampshire<sup>55</sup> have also approved or are in the process of approving laws recognizing inherent rights of nature.

Other jurisdictions have stopped short of granting rights for all of nature, but have granted rights to certain natural aggregate entities, such as landscapes, rivers, and ecosystems. The New Zealand Parliament recently passed a law granting rights to the Whanganui River, the country's longest navigable river, which extends from its central volcanic plateau to the Tasman Sea.<sup>56</sup> That move was the result of more than two centuries of confrontation between the Maori Tribe and the Crown over the Whanganui River.<sup>57</sup> Following an approach similar to the Bolivian model, the Act created an office that is charged with representing the river.<sup>58</sup> More recently, in 2017, the New Zealand Mount Taranaki

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<sup>51</sup> Broadview Heights, Ohio, Ordinance No. 115-12, § 1 (Sept. 4, 2012) (“Natural communities and ecosystems . . . possess inalienable and fundamental rights to exist and flourish within The City of Broadview Heights. Residents of the City shall possess legal standing to enforce those rights on behalf of those natural communities and ecosystems.”); see also Yellow Springs, Ohio, Ordinance 2012-17, ch. 878, § 878.04 (2012) (“Ecosystems and natural communities possess the right to exist and flourish within the Village.”); Toledo, Ohio, Mun. Code ch. XVII, § 254(a) (2019) (establishing the rights of Lake Erie Ecosystem “to exist, flourish, and naturally evolve”), invalidated by *Drewes Farms P’ship v. City of Toledo*, 441 F. Supp. 3d 551 (N.D. Ohio 2020).

<sup>52</sup> Some local ordinances grant rights to nature. See, e.g., Licking Township, Pa., Ordinance Protecting the Right of the Community to Natural Water Sources Within Licking Township § 3.5 (2010); Packer Township, Pa., Ordinance to Protect the Health, Safety, and General Welfare of the Citizens and Environment of Packer Township § 7.2 (2008); Mahanoy Township, Pa., Ordinance 2008-2, § 7.14 (Feb. 21, 2008). Some grant legal standing to residents to enforce rights on behalf of natural communities and ecosystems. See, e.g., Pittsburgh, Pa., Code § 618.03(b) (2010); Forest Hills, Pa., Ordinance No. 1017, § 3(b) (Oct. 19, 2011); West Homestead, Pa., Ordinance No. 659, § 3(b) (May 10, 2011). Other ordinances establish that natural communities shall be considered to be “persons.” See Tamaqua Borough, Pa., Ordinance No. 612, § 7.6 (Sept. 19, 2006).

<sup>53</sup> Halifax, Va., Code art. VII, § 30-156.7 (Feb. 7, 2008) (granting inalienable and fundamental rights to nature to exist and flourish).

<sup>54</sup> Newfield, N.J., Town of Newfield Water Ordinance § 5.1 (Feb. 10, 2009) (proposing an ordinance to grant natural communities and ecosystems inalienable and fundamental rights to exist and flourish).

<sup>55</sup> Nottingham, N.H., Nottingham Water Rights & Self Government Ordinance § 5.1 (Mar. 15, 2008).

<sup>56</sup> Te Awa Tupua (Whanganui River Claims Settlement) Act 2017, §§ 14–15 (N.Z.).

<sup>57</sup> *Id.* § 69.

<sup>58</sup> See *id.* §§ 18–20 (explaining the function of this office is to “act and speak for and on behalf of [the Whanganui River],” to “promote and protect [its] health and well-being,” to perform “landowner functions” with respect to the “land vested in [it],” to administer the commission charged with deciding application for fishing and catchment activities, and to

obtained the same legal rights as a person.<sup>59</sup> In two related cases in India in 2014, initially two river bodies,<sup>60</sup> and then the entire associated ecosystem,<sup>61</sup> were granted legal personhood and rights.<sup>62</sup> The same High Court of Uttarakhand also recognized rights to the entire animal kingdom.<sup>63</sup> In 2019, the High Court of Bangladesh followed these Indian precedents and recognized the River Turag as a living entity with legal rights and extended the same privileges to all rivers in Bangladesh.<sup>64</sup>

In 2016, the Colombian Constitutional Court recognized rights for the River Atrato, the largest river basin in Colombia and one of the largest in the world.<sup>65</sup> The case was initially brought by local residents who sought relief from mining activities. After reviewing the different conceptions of the relationship between humans and nature, the Court concluded that only an eco-centric approach to nature could inspire the necessary respect

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administer a related fund). The Te Pou Tupua is comprised by appointing one member of the Maori Tribe and one member of the government.

<sup>59</sup> Ngā Iwi o Taranaki and the Crown: Record of Understanding for Mount Taranaki, Pouākai and the Kaitake Ranges 2017, § 5 (N.Z.).

<sup>60</sup> Writ Petition (PIL) No. 126 of 2014 ¶ 19, *Salim v. Uttarakhand* (2017) (India).

<sup>61</sup> Writ Petition (PIL) No. 140 of 2015 ¶ 2, *Miglani v. Uttarakhand* (2017) (India).

<sup>62</sup> Members of India's environmental community have reacted with skepticism towards the court's innovation. See, e.g., Omair Ahmad, Indian Court Awards Legal Rights of a Person to Entire Ecosystem, *Climate Home News* (Apr. 3, 2017), <http://www.climatechangenews.com/2017/04/03/indian-court-awards-legal-rights-person-nature/> [<https://perma.cc/9QXM-5J3R>]; Indian Court Grants Himalayan Glaciers Status of 'Living Entities,' *Dawn* (Apr. 1, 2017), <https://www.dawn.com/news/1324199/indian-court-grants-himalayan-glaciers-status-of-living-entities> [<https://perma.cc/M969-CLTL>]. The Supreme Court of India ultimately ruled that the Ganges and Yamuna Rivers cannot be viewed as living entities. See India's Ganges and Yamuna Rivers Are 'Not Living Entities,' *BBC News* (July 7, 2017), <https://www.bbc.com/news/world-asia-india-40537701> [<https://perma.cc/88ZV-JSL5>].

<sup>63</sup> Writ Petition (PIL) No. 43 of 2014 ¶ 98, *Bhatt v. India* (2018) (India).

<sup>64</sup> Sebastian Bechtel, *Legal Rights of Rivers—An International Trend?*, *Client Earth* (Mar. 13, 2019), <https://www.clientearth.org/legal-rights-of-rivers-an-international-trend/> [<https://perma.cc/J4UW-9CVJ>]; U.N. Secretary-General, *Harmony with Nature*, ¶ 23, U.N. Doc. A/74/236 (July 26, 2019).

<sup>65</sup> Corte Constitucional [C.C.] [Constitutional Court], noviembre 10, 2016, M.P. Jorge Iván Palacio Palacio, *Sentencia T-622/16* (Colom.). The judge who wrote the majority opinion in this case noted the influence of the prior decisions in India on his reasoning: “[He] said that in an event that the Court organized in October 2016, he listened attentively to the speech given by a judge from India, who explained that ‘our brothers the trees and our sisters the flowers’ should be subject to rights.” He went on to say: “Thus, when the case came to the Court, I knew what I had to do: Nature has a right not be polluted, a right not to be destroyed, and a right to be rationally used.” See Jorge Iván Palacio: *El Centinela del Río Atrato*, *El Espectador* (Dec. 3, 2017), <https://www.elespectador.com/noticias/judicial/jorge-ivan-palacio-el-centinela-del-rio-atrato-articulo-726304> [<https://perma.cc/EXP3-K7U2>] (translation by the author).

and humility to use natural resources in a fair and equitable manner.<sup>66</sup> Similar to the Bolivian and New Zealand models, the Colombian Constitutional Court clarified that the government, together with the ethnic communities who live at the river's basin, would serve as representatives for the river's interest.<sup>67</sup> These representatives were asked to create a special commission; this commission is charged with speaking on behalf of the river and pursuing the river's protection, restoration, and conservation.<sup>68</sup> Building on the Atrato River case, the Colombia Supreme Court used rights for nature to order the government, together with the affected communities and other interested people, to prepare a plan to reduce and eventually eliminate the deforestation of the Amazonian rainforest.<sup>69</sup> Since then, other courts in Colombia have recognized rights for the territory of Katsu,<sup>70</sup> the Quindío River,<sup>71</sup> the Magdalena River,<sup>72</sup>

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<sup>66</sup> Sentencia T-622/16, ¶ 5.3, 5.4, 9.22 (Colom.).

<sup>67</sup> Ana Lucía Maya-Aguirre, Implementing Environmental Constitutionalism in Colombia: Tensions Between Public Policy and Decisions of the Constitutional Court, *in* *Implementing Environmental Constitutionalism: Current Global Challenges* 143, 157 (Erin Daly & James R. May eds., 2018).

<sup>68</sup> Sentencia T-622/16, ¶ 9.32 (Colom.).

<sup>69</sup> Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Lab. abril 5, 2018, M.P: Luis Armando Tolosa Villabona, STC4360-2018, 48 (Colom.).

<sup>70</sup> Jurisdicción Especial Para La Paz [Special Jurisdiction for Peace], Sala. Reconocimiento. noviembre 12, 2019, M: Belkis Florentina Izquierdo Torres & Ana Manuela Ochoa Arias, Caso No. 02 de 2018, 30 (Colom.).

<sup>71</sup> Redacción Nacional, Río Quindío, Otro Cuerpo Fluvial que Es Sujeto de Derechos [Quindío River, Another River Body that Is Subject to Rights], *El Nuevo Siglo* (Dec. 8, 2019), <https://www.elnuevosiglo.com.co/articulos/12-2019-rio-quindio-otro-cuerpo-fluvial-que-es-sujeto-de-derechos> [<https://perma.cc/B9XQ-QC3Z>].

<sup>72</sup> Juzgados Primero Penal del Circuito con Funciones de Conocimiento de Neiva-Huila [Juzg. Circ.] [First Criminal Court of the Circuit with Functions of Knowledge of Neiva-Huila], octubre 24, 2019, J: Victor Alcides Garzon Barrios, Sentencia de Tutela de Primera Instancia No. 071, 35 (Colom.).



the Cauca River,<sup>73</sup> the Rivers Coello, Combeima, and Cocora,<sup>74</sup> the La Plata River,<sup>75</sup> the Pisba Highlands,<sup>76</sup> and the Spectacled Bear.<sup>77</sup>

Building on developments at the domestic level, rights for nature have also been recognized internationally. Citing experiences in India, Colombia, and New Zealand, the Inter-American Court of Human Rights recently found an implicit right to a healthy environment in a variety of international human rights instruments.<sup>78</sup> In an advisory opinion requested by Colombia concerning state responsibility for environmental harms that occur outside its territories, the Court stated:

This Court considers it important to emphasize that the right to a healthy environment is an autonomous right that, unlike other rights, protects the components of the environment, such as *forests, rivers, seas and others, as legal interests in themselves*, even in the absence of certainty or evidence about the risk to individual persons. It is about protecting nature and the environment not only because of its connection with a utility for the human being or for the effects that its degradation could cause in other people's rights, such as health, life or personal integrity, *but for their importance for the other living organisms with whom the planet is shared, also worthy of protection in themselves*. In this sense, the Court notices a trend to recognize legal status and, therefore, *rights*

<sup>73</sup> Tribunal Superior de Medellín [T. Sup.], Sala. Civil. junio 17, 2019, M: Juan Carlos Soso Londoño, Sentencia No. 38, Tribunal Superior de Medellín [T.S.M.] 43 (Colom.).

<sup>74</sup> Tribunal Administrativo del Tolima [T. Admtivos] [Administrative Superior Court], Sala. Civil. mayo 30, 2019, M.P: José Andrés Rojas Villa, Sentencia 73001-23-00-000-2011-00611-00, 149 (Colom.).

<sup>75</sup> Juzgado Único Civil Municipal la Plata—Huila [Juz. Mun.] [Municipal Civil Court], marzo 19, 2019, J: Juan Carlos Clavijo González, 41-396-40-03-001-2019-00114-00 (Colom.).

<sup>76</sup> Tribunal Administrativo del Boyocá [T. Admtivos] [Administrative Superior Court], Sala. de Decisión agosto 9, 2018, M.P: Clara Elisa Cifuentes Ortiz, Expediente 15238 3333 002 2018 00016 01, 67–68) (Colom.).

<sup>77</sup> Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. de Casación Civil julio 26, 2017, M.P: Luis Armando Tolosa Villabona, AHC4806-2017 (No. 17001-22-13-000-2017-00468-02, p. 34–35) (Colom.).

<sup>78</sup> Medio Ambiente y Derechos Humanos [The Environment and Human Rights], Opinión Consultiva [Advisory Opinion] OC-23/17, Corte Interamericana de Derechos Humanos [Inter-Am. Ct. H.R.] (ser. A) ¶ 62, n.100 (15 de noviembre de 2017); see also Nicolás Carrillo-Santarelli, *The Politics Behind the Latest Advisory Opinions of the Inter-American Court of Human Rights*, Int'l J. Const. L. Blog, Feb. 24, 2018, <http://www.iconnectblog.com/2018/02/the-politics-behind-the-latest-advisory-opinions-of-the-inter-american-court-of-human-rights/> [https://perma.cc/X9MY-A74Z] (remarking on the political aspects of several advisory opinions published by the Inter-American Court of Human Rights, including OC-23/17).

*to nature* not only in constitutional judgments but also in constitutional provisions.<sup>79</sup>

The expansion of rights for nature has been embraced by activists, international institutions, and scholars. On the activist front, groups such as the Community Legal Defense Fund and the Earth Law Center have been established with missions of promoting rights for nature.<sup>80</sup> In her study of the political history of the expansion of nature's rights in Ecuador, sociologist Maria Akchurin notes the importance of support from U.S. environmental organizations.<sup>81</sup> At the international level, the U.N. General Assembly has initiated an ongoing dialogue on "Harmony with Nature" that focuses on non-anthropocentric approaches to law, including rights for nature.<sup>82</sup> A core feature of the approach embraced by the Harmony with Nature dialogue is an emphasis on the relationship between rights for indigenous peoples and cultures and environmental protection. A precursor to this effort was a "Universal Declaration of the Rights of Mother Earth" proposed by a group of non-governmental bodies, indigenous groups, and civil society organizations during the U.N. Conference on Sustainable Development in 2012.<sup>83</sup> More recently, on March 29, 2017, members of the European Parliament, representatives from key European Union environmental institutions, non-governmental

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<sup>79</sup> Medio Ambiente y Derechos Humanos [The Environment and Human Rights], Opinión Consultiva [Advisory Opinion] OC-23/17, Corte Interamericana de Derechos Humanos [Inter-Am. Ct. H.R.] (ser. A), ¶ 62 (15 de noviembre de 2017) (emphasis added) (translation by the author).

<sup>80</sup> The Community Environmental Legal Defense Fund describes itself as "building a movement for . . . the Rights of Nature to advance democratic, economic, social, and environmental rights—building upward from the grassroots to the state, federal, and international level." Community Environmental Legal Defense Fund, CELDF Statement on Orange County, FL 'Rights of Nature' Law (Nov. 4, 2020), <https://celdf.org/2020/11/celdf-statement-on-orange-county-fl-rights-of-nature-law/> [<https://perma.cc/423D-HJSV>]. The Earth Law Center states that it "seek[s] legal rights for ecosystems and species" throughout the world. Earth Law Center, Community Toolkit for Rights of Nature 22, <https://static1.squarespace.com/static/55914fd1e4b01fb0b851a814/t/5c8abd994192021c8d560fcb/1552596381584/Community+Toolkit+for+Rights+of+Nature.pdf> [<https://perma.cc/W7NM-LSRW>].

<sup>81</sup> Maria Akchurin, Constructing the Rights of Nature: Constitutional Reform, Mobilization, and Environmental Protection in Ecuador, 40 *Law & Soc. Inquiry* 937, 952 (2015).

<sup>82</sup> See U.N. Secretary-General, Harmony with Nature: Note by the Secretary-General, ¶ 5, U.N. Doc. A/71/266 (Aug. 1, 2016); U.N. Secretary-General, Harmony with Nature: Rep. of the Secretary-General, ¶ 4, U.N. Doc. A/70/268 (Aug. 4, 2015).

<sup>83</sup> U.N. Secretary-General, Harmony with Nature: Rep. of the Secretary-General, ¶ 4, U.N. Doc. A/69/322 (Aug. 18, 2014).

organizations, and international experts met at the European Parliament for a conference exploring the adoption of the rights of nature and giving legal personality and rights for ecosystems and species in European Union law and policy.<sup>84</sup>

Where rights of nature have been adopted, indigenous people have often been important proponents, and the rights are often stated in ways that resonate with concepts and values drawn from indigenous communities.<sup>85</sup> In New Zealand, the legal recognition of these rights was part of an agreement between New Zealand's government and indigenous Maori groups who had been fighting for decades over the country's natural resources.<sup>86</sup> In Bolivia and Ecuador, these political coalitions promoted the nature's rights amendment to the constitution while including indigenous groups as one of their core constituencies.<sup>87</sup>

A number of legal scholars have taken an interest in the recent rise of nature's rights. Perhaps the leading academic celebrator of nature's rights is Professor David R. Boyd, who has argued in both academic and popular work in favor of robust constitutional protection for natural entities.<sup>88</sup> Other legal scholars have detailed the growing adoption of nature's rights and have argued that they have the potential to support stronger environmental protection.<sup>89</sup> The growth of nature's rights has also proven

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<sup>84</sup> U.N. Secretary-General, *Harmony with Nature: Rep. of the Secretary-General*, ¶ 41, U.N. Doc. A/72/175 (July 19, 2017).

<sup>85</sup> See generally *Out of the Mainstream: Water Rights, Politics and Identity* (Rutgerd Boelens, David Getches & Armando Guevara-Gil eds., 2010) (explaining the impact of indigenous movements on Latin American water management).

<sup>86</sup> Bryant Rousseau, *In New Zealand, Lands and Rivers Can Be People (Legally Speaking)*, N.Y. Times (July 13, 2016), <https://www.nytimes.com/2016/07/14/world/what-in-the-world/in-new-zealand-lands-and-rivers-can-be-people-legally-speaking.html> [<https://perma.cc/C28W-N7R3>].

<sup>87</sup> John Vidal, *Bolivia Enshrines Natural World's Rights with Equal Status for Mother Earth*, *Guardian* (Apr. 10, 2011), <https://www.theguardian.com/environment/2011/apr/10/bolivia-enshrines-natural-worlds-rights> [<https://perma.cc/6KRA-ZG6Z>]; Craig M. Kauffman & Pamela L. Martin, *Constructing Rights of Nature Norms in the US, Ecuador, and New Zealand*, 18 *Glob. Env't Pol.* 43, 55 (2018).

<sup>88</sup> See David R. Boyd, *Recognizing the Rights of Nature: Lofty Rhetoric or Legal Revolution?*, 32 *Nat. Res. & Env't* 13, 17 (2018). See generally Boyd, *supra* note 4 (offering a defense of nature's rights for a broader audience).

<sup>89</sup> See, e.g., Jan G. Laitos, *How Science Has Influenced, but Should Now Determine, Environmental Policy*, 43 *Wm. & Mary Env't L. & Pol'y Rev.* 759, 788 (2019); Oliver A. Houck, *Noah's Second Voyage: The Rights of Nature as Law*, 31 *Tul. Env't L.J.* 1, 41–42 (2017); *Rule of Law for Nature: New Dimensions and Ideas in Environmental Law* (Christina Voigt ed., 2013) (collecting essays exploring broad environmental rights). The origin of the notion of nature's rights can be found in the legal academic literature in Professor Christopher

of interest to a broader academic audience, including within humanistic fields such as religious studies and natural sciences such as conservation biology and ecology.<sup>90</sup>

Notwithstanding the considerable enthusiasm for nature's rights, there are serious questions about the practical value of this particular path of constitutional reform. Assuming that political energies that are devoted to supporting nature's rights could be directed elsewhere (either to address environmental threats under existing laws or in favor of other types of law reform projects), nature's rights have, at the very least, political opportunity costs for environmental campaigners. To the extent that nature's rights are incoherent or ineffective, they may dissipate energy and create skepticism about future environmental advocacy efforts.

Nature's rights intersect with a number of longstanding debates of interest to legal scholars and philosophers.<sup>91</sup> Generally, our strategy will be to sidestep these debates whenever possible by giving the concept of nature's rights the benefit of the doubt. A skeptic on rights generally is likely to be predisposed against nature's rights, but the point of this Article is not to convince the converted by recapitulating debates about the viability of rights as moral or legal constructs. Rather, our goal is to

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D. Stone's famous essay, *Should Trees Have Standing?—Toward Legal Rights for Natural Objects*, 45 S. Cal. L. Rev. 450, 456 (1972); Cormac Cullinan, *Wild Law* 157–59 (2d ed. 2011) (advocating radical restructuring of law and governance to account for natural systems). See generally Susan Emmenegger & Axel Tschentscher, *Taking Nature's Rights Seriously: The Long Way to Biocentrism in Environmental Law*, 6 *Geo. Int'l Env't L. Rev.* 545, 573 (1994) (“Acknowledging nature's rights would make the respective natural entity a subject whereas it is merely an object of human considerations in the context of duties towards nature.”).

<sup>90</sup> See, e.g., Carolina Valladares & Rutgerd Boelens, *Mining for Mother Earth: Governmentalities, Sacred Waters and Nature's Rights in Ecuador*, 100 *Geoforum* 68, 68–69 (2019) (discussing the relationship between nature's rights and mining); Eden Kinkaid, “Rights of Nature” in Translation: Assemblage Geographies, Boundary Objects, and Translocal Social Movements, 44 *Transactions Inst. Brit. Geographers* 555 (2019) (considering rights of nature as “a boundary object connecting translocal assemblages of environmental governance through acts of translation”); Florent Kohler, Timothy G. Holland, Janne Sakari Kotiaho, Maylis Desrousseaux & Matthew D. Potts, *Embracing Diverse Worldviews to Share Planet Earth*, 33 *Conservation Biology* 1014, 1014–16 (2019) (arguing for nature's rights to preserve nature); Kelly D. Alley, *River Goddesses, Personhood and Rights of Nature: Implications for Spiritual Ecology*, 10 *Religions* 502 (2019) (examining rights for nature through a religious lens); Mariana Chilton & Sonya Jones, *The Rights of Nature and the Future of Public Health*, 110 *Am. J. Pub. Health* 459 (2020) (advocating for rights of nature to mitigate environmental impacts and discrepancies on public health); Guillaume Chapron, Yaffa Epstein & José Vicente López-Bao, *A Rights Revolution for Nature*, 363 *Science* 1392 (2019).

<sup>91</sup> Intersecting topics include literatures on rights, rights conflicts, incommensurability, group rights, and animal welfare.

argue that, even putting aside more general critiques of rights, special problems arise in the context of rights for nature. Stated another way, we believe that even someone who endorses rights in other contexts has reason to be skeptical about nature's rights.

Our focus is also pragmatic, in that we are interested in how legal rights for nature function within real political systems. Where we raise conceptual issues, they are not intended as metaphysical critiques. Rather, our aim is to demonstrate real challenges to practical reasoning that will confront decision makers who are charged with vindicating nature's rights.<sup>92</sup>

The discussion in the balance of this Article focuses on the viability of nature's rights. There are two general approaches that could be used to understand the content of nature's rights: as a class of rights that are extended to a number of natural entities and as a set of rights that are extended to a single entity understood as nature itself. We refer to the first approach as "bottom-up rights" and the second approach as "top-down rights." In discourse describing nature's rights, including relevant constitutional provisions, judicial opinions, and academic commentary, these rights are sometimes articulated as bottom-up rights and other times as top-down rights, but these two approaches present very different conceptual questions. In the next Part, we examine nature's rights when they are understood as representing the rights of a large class of natural entities. In Part III, we focus on the top-down understanding of nature's rights.

## II. BOTTOM-UP RIGHTS

The term "human rights" is not typically understood to imply that humanity as a whole enjoys particular rights, but rather that individual humans do.<sup>93</sup> *Mutatis mutandis*, nature's rights can be understood as rights that are held by non-human entities of some kind. One of the most

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<sup>92</sup> Cf. Richard Schragger & Micah Schwartzman, Some Realism about Corporate Rights 345, 347, in *The Rise of Corporate Religious Liberty* (Micah Schwartzman, Chad Flanders & Zoë Robinson eds., 2016) (arguing that there is no need to settle disputes concerning ontological status of corporations to reason about group rights). For purposes of this Article, we proceed under Schragger and Schwartzman's view that ontological claims about entities need not be settled to engage in pragmatic reasoning about legal rights.

<sup>93</sup> See, e.g., Universal Declaration of Human Rights, G.A. Res. 217A (III), U.N. Doc. A/810 (Dec. 10, 1948).

basic questions that must be addressed in a bottom-up understanding of nature's rights is which non-human entities enjoy these rights.

One possibility is that the rights bearers are individual organisms, again by analogy to human rights. This approach could equate nature's rights with animal rights, with the rights bearers being any organisms with central nervous systems capable of experiencing pain and pleasure. An individual-level approach could also, in theory, extend to broader classes of organisms including plants, fungi, or all "teleological centers of life."<sup>94</sup>

In this Article, we put to the side the interpretation of nature's rights in which rights bearers are exclusively individual organisms. Such an interpretation seems to miss a core feature of how these rights are typically articulated, which tend to focus on biological aggregates rather than individual organisms.<sup>95</sup> For example, in his classic essay that inspired at least some nature's rights advocates,<sup>96</sup> Professor Christopher Stone proposes "that we give legal rights to forests, oceans, rivers and other so-called 'natural objects' in the environment—indeed, to the natural environment as a whole."<sup>97</sup> When Stone asked, "Should trees have standing?" he was at least partially referring to "trees" in the aggregate—as forest ecosystems—and not simply as individual plants.

Rights for biological aggregates could stand in two relationships to the rights (or interest) of organisms. More prosaically, legal rights for aggregates could serve as a practical means of promoting the interests of organisms.<sup>98</sup> Under such an account, biological aggregates themselves need not be deserving of moral consideration to justify extending rights to such entities; the question is whether, as a functional matter, they forward interests that are worth considering. A second, more intriguing possibility sees at least some aggregates as worthy of moral consideration on their own terms. We do not take a position on whether rights for biological aggregates are best understood as instrumental or foundational. The difficulties that we discuss in this Part arise either way.

In nearly the same breath as Stone articulated his notion of legal rights extended to natural objects, he noted that "there are large problems

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<sup>94</sup> Paul W. Taylor, *Respect for Nature: A Theory of Environmental Ethics* 119–29 (1986).

<sup>95</sup> See *supra* Part I.

<sup>96</sup> See Akchurin, *supra* note 81.

<sup>97</sup> Stone, *supra* note 89, at 456.

<sup>98</sup> Cf. Christian List & Philip Pettit, *Group Agency: The Possibility, Design, and Status of Corporate Agents* 182 (2011) (citations omitted) (adopting "normative individualism" . . . : the view that something [including extending legal rights to groups] is good only if it is good for individual human[s] or, more generally, sentient beings").

involved in defining the boundaries of the ‘natural object.’”<sup>99</sup> Nearly fifty years after publication of Stone’s essay, these problems of definition have not been adequately addressed. In this Part, we focus on the conceptual challenges associated with defining Stone’s natural objects. We begin by discussing a general set of issues that arise when policies have various effects on more than one natural object. We then turn to difficulties in defining the rights bearers and their interests, which are both necessary steps for making comparisons between various policy options.

### *A. Balancing Conflicting Interests*

Choices about land use, pollution control, and access to natural resources have a wide range of both positive and negative effects, touching people, cultures, species, ecosystems, and landscapes in many complex ways and giving rise to considerable controversy.<sup>100</sup> Cases where every affected party agrees about the best path forward to address an environmental challenge are rare. Instead, policymakers are faced with the task of comparing the various consequences of a decision against each other and must make judgments about the best way to respond to competing pressures.

Framing environmental policy in terms of rights does not avoid the need to make comparisons between alternative courses of action. There is a considerable philosophical literature on the concept of rights and how it relates to moral and legal reasoning.<sup>101</sup> Under one popular conception, rights are invoked to assert the lexical priority of some normative claim over others.<sup>102</sup> The notion of rights as “side constraints” on political decisions fits within this tradition.<sup>103</sup> Under the side constraint model, a political decision maker is free to achieve some general set of goals—

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<sup>99</sup> Stone, *supra* note 89, at 456 n.26.

<sup>100</sup> See generally Justin Farrell, *The Battle for Yellowstone: Morality and the Sacred Roots of Environmental Conflict* (2015) (examining a host of different sources of conflict over the management of a complex ecosystem with a large number of interested stakeholders).

<sup>101</sup> See generally Tom Campbell, *Rights: A Critical Introduction* (2006) (summarizing various theories of rights and their relation to legal rights); see also Leif Wenar, *Rights*, *The Stan. Encyc. of Phil.* (Edward N. Zalta ed., 2015), <https://plato.stanford.edu/archives/fall2015/entries/rights/> [<https://perma.cc/5TME-FMZQ>] (describing the nature of rights, categorizing rights according to shared attributes, and exploring sub-categories of moral and legal rights).

<sup>102</sup> See Waldron, *supra* note 7, at 508. Lexical priority means that certain claims must be satisfied altogether before other claims. See, e.g., John Rawls, *Justice as Fairness: Political Not Metaphysical*, 14 *Phil. & Pub. Affs.* 223, 227–28 (1985) (stating two principles of justice where “the first is given priority over the second”).

<sup>103</sup> See Robert Nozick, *Anarchy, State, and Utopia* 29 (1974).

such as maximizing social well-being—subject to some set of constraints that are derived from people’s rights. For example, if the right to freedom of expression is a side constraint, then it would not be permissible for the government to ban certain forms of speech, even if such a ban would lead people to be, all things considered, better off. Ronald Dworkin’s notion of rights as “trumps” is one way to formulate the notion of lexical priority.<sup>104</sup>

The language of rights has enormous cache and plays an important role in structuring political and legal discourse around the world.<sup>105</sup> Nevertheless, reasoning with rights raises difficulties.<sup>106</sup> One set of these problems arises out of cases that present conflicts between purported rights.<sup>107</sup> A contemporary example of a rights conflict in the United States involves the right to be free from discrimination on the basis of sexual orientation and the right to religious freedom.<sup>108</sup> Similar conflicts can be imagined in the case of environmental policymaking. A few examples illustrate the point.<sup>109</sup>

- In its Mercury and Air Toxics Standards, adopted toward the latter part of the Obama Administration, the U.S. Environmental Protection Agency adopted a rule that required substantial new controls on certain pollutants from coal-fired electricity-generating units.<sup>110</sup> These controls were costly, and

<sup>104</sup> Ronald Dworkin, *Taking Rights Seriously* 6 (1977).

<sup>105</sup> For a discussion of rights discourse in the United States, see, e.g., Richard A. Primus, *The American Language of Rights* (1999); Carl Wellman, *The Proliferation of Rights: Moral Progress or Empty Rhetoric?* (1999); Mary Ann Glendon, *Rights Talk: The Impoverishment of Political Discourse* (1991). For a critique of the discourse of rights at a global level, see Eric A. Posner, *The Twilight of Human Rights Law* (2014).

<sup>106</sup> For general critiques of rights reasoning in the context of human rights, see Alasdair MacIntyre, *After Virtue* 6–21 (2d ed. 1984).

<sup>107</sup> See generally Waldron, *supra* note 7 (exploring the moral difficulties that occur when rights conflict with one another).

<sup>108</sup> See generally *Same-Sex Marriage and Religious Liberty: Emerging Conflicts* (Douglas Laycock, Anthony R. Picarello, Jr. & Robin Fretwell Wilson eds., 2008) (discussing conflicting liberties in the context of same-sex marriage and religious freedom). See, e.g., *Bostock v. Clayton County*, 140 S. Ct. 1731, 1753–54 (2020) (“[T]he employers fear that complying with Title VII’s requirement [not to engage in employment discrimination against homosexual or transgender people] . . . may require some employers to violate their religious convictions. We are also deeply concerned with preserving the promise of the free exercise of religion enshrined in our Constitution; that guarantee lies at the heart of our pluralistic society.”).

<sup>109</sup> For additional examples of policy choices that present conflicts within the domain of nature, see Jamieson, *supra* note 17, at 168–80.

<sup>110</sup> 77 Fed. Reg. 9303 (Feb. 16, 2012).



complying was anticipated to cost billions of dollars—costs that would be borne by shareholders, electricity consumers, and (to a limited extent) workers.<sup>111</sup> The rule was also anticipated to reduce exposure to methylmercury, a neurotoxin associated with a range of negative health effects, including cognitive impairment, in exposed populations.<sup>112</sup> In complying with the rule, regulated entities were anticipated to adopt technologies that would reduce particulate matter, an important air pollutant, avoiding thousands of premature deaths.<sup>113</sup> Potential rights implicated by the rule include a right to clean air, the property rights of plant owners, and the socio-economic rights of affected electricity consumers (some of whom may live near the poverty line) or displaced workers.

- As of 2014, there were nearly twenty billion chickens, over one billion cattle, and nearly one billion pigs being raised as livestock for human consumption.<sup>114</sup> The conditions of many of these animals are far from pastoral, as has been recognized by scholars, activists, and at least some part of the general public for some time.<sup>115</sup> The severe conditions on modern farms are not the result of sadism but simple efficiency. Space, energy, and labor are expensive inputs into the production of meat, eggs, and fish. Generally, farming practices that maintain decent living conditions for livestock require more of these inputs than animal welfare-agnostic practices.<sup>116</sup> Were policies

<sup>111</sup> EPA, Regulatory Impact Analysis for the Final Mercury and Air Toxics Standards (2011).

<sup>112</sup> *Id.*

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

<sup>114</sup> Timothy P. Robinson et al., Mapping the Global Distribution of Livestock, *PLOS One*, May 29, 2014, at 1, <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0096084#pone-0096084-g002> [<https://perma.cc/EN4R-2GPX>].

<sup>115</sup> See generally Jared Prunty & Kevin J. Apple, Painfully Aware: The Effects of Dissonance on Attitudes Toward Factory Farming, 26 *Anthrozoös* 265 (2013) (discussing conflicting public attitudes concerning animal welfare and commercial farming practices); Ruth Harrison, *Animal Machines: The New Factory Farming Industry* (1964) (providing moral arguments).

<sup>116</sup> It has sometimes been argued that the profit motive is adequate to provide for animal welfare, because “farm animals which receive better care will be more productive.” See Jayson L. Lusk & F. Bailey Norwood, Animal Welfare Economics, 33 *Applied Econ. Persps. & Pol’y* 463, 464 (2011) (explaining but not adopting this view). Indeed, a purely profit-motivated firm will invest some resources into animal welfare and will not engage in gratuitously inhuman treatment. But, as long as there are increasing returns to animal welfare from further

to require more animal-friendly farming, costs would necessarily be borne by farmers and consumers. Potential rights implicated by animal welfare policies include the right to be free of inhumane treatment (for the animals); the rights of low-income people to affordable, nourishing food; and the rights of family farmers to continue their traditional way of life.

- In another Obama-era rulemaking, the U.S. EPA addressed ecological harms that arise from the cooling intake structures of power plants.<sup>117</sup> The fossil fuel combustion used to generate electricity creates a considerable amount of heat that must be dissipated, and a standard approach to cooling involves drawing water from a nearby source that can be circulated through a facility. The technologies used for this purpose result in what is euphemistically referred to as “impingement and entrapment” of marine life, which occurs when fish and other marine animals are crushed against intake screens or sucked up into a facility and cooked to death.<sup>118</sup> Prior to the rule, millions of fish and countless other marine animals met their fate this way. The Cooling Intake Structure Rule required that existing facilities retrofit their technologies, resulting in a substantial projected decline of impingement and entrapment, but the rule also imposed costs on shareholders and electricity consumers.<sup>119</sup> In this rulemaking, the rights of marine life and ecosystems are cast against the property rights and socioeconomic rights of affected plant owners, workers, and electricity consumers.
- The Ivanpah Solar Electric Generating System is a 392-megawatt concentrated solar thermal facility in the Mojave Desert in California. The facility’s year-to-year output has varied based on weather conditions and other factors, but it has generated between 420- and 850-gigawatt-hours per year of

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investments beyond what is profit maximizing—a highly likely situation—then profitability and protections for animal well-being will part ways. See *id.*

<sup>117</sup> National Pollutant Discharge Elimination System, 79 Fed. Reg. 48,300 (Aug. 15, 2014).

<sup>118</sup> *Id.* at 48,318–21.

<sup>119</sup> EPA, Benefits Analysis for the Final Section 316(b) Existing Facilities Rule (May 2014), [https://www.epa.gov/sites/production/files/2015-05/documents/cooling-water\\_phase-4\\_benefits\\_2014.pdf](https://www.epa.gov/sites/production/files/2015-05/documents/cooling-water_phase-4_benefits_2014.pdf) [<https://perma.cc/9JK9-66H3>].

electricity,<sup>120</sup> avoiding over a million tons of carbon dioxide emissions.<sup>121</sup> There is a broad consensus among experts that many more facilities on the scale of Ivanpah are needed across the world to achieve the greenhouse gas reductions required to avoid the worst risks associated with climate change.<sup>122</sup> But at the same time that the Ivanpah facility is helping to avoid climate disruption, it also imposes environmental costs. The Mojave Desert is a habitat for a wide range of species, including the desert tortoise, and even after expensive efforts were taken by the Ivanpah developers to mitigate threats to the tortoise—including through relocation of individual animals and a downscaling of the overall size of the project—impacts on the species were expected.<sup>123</sup> In addition, thousands of birds die each year at Ivanpah by being incinerated when they fly through the high-heat focused light produced by the facility's tens of thousands of mirrors.<sup>124</sup> In the permitting decisions for

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<sup>120</sup> Joe Ryan, NRG's Massive California Solar Plant Finally Making Enough Power, Bloomberg (Feb. 2, 2017), <https://www.bloomberg.com/news/articles/2017-02-01/nrg-s-massive-california-solar-plant-finally-making-enough-power> [<https://perma.cc/URX3-5ABV>]; Cal. Energy Comm'n, California Solar Energy Statistics and Data, [https://ww2.energy.ca.gov/almanac/renewables\\_data/solar/index\\_cms.php](https://ww2.energy.ca.gov/almanac/renewables_data/solar/index_cms.php) [<https://perma.cc/N7N5-HCWG>].

<sup>121</sup> Avoided emissions calculations are tricky. The values here are a back-of-the-envelope calculation using the following information: Avoided Emissions Calculator, <https://www.irena.org/climatechange/Avoided-Emissions-Calculator> [<https://perma.cc/23W4-MJB6>]. To arrive at our estimate, we set the country entry to "United States of America," the technology entry to "concentrated solar power," and the year entry to "2016." Using these inputs, IRENA reports that 3,701 GWh were generated in 2016 by concentrated solar power. According to the above estimates, Ivanpah generated about 3,500 GWh between 2014 and 2020. IRENA reports that the United States avoided an estimated 2.832 million tons of carbon dioxide when producing this much energy using concentrated solar power. In order to account for any confounding variables, we cut this figure in half and rounded down to provide a conservative, lower-bound estimate of avoided emissions.

<sup>122</sup> See, e.g., Manish Ram et al., LUT University Energy Watch Group, Global Energy System Based on 100% Renewable Energy—Power, Heat, Transport and Desalination Sectors 16 (Mar. 2019) (offering a policy scenario in which installed solar electricity generating capacity is nearly ten times greater by 2050 than current (2015) installed capacity from all energy sources).

<sup>123</sup> Bureau of Land Mgmt., California Desert Conservation Area Plan Amendment/Final Environmental Impact Statement for Ivanpah Solar Electric Generating System 1–23 (2010).

<sup>124</sup> Louis Sahagun, This Mojave Desert Solar Plant Kills 6,000 Birds a Year. Here's Why That Won't Change Any Time Soon, L.A. Times (Sept. 2, 2016), <https://www.latimes.com/local/california/la-me-solar-bird-deaths-20160831-snap-story.html> [<https://perma.cc/A8NA-JZLH>].

the Ivanpah facility, the rights of people and natural systems to a stable climate conflict with the rights of an endangered species to undisturbed habitat and the rights of affected birds to bodily integrity.

Of course, the fact that many environmental policies have complex and wide-ranging effects does not imply that this is a necessary, logical relationship. It is possible to imagine scenarios where an environmental policy makes absolutely every affected person and non-human entity better off—for example, a policy that bans gratuitous environmental destruction. But in the real world where policymaking happens, cases like this are rare. Rather, policymakers must make choices between courses of action with both positive and negative consequences. In such cases, they must compare these effects to each other and decide, on balance, which policy has the best results.

There are several potential responses to rights conflicts. One approach is to deny that true rights conflicts can exist; for example, Professor Hillel Steiner argues that rights must be “compossible,” meaning that the duties derived from the full set of rights can all be performed.<sup>125</sup> Such a system of rights is necessarily sparse and excludes many commonly articulated rights.<sup>126</sup> Steiner argues that property rights, when properly understood, can be compossible, but does not defend the more expansive set of rights granted in modern societies. Integrating nature’s rights into a compossible system of rights appears impossible on its face. Were rights articulated for the land itself, then even Steiner’s property-rights core would evaporate.

An alternative approach accepts a larger cast of rights but introduces more elaborate machinery for reasoning with those rights. For example, hierarchies of rights could be established that specify which rights have priority over others.<sup>127</sup> Rights could also come with additional specifications that define the limits of their applicability or describe the zones where they have more or less force.<sup>128</sup> It might be possible to

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<sup>125</sup> See Hillel Steiner, *The Structure of a Set of Compossible Rights*, 74 *J. Phil.* 767, 768 (1977).

<sup>126</sup> Keith Dowding & Martin Van Hees, *The Construction of Rights*, 97 *Am. Pol. Sci. Rev.* 281, 292 (2003) (Steiner’s account leaves a set of rights that “are nonexistent or vanishingly small”).

<sup>127</sup> See Alan Gewirth, *Are There Any Absolute Rights?*, 31 *Phil. Q.* 1, 3 (1981).

<sup>128</sup> John Oberdiek, *Specifying Rights Out of Necessity*, 28 *Oxford J.L. Stud.* 127, 128 (2008) (arguing rights carry limiting specifications); Russ Shafer-Landau, *Specifying Absolute Rights*, 37 *Ariz. L. Rev.* 209 (1995) (analyzing arguments about specifications on rights).

examine the rights themselves to justify a loose sense of qualitative priorities to make decisions when conflicts arise.<sup>129</sup> To address rights conflicts in the context of nature's rights, hierarchies, specifications, or qualitative priorities would be needed to provide a means of negotiating cases where nature's rights create competing demands or conflict with other (human) rights by stipulating which rights control over others.

A final approach to resolving rights conflicts is to embrace an overarching value that can be used to balance competing demands.<sup>130</sup> Utilitarianism is one formulation of this approach, but there are many variants.<sup>131</sup> The idea is that, at bottom, there is a single overarching goal to be achieved, and policies can be measured in terms of how well they achieve that goal. Conflicts within nature's rights and between nature's rights and other values can be understood in terms of positive and negative consequences that can be balanced against each other. This last approach is most consistent with the mainstream model for assessing environmental policy in the United States, which is grounded in welfare economics and the goal of maximizing social well-being.<sup>132</sup>

For purposes of analysis, it simplifies the problem to assume that rights reasoning does not raise any special challenge for nature's rights. Following Guillaume Chapron, Yaffa Epstein, and José Vicente López-Bao, we also accept that nature's rights are "most easily grounded in the interest theory of rights."<sup>133</sup> Under the interest theory, which was articulated by Joseph Raz, rights are supported by interests of sufficient moral weight.<sup>134</sup> Accepting the interest account of rights allows us to make the further simplifying assumption that nature's rights are amenable to the most flexible existing conceptual apparatuses that are available for

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<sup>129</sup> See Waldron, *supra* note 7, at 516–19.

<sup>130</sup> In the context of constitutional adjudication, courts (especially outside the United States) often make recourse to the notion of "proportionality" in cases of rights conflict. See Vicki C. Jackson, *Constitutional Law in an Age of Proportionality*, 124 *Yale L.J.* 3094, 3096, 3110–21 (2015). Jackson argues that the concept of "proportionality as such" . . . differs from 'balancing' tests that tend to focus primarily on quantification of net social good" because it is part of a "structured, sequenced . . . analysis" that "as a whole, prioritizes the right." *Id.* at 3099–100. This might be thought of as a mix of a pure balancing approach with one that involves some prioritization mechanism.

<sup>131</sup> See generally Matthew D. Adler, *Well-Being and Fair Distribution: Beyond Cost-Benefit Analysis* 158–70 (2012) (examining "the range of accounts of well-being proposed within the philosophical literature").

<sup>132</sup> See generally EPA, *supra* note 10 (describing EPA's approach to evaluating environmental policy using cost-benefit analysis).

<sup>133</sup> Chapron, Epstein & López-Bao, *supra* note 90, at 1392.

<sup>134</sup> *Id.*

making comparisons between effects on different interests.<sup>135</sup> These assumptions simplify the case of nature's rights and create a relatively favorable context for their interpretation when policies have effects on multiple entities.

It has long been known that decision making at least sometimes requires that positive and negative effects on various interests be weighed against each other. When constrained to effects on people, this task gives rise to the problem of *interpersonal comparison* because positive effects for some must be weighed against negative effects for others.<sup>136</sup> Philosophers and economists debate how to best make such interpersonal comparisons.<sup>137</sup> Early utilitarian thinkers such as Jeremy Bentham assumed that a general social calculus could be made in which benefits and burdens that occur across different persons could simply be aggregated.<sup>138</sup> As the field of welfare economics matured, Professor Lionel Robbins argued that there was no empirical method to weigh the happiness of one person against the happiness of another, making such

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<sup>135</sup> This move is correctly controversial. For example, it may be that it is easier to make such comparisons under a consequentialist view, which evaluates choices based on their outcomes. But some may object to consequentialism, either generally or in the context of nature's rights—for example, because it fails to take seriously the obligations of individuals to act (or not act) in particular ways, which is distinct from the obligation to bring about (or not) certain outcomes. See generally F.M. Kamm, Non-Consequentialism, the Person as an End-in-Itself, and the Significance of Status, 21 *Phil. & Pub. Affs.* 354, 358–59 (1992) (“I believe that options [to not maximize overall best consequences] are justified by the view that persons are not mere means to the end of the best state of affairs, but ends-in-themselves, having a point even if they do not serve the best consequences.”). We put these critiques to one side, under the stipulation that welfare economic tools (or others that are associated with consequentialism) could be applied to reasoning concerning nature's rights if they facilitate comparison between policy options with complex effects on the world. If this assumption does not hold, then nature's rights face a range of additional difficulties.

<sup>136</sup> For the classic formulation of the problem, see Lionel Robbins, *An Essay on the Nature and Significance of Economic Science* 139–40 (2d ed. 1935) (arguing that interpersonal utility comparisons are outside the boundaries of economic science altogether). See generally Ken Binmore, *Interpersonal Comparison of Utility*, in *Oxford Handbook of Philosophy of Economics* 540, 547–50 (Don Ross & Harold Kincaid eds., 2009) (providing overview); Marc Fleurbaey & Peter J. Hammond, *Interpersonally Comparable Utility*, in 2 *Handbook of Utility Theory* 1179, 1181 (Salvador Barberà, Peter J. Hammond & Christian Seidl eds., 2004) (same); *Interpersonal Comparisons of Well-Being* (Jon Elster & John E. Roemer eds., 1991) (collecting essays exploring various perspectives).

<sup>137</sup> See generally *The Oxford Handbook of Well-Being and Public Policy* (Matthew D. Adler & Marc Fleurbaey eds., 2016) (collecting diverse views).

<sup>138</sup> Binmore, *supra* note 136, at 541.

comparisons unscientific.<sup>139</sup> Later, John Rawls argued that utilitarianism generally failed to respect the separateness of persons and was therefore flawed as a moral theory.<sup>140</sup> In its place, Rawls offered his alternative contractarian account that was grounded in an idealized deliberation between rational agents behind his famous “veil of ignorance.”<sup>141</sup> Out of that idealized deliberative process, Rawls draws his own methods for making comparisons, which place great weight on how a policy affects the worst off.<sup>142</sup>

Within welfare economics, there are two general responses to the problem of interpersonal comparison. The more mainstream approach is to accept that interpersonal comparisons are problematic and to develop alternative normative criteria that do not require that such comparisons be made, at least not directly. The most important of these criteria are Pareto efficiency and Kaldor-Hicks efficiency. The first favors states of affairs that at least one person prefers and that all others are at least indifferent to. A state of affairs that cannot be improved from any person’s perspective without making at least one other person less well-off is Pareto optimal. A perfect, frictionless market can be expected to produce Pareto optimal outcomes.<sup>143</sup> Kaldor-Hicks efficiency builds on the notion of Pareto efficiency with the *potential compensation* test.<sup>144</sup> The basic inquiry is whether those who favor moving from the status quo to another state of affairs would be willing to provide sufficient compensation to those who prefer the status quo to make everyone at least indifferent to the move. Kaldor-Hicks efficiency is the basis of cost-benefit analysis as it is currently practiced by the U.S. government.<sup>145</sup> Various technical

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<sup>139</sup> See Lionel Robbins, *Interpersonal Comparisons of Utility: A Comment*, 48 *Econ. J.* 635, 637–38 (1938).

<sup>140</sup> John Rawls, *A Theory of Justice* 26–27 (rev. ed. 1999).

<sup>141</sup> *Id.* at 11.

<sup>142</sup> See *id.* at 13. John Harsanyi argues that Rawls places too much emphasis on worst-case scenarios. See John C. Harsanyi, *Can the Maximin Principle Serve as a Basis for Morality? A Critique of John Rawls’s Theory*, 69 *Am. Pol. Sci. Rev.* 594, 595–97 (1975).

<sup>143</sup> EPA, *Guidelines for Preparing Economic Analyses A-3* (2010).

<sup>144</sup> The classic papers setting out the Kaldor-Hicks framework are: John R. Hicks, *The Foundations of Welfare Economics*, 49 *Econ. J.* 696 (1939) and Nicholas Kaldor, *Welfare Propositions of Economics and Interpersonal Comparisons of Utility*, 49 *Econ. J.* 549 (1939).

<sup>145</sup> See Matthew D. Adler & Eric A. Posner, *New Foundations for Cost-Benefit Analysis* 10–12 (2006) For an examination of the theoretical justification of using cost-benefit analysis as a policy tool, see generally *id.*

problems have been raised with the potential compensation test, including that it can be inconclusive and lead to preference cycles.<sup>146</sup>

The second approach is to argue that direct interpersonal comparisons can be supported.<sup>147</sup> Under some subjective well-being accounts, hedonic states can, at least in theory, be observed and then directly compared across individuals.<sup>148</sup> Objective theories of welfare allow for interpersonal comparisons if the objectively good thing can be observed and measured on a cardinal scale.<sup>149</sup> One leading preference-based candidate for interpersonal comparisons relies on the notion of “extended preferences.”<sup>150</sup> Essentially, extended preferences involve not only individual preferences over outcomes but preferences over identity and preferences in outcomes, which—at least on some accounts—provides a thick enough account of preference to support interpersonal comparison.<sup>151</sup>

When considering effects on the non-human world, the dominant approaches have traditionally tended to limit their analysis to the ways in which those effects impinge on human beings. For example, within environmental economics, there is a well-established approach to engaging in human-non-human comparison, which is to translate all effects on non-humans into effects on humans and value them accordingly. Animals are valued in terms of their commercial prices or people’s willingness to pay to protect them.<sup>152</sup> The value of ecosystems is

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<sup>146</sup> See generally Tibor Scitovsky, A Note on Welfare Propositions in Economics, *in* Readings in Welfare Economics 390, 400–01 (Kenneth J. Arrow & Tibor Scitovsky eds., 1969) (introducing problem of preference cycles).

<sup>147</sup> See Adler, *supra* note 131, at 187–92; John C. Harsanyi, Cardinal Welfare, Individualistic Ethics, and Interpersonal Comparisons of Utility, 63 *J. Pol. Econ.* 309, 316–21 (1955) (offering account of how interpersonal comparisons can be made).

<sup>148</sup> See Daniel Kahneman, Objective Happiness, *in* Well-Being: The Foundations of Hedonic Psychology (Daniel Kahneman, Ed Diener & Norbert Schwarz eds., 1999). Cf. Paul W. Glimcher, Foundations of Neuroeconomic Analysis (2011) (developing notion of cardinal utility based on observable neurological information).

<sup>149</sup> Adler, *supra* note 131, at 185–92.

<sup>150</sup> Matthew D. Adler, Extended Preferences, *in* The Oxford Handbook of Well-Being and Public Policy, *supra* note 137, at 476, 476.

<sup>151</sup> See Hilary Greaves & Harvey Lederman, Extended Preferences and Interpersonal Comparisons of Well-Being, 96 *Phil. & Phenomenological Res.* 636, 645 (2018).

<sup>152</sup> EPA *supra* note 10, at 7-7 to 7-10.



described in terms of the “services” that they provide to humans, such as free pollination services.<sup>153</sup>

Some philosophers have argued that moral consideration should be given directly to non-humans. The most prominent of these arguments concern animal welfare, and thinkers such as Professor Peter Singer have been broadly influential.<sup>154</sup> Singer argues that animals can experience pleasure and pain, which is a sufficient basis for moral consideration. Under Singer’s view, practices such as factory farming, which generates enormous amounts of animal suffering with relatively few benefits, should be banned. However, there is a considerable amount of controversy even among those concerned with animal welfare about how to make judgments in more marginal cases.

Within the field of environmental ethics, there is a range of views about the moral status of both animals and more aggregated entities, such as ecosystems and species. One influential but controversial view put forward by Professor Paul Taylor is that all “teleological centers of life” are worthy of moral consideration—this view goes further than Singer’s because it does not ground moral consideration in the subjective experience of pleasure or pain.<sup>155</sup> Several scholars have both defended and objected to claims that there are moral obligations to protect species and ecosystems, apart from any effect on people or biological individuals.<sup>156</sup> Largely absent from these accounts, however, is a method for making comparisons between policies that have both positive and negative effects, either entirely within the domain of non-human nature or in cases of conflict between humans and non-human entities.<sup>157</sup>

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<sup>153</sup> See generally Robert Costanza et al., *The Value of the World’s Ecosystem Services and Natural Capital*, 387 *Nature* 253 (1997) (estimating economic value of several ecosystem services, including pollination and nutrient cycling).

<sup>154</sup> Singer, *supra* note 8.

<sup>155</sup> See Taylor, *supra* note 94, at 122, 125, 128–29. See generally Nicholas Agar, *Biocentrism and the Concept of Life*, 108 *Ethics* 147 (1997) (developing a “continuum” of organisms from humans to “simple living things” that clarifies the degree of moral consideration that ought to be afforded).

<sup>156</sup> Compare J. Baird Callicott, *In Defense of the Land Ethic: Essays in Environmental Philosophy* (1989) (defending moral consideration of aggregates), with Tom Regan, *The Case for Animal Rights* 362 (1983) (criticizing as “[e]nvironmental fascism” views that suggest that the interests of individuals be subordinated to those of aggregates).

<sup>157</sup> See, e.g., Paul W. Taylor, *The Ethics of Respect for Nature*, 3 *Env’t Ethics* 197, 218 (1981) (“If we accept the biocentric outlook and accordingly adopt the attitude of respect for nature as our ultimate moral attitude, how do we resolve conflicts that arise from our respect for persons in the domain of human ethics and our respect for nature in the domain of environmental ethics? This is a question that cannot adequately be dealt with here.”).

The economic and philosophical discourse concerning normative policy evaluation is extensive and highly articulated.<sup>158</sup> More important than the details of any given approach are certain shared features. Most fundamental is the need for comparison: either interpersonal comparison in the case of policy effects on people or some broader notion of comparison that encompasses non-humans. The need for comparison gives rise to two additional analytic steps: first, defining the entities that are worthy of consideration and, second, rendering effects across those entities comparable in some way.<sup>159</sup>

Within the standard, human-centered approaches, the first step is straightforward, as individual humans are the entities that are worthy of consideration. From there, the dominant metaphors for rendering effects across people comparable are bargaining and deliberation. The former metaphor of bargaining underlies the market model that is used for concepts like Pareto-optimality and Kaldor-Hicks efficiency. In this model, it is possible to compare effects across people by analogy to the market, where people commensurate goods by engaging in transactions with each other. The latter metaphor of deliberation has been used heavily by philosophers such as Rawls to ground theories of political morality.

Moving beyond human-centered approaches, the first step (defining entities) is anything but straightforward. Some argue that subjective experience of pleasure and pain is necessary; others reject that claim; still others argue that groups, and not just individuals, deserve consideration. Even once the entities are settled upon, there are no leading approaches for rendering effects comparable across entities.

The following two Sections delve into these two challenges raised by nature's rights: we first discuss problems that arise when defining the relevant entities; we then discuss difficulties associated with developing some analytic framework for making comparisons across effects on those entities. These two steps each present a conceptual thicket with no clear pathway through.

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<sup>158</sup> For a useful introduction to the field, see Daniel M. Hausman & Michael S. McPherson, *Economic Analysis, Moral Philosophy, and Public Policy* (2d ed. 2006).

<sup>159</sup> Making comparisons does not require the stronger relationship of commensurability. For a general discussion of the issue of commensuration in the context of legal decision making (including the adjudication of rights), see a useful symposium issue of the *University of Pennsylvania Law Review*. Symposium, *Law and Incommensurability*, 146 *U. Pa. L. Rev.* 1169 (1998).

*B. Defining Entities*

There are many differences between the alternative approaches to responding to the problem of interpersonal comparison discussed above, but they share the common feature that the relevant entities are individual human persons. Whether they are the bearers of rights, the source of moral obligations, or the experiencers of utility or well-being, human persons are distinct entities with subjective experiences and fairly clear boundaries.<sup>160</sup> In the case of rights for nature, however, the entities can be much less well-described and might include both individual non-humans (e.g., plants or animals) as well as aggregations of individuals (such as species or ecosystems) that have an independent status. Rights for nature that protect biological aggregates present serious definitional problems based on the difficulty of drawing boundaries around the relevant entities.

Species provide an illustrative example of the definitional problems that arise for biological aggregates. A species might initially seem like a relatively straightforward category and a good candidate for protection under a rights-for-nature regime. Species as aggregates seem to have an empirical foundation, and their protection is a primary concern of many environmental laws.<sup>161</sup> But upon closer inspection, even this way of aggregating biological life raises problems. The common “schoolroom” definition of a species as “a group of living things that create fertile offspring when mating with each other but not when mating with outsiders” has largely been abandoned by the scientific community, in favor of a profusion of definitions that depend, to varying degrees, on the morphological, ecological, genetic, and reproductive characteristics of the

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<sup>160</sup> The word “individual” derives from the Latin *individuus*, meaning indivisible. See Individual, Oxford English Dictionary (3d ed. 2014). We set aside concerns about personal identity, although there is a vibrant philosophical literature on these questions. See, e.g., Eric T. Olson, *The Human Animal: Personal Identity Without Psychology* (1999); Marya Schechtman, *The Constitution of Selves* (1996); Derek Parfit, *Reasons and Persons* (reprt. 1987); see also Eric T. Olson, *Personal Identity*, Stan. Encyclopedia Phil. (last updated Sept. 6, 2019), <https://plato.stanford.edu/entries/identity-personal/> [<https://perma.cc/AVF6-G9M9>].

<sup>161</sup> Examples include the U.S. Endangered Species Act of 1973, 16 U.S.C. §§ 1531–44 and the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Mar. 3, 1973, 27 U.S.T. 1087.

relevant biological entities.<sup>162</sup> Decades of debate have not resulted in a settled scientific definition of species.<sup>163</sup>

Even if there were a generally accepted scientific definition of a species, that would not necessarily settle the matter from a legal or moral perspective. One concern is simply the naturalistic fallacy of deciding a normative question on purely descriptive grounds: it would be preferable to at least begin an account of what a species is for purposes of defining the scope of rights for nature based on some normative understanding of the justification for protecting these kinds of things. Legal disputes raise similar issues, as legal definitions can and often do depart from scientific definitions, and environmental laws have led courts into many difficult definitional labyrinths when determining what does and does not count as a species under the law.<sup>164</sup> Similar problems arise for other biological aggregates, such as ecosystems or natural features, such as rivers: there are no clear boundaries around or within these aggregations.<sup>165</sup>

The plurality of potential definitions creates problems whenever policies must be evaluated. Imagine a rights-for-nature regime in which each individual animal has some status and must be accorded due consideration when evaluating policy choices. In addition, there are aggregations, such as species, population segments, or ecosystems that must be given consideration as well. These aggregations have independent status apart from the sum of the interests of their members. An individual animal might be included within multiple aggregations—for example, it would be included in a species aggregation as well as an ecosystem aggregation. Every species subset is included in all of the higher taxonomic ranks (genus, family, order, etc.), and ecosystems would be included within higher level ecosystems, including regional ecosystems and even the entire biosphere.<sup>166</sup> Aggregations might overlap or be fully included in another: for example, an entire species of the

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<sup>162</sup> Susan Milius, *The Fuzzy Art of Defining Species*, *Science News*, Nov. 11, 2017, at 22–24; see also Michael Ruse, *Biological Species: Natural Kinds, Individuals, or What?*, 38 *Brit. J. Phil. Sci.* 225, 226–27 (1987) (listing four biological concepts of “species”).

<sup>163</sup> See Frank E. Zachos, *Species Concepts in Biology 77–96* (2016) (providing an annotated list of thirty-two definitions).

<sup>164</sup> See, e.g., *Nat’l Ass’n of Home Builders v. Norton*, 340 F.3d 835, 842 (9th Cir. 2003).

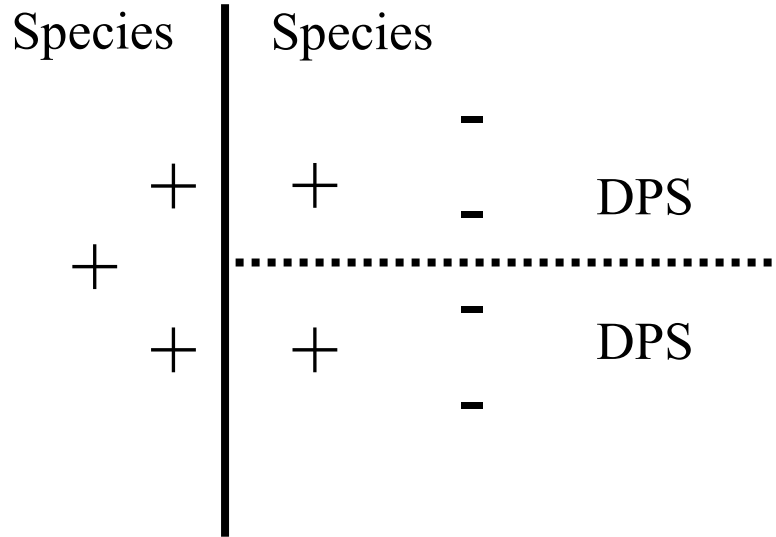
<sup>165</sup> For example, the Supreme Court has had an extraordinarily difficult time articulating coherent boundaries around what constitutes the “waters of the United States” for purposes of jurisdiction under the Clean Water Act. See, e.g., *Rapanos v. United States*, 547 U.S. 715 (2006).

<sup>166</sup> William Miller III, *The Hierarchical Structure of Ecosystems: Connections to Evolution*, 1 *Evolution: Educ. & Outreach* 16, 16 (2007).

animal might be included within an ecosystem. The set of entities afforded some status under a rights-for-nature approach would explode, including all animals and all possible ways of aggregating those animals, along with overlapping aggregations of aggregations.

Even if the exploding number of entities with interests does not make it impossible to make comparisons, defining biological aggregates introduces arbitrariness into the calculus. If there are many different plausible ways to constitute the relevant aggregations—each with no stronger normative claim than the other—then the purported desirability of many decisions could be contingent on an arbitrary choice about how the aggregations are described.

For example, a question that might implicate rights for nature would be whether to build a road through a sensitive forest area. We would expect that such a policy might lead to different consequences for biological individuals: the forest road will be bad for small mammals that are hit when crossing the road, but good for the carrion birds that feed on the roadkill. But collectives will also be affected: the species of carrion birds might enjoy a small increase in its population resulting from the increased food supply, but the local ecosystem, of which individual carrion birds are members, may lose biodiversity as some species move away from the road. What is bad for the local ecosystem might be good for a neighboring ecosystem, and, of course, they are both included in a higher-level regional ecosystem, which might benefit from or be harmed by the road (for example, the new road could alleviate traffic from another road that is in an even more sensitive and important area). Similarly, an increase in the population of one carrion bird species might harm a competing bird species that shares a taxonomic category—say, of the same order. If there is some number of plausible ways of partitioning individuals into a set of aggregations (e.g. ignoring or including sub-ecosystems or sub-species), then the desirability of the decision (whether to build the road) could depend on how the aggregations are defined.

**Figure 1**

Note: Whether an environmental policy had net benefits depends on how effects are aggregated across individuals, species, and discrete population segments (DPSs). The pluses and minuses reflect benefits and harms to individual animals, and the policymaker must decide whether to treat the two discrete population segments as worthy of separate consideration.

The problem is illustrated in Figure 1. Each plus or minus sign in the figure is an individual animal that is affected by a policy, with the signs denoting whether the effects are positive or negative. Assuming the same magnitude for these effects, then when summed at the individual level, the policy generates net benefits: five units of benefits against four units of cost. The affected individuals might also be divided into two species, each of which is given its own independent consideration. In that case, then, there is an additional unit of benefits (for species A) and one additional unit of costs (for species B, based on aggregate intra-species effects). The outcome is the same in this scenario: the policy has net benefits of six minus five. In a third scenario, species B is divided into two discrete population segments (DPSs), each given independent status, in addition to the species and the individuals. In this partitioning, there are two more units of costs, one for each of the population segments.

Under this third scenario, the scales are tipped in the negative direction. Unless there is some principled way to decide whether the DPS partitioning is or is not preferred to the species-only or individual-only partitioning, the outcome of the comparison is contingent on an arbitrary choice.

A concrete hypothetical might help drive the point home. A government decision maker must decide whether to grant a permit for a land sanctuary. The goal of the sanctuary is to protect a group of three hundred orangutans and two hundred tigers. However, this sanctuary would displace farming and other economic activities in ways that would ultimately threaten four hundred tigers in other locations. A tiger conservation group that claims to represent nature's rights argues to the government official that granting the permit would violate those rights because of the negative effects on the individual tigers outside the proposed sanctuary and on tigers as a whole. On the other side, an orangutan conservation group argues that denying the permit would violate nature's rights, because of the value of the sanctuary for the orangutans and the tigers that would be afforded protection.

In this hypothetical, the government decision maker faces conflicting claims about nature's rights. Viewed at the level of individual animals, the sanctuary has net benefits because, while it creates risks for four hundred animals, it protects five hundred. (We can assume for the sake of simplicity that the protections and harms are of equal magnitude.) From the perspective of animal welfare, granting the permit seems to be, all things considered, the better option. But there is also the species level to consider. At first glance, the sanctuary could be considered as having a net effect of zero at the species level because it benefits orangutans but has a net cost for tigers. However, there is currently a "lack of a consensus on the number of tiger subspecies or management units" that are relevant for conservation, with estimates ranging from two to nine.<sup>167</sup> The tiger conservation group could argue that the tigers should be treated as two sub-species, each with its own separate rights. If so, at the level of aggregate entities, the sanctuary creates net harms because the benefit to orangutans is more than offset by harms to tigers in general, as well as to the two distinct population segments of tigers. Unless there is some principled way to decide whether the tigers should be treated as one group

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<sup>167</sup> See Andreas Wilting et al., *Planning Tiger Recovery: Understanding Intraspecific Variation for Effective Conservation*, 1 *Sci. Advances*, June 26, 2015, at 1, DOI, 10.1126/sciadv.1400175.

or two, the decision over whether the sanctuary does or does not violate nature's rights, then, would turn on an arbitrary decision about how to define the relevant aggregates.

Contrast the nature's rights approach with how a similar question would be addressed under a statute such as the U.S. Endangered Species Act ("ESA").<sup>168</sup> Under the ESA, the government cannot grant a permit that jeopardizes an endangered species,<sup>169</sup> and there could be a live question about whether a population should be treated as a single unit or two distinct groups.<sup>170</sup> However, when deciding whether a population should be treated as a DPS, decision makers can make recourse to the purposes of the ESA,<sup>171</sup> which involve "interrelated goals of conserving genetic resources and maintaining natural systems and biodiversity[.]"<sup>172</sup> Although these goals may not always lead to determinate answers when applied to individual DPS determinations, they provide some foundation for analysis.

It is useful to note what the argument developed in this Section does and does not claim. First, to summarize the claim: if nature's rights cover aggregates, such as species and ecosystems, in addition to individual animals and plants, then some method for defining those aggregates is necessary. Generally speaking, there will not be a purely scientific or empirical basis for making those determinations. Nature's rights are typically articulated as themselves normatively important, rather than as policy instruments to achieve some goal such as "conserving genetic resources."<sup>173</sup> So far, there is no convincing account of how to define the relevant aggregates for purposes of understanding the implications of nature's rights in individual cases. To be successful, such an account should not simply fall prey to the naturalistic fallacy and should be related to the underlying normative values that motivate nature's rights.

But our arguments should not be overinflated. We do not claim that any determination concerning biological aggregates (such as species) is inherently arbitrary; indeed, the ESA is an example of where such determinations can be made by reference to an underlying policy goal.

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<sup>168</sup> U.S. Endangered Species Act of 1973, 16 U.S.C. §§ 1531–44.

<sup>169</sup> *Id.* § 1536.

<sup>170</sup> Put aside the fact that there are no wild orangutans or tigers in the United States.

<sup>171</sup> Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act, 61 Fed. Reg. 4722, 4722 (Feb. 7, 1996) ("Any interpretation adopted should also be aimed at carrying out the purposes of the Act . . .").

<sup>172</sup> *Id.* at 4723.

<sup>173</sup> *Id.*



Nor do we argue that it is impossible to articulate a suitable set of normative criteria for delineating the biological aggregates that should be covered by nature's rights. Rather, we note the task and explain why it is likely to be difficult. A particular difference between nature's rights and legal regimes such as the ESA is that the latter embodies a set of pragmatic tools for forwarding policy goals such as biodiversity, whereas nature's rights are typically defended as directly arising from a fundamental set of duties, rather than as a tool to achieve some other end.

### *C. Defining Interests*

The line-drawing problem of biological aggregates is compounded by two additional challenges related to the interests of those entities. The first challenge is simply in determining what those interests are. The second challenge is rendering effects on those interests comparable.

#### *1. Determining Interest*

With respect to human persons, there are several ways that interests might be defined: in terms of preferences, subjective happiness, or objective features of their lives such as access to certain goods or capabilities to engage in certain behaviors.<sup>174</sup> These interests are closely connected to the definition of the relevant unit of analysis. Unlike other aggregates, such as species, the components of a human being are rarely argued to have individual (rather than collective) status. The boundaries of the individual are relatively clear, and controversies rarely arise over whether a person's interest includes imperceptible effects on that person's gut biota, for example.<sup>175</sup>

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<sup>174</sup> Martha C. Nussbaum, *Women and Human Development: The Capabilities Approach* 59–71 (2001); Amartya Sen, *Commodities and Capabilities* (Oxford India Paperbacks 1999) (1987).

<sup>175</sup> Callicott argues that the distinction between individuals and collectives is an illusion because “‘individual organisms’ (including human organisms) are . . . ecological collectives.” J. Baird Callicott, *How Ecological Collectives Are Morally Considerable*, in *The Oxford Handbook of Environmental Ethics* 113, 113–14 (Stephen M. Gardiner & Allen Thompson eds., 2017). It is true that, as a biological matter, a person is made up of many trillions of human cells in addition to trillions of microorganisms—e.g., bacteria, viruses, protozoa, and fungi—representing hundreds of species. See Peter J. Turnbaugh et al., *The Human Microbiome Project*, 449 *Nature* 804, 804–06 (2007) (describing the microbiome and what is known about it). However, although human beings are collectives of a sort, we take it as uncontroversial that the interests of the sub-units can be safely ignored—it would be absurd to grant standing to a person's gut biota to sue her small intestine over a conflict of resources.

For individual animals, some of the same logic could apply. There are good reasons to believe that at least many other animals have subjective experience.<sup>176</sup> We may not know what it feels like to be a bat, but it likely *does* feel like something.<sup>177</sup> The same holds for other mammals, as well as many other vertebrates and even some invertebrates, including some cephalopods.<sup>178</sup> It might also be possible to think of animals as having preferences.<sup>179</sup> Given a choice, a cat might prefer treats to kibble. Some notion of the objective well-being of animals might also be constructed based on their ability to engage in certain kinds of behaviors.

But even this limited analogy to human persons starts to break down at some point. With respect to subjective experience, it is far from clear that it feels like anything to be an oak tree. Even more attenuated is any notion of subjective experience of biological aggregates: the species *pan paniscus* does not itself have subjective experience, even if it does feel like something to be an individual bonobo. Nor does it feel like anything to be a rainforest ecosystem, even if it is teeming with birds who have some form of subjective experience.

Preference-based accounts also seem odd applied outside the context of individual animals. It does not seem altogether sensible to speak of a tree as *preferring* the sun to the shade, even if it tends to grow in that direction. Biological aggregates create even larger problems. There is no obvious way in which a species or ecosystem makes choices over options, even if individual members of it do. Nor does it make sense to characterize aggregate-level phenomena as akin to human collective

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It is, perhaps, worth considering why some biological collectives (e.g., individual organisms) have this type of unity that others (e.g., species and ecosystems) lack. Consciousness and subjective experience provide one possible explanation. Indeed, one of the leading theories concerning the neurological basis of consciousness argues that its most basic function is the integration of information that is diffused across the organism. Giulio Tononi, Melanie Boly, Marcello Massimini & Christof Koch, *Integrated Information Theory: From Consciousness to Its Physical Substrate*, 17 *Nature Revs. Neuroscience* 450, 452 (2016) (“[T]he content of an experience (information) is integrated within a unitary consciousness.”).

<sup>176</sup> For a popular account of subjective experience of an octopus, see Peter Godfrey-Smith, *Other Minds: The Octopus, the Sea, and the Deep Origins of Consciousness* 98–106 (1st ed. 2016).

<sup>177</sup> Thomas Nagel, *What Is It Like to Be a Bat?*, 83 *Phil. Rev.* 435, 438–40 (1974).

<sup>178</sup> See Jennifer A. Mather, *Cephalopod Consciousness: Behavioural Evidence*, 17 *Consciousness & Cognition* 37, 37 (2008).

<sup>179</sup> Lusk & Norwood, *supra* note 116, at 479–80.

decision-making institutions such as legislatures or corporate boards.<sup>180</sup> Non-human biological individuals do not deliberate over means and ends, and so aggregate phenomena are not properly understood as making choices in the relevant sense.

If subjective experience and preferences are not meaningful ways of defining the interests of certain biological individuals (e.g., trees) and of all biological aggregates, another alternative is a notion of objective well-being. Some conditions are more conducive to flourishing than others, and well-being could be defined in terms of those conditions. At the level of the individual, flourishing can be defined in terms of reproduction or some other metric. At the level of species or ecosystems, flourishing could be defined in terms of population health, biodiversity, or some other metric—indeed, such efforts are central to certain legal questions, such as whether a particular behavior creates a “harm” that is cognizable under the Endangered Species Act.<sup>181</sup>

Moving away from subjective experience (and the related notion of preferences) in favor of some notion of objective flourishing is not without problems. If an entity has subjective experience—if it feels like something to be that entity—then a moral agent has an at least arguable reason not to make that entity feel bad. But for entities that have no subjective experience, that *prima facie* reason is not present. There would need to be some other reason to extend concern to that entity. A hurricane is a kind of physical phenomenon, and there are conditions under which a hurricane might be thought to “flourish,” but there is no obvious reason why the purported interests of hurricanes ought to be given any moral weight. There needs to be some reason to distinguish those non-subjective-experience-bearing entities that should be considered from those that should not.

## 2. Comparability

Assuming that the interests of the relevant entities could be determined, there is a second question of how effects on those interests could be compared to each other. Recall from the discussion in Section II.A that

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<sup>180</sup> Cf. List & Pettit, *supra* note 98, at 182 (discussing moral agency in the context of deliberating between groups of people and denying that aggregates have moral interests independent of individuals).

<sup>181</sup> See *Babbitt v. Sweet Home Chapter of Cmty. For a Great Or.*, 515 U.S. 687, 708 (1995) (holding that the definition of “harm” under the Endangered Species Act could include habitat loss).

the dominant metaphors that undergird the leading analytic frameworks for making policy comparisons are bargaining and deliberation. Under the Pareto/Kaldor-Hicks framework that is the basis for standard cost-benefit analysis, effects on different people are rendered comparable through the analogy of the marketplace, where people trade for goods and services. Prices emerge from these market transactions, and the values of goods and services are thus rendered in a common metric. This market is a theoretical construct, and real markets do not necessarily generate correct prices due to market failures such as externalities.<sup>182</sup> Various tools can be used to estimate the correct prices (sometimes called “shadow prices”) of goods affected by such market failures.

Under the framework popularized by Rawls and used by Professor John Harsanyi,<sup>183</sup> among many others, the metaphor of deliberation provides an alternative way to compare effects across entities. In the imagined scenario, deliberation takes place behind a “veil of ignorance” that obscures the identities of the deliberators from themselves.<sup>184</sup> Comparability is achieved through a thought exercise: the deliberator faces a lottery over all identities in a given society and anticipates the effects of different sets of social relations accordingly.<sup>185</sup>

These metaphors quickly break down in the context of nature’s rights.<sup>186</sup> Even in the least-difficult case of individual animals, where the interests at stake are the most comprehensible, there are serious challenges to establishing a basis for comparison. Persons can deliberate with each other as rational agents with a level of mutual understanding and an ability to communicate with each other. Only at the highest level of cognitive and social sophistication do animals engage in behaviors that imply an understanding of reciprocity and an ability to track mutual exchanges.<sup>187</sup> And even in those cases, communication is extremely

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<sup>182</sup> Here, correct prices are simply those that would exist in a perfect market.

<sup>183</sup> See, e.g., Harsanyi, *supra* note 147; Harsanyi, *supra* note 142.

<sup>184</sup> Rawls, *supra* 140, at 11.

<sup>185</sup> *Id.*

<sup>186</sup> As noted by Carlier and Treich, in the original position literature:

[P]eople are asked to imagine that they do not know their gender, ethnic background, economic status, class, abilities or talents; they can be slaves, physically [disabled], mentally [disabled] and so forth, but they usually cannot be animals. Many mental barriers are overcome in this thought experiment, but not that of species.

Carlier & Treich, *supra* note 8, at 131.

<sup>187</sup> For an account of fairly complex social relationships in the non-human world, see generally Frans de Waal, *Chimpanzee Politics: Power and Sex Among Apes* (1st U.S. ed. 1982) (studying the social organization of a chimpanzee colony).

rudimentary and below what is necessary to enter the “space of reasons.”<sup>188</sup> An original position that requires a deliberator to imagine lotteries, not only over positions in human society but over the entire range of human or animal lives, stretches empathetic capacities to a breaking point. The problems of comparison are all that much more severe in the case of biological aggregates. Even if the interests of species, ecosystems, and landscapes could be defined, there is no sense in which it is possible to bargain or deliberate with such entities.

It may be possible to extend the metaphors of bargaining or deliberation through the notion of representation, in which individual non-humans and biological aggregates would be appointed guardians who could speak on their behalf. We could imagine that the duty of these guardians (which they carry out in good faith) would be to maximize the well-being of their charges, where the interests of non-human entities are understood in objective terms.

Applying the notion of guardianship to the marketplace metaphor, we could imagine a theoretical world where guardians for the interests of non-humans possessed a certain amount of cash and then bargained over land or other resources in exchange for ecosystem services. The prices achieved in this theoretical market would allow for comparability between effects on humans and non-humans.

One normative question that one might ask about such a world is whether there are Pareto improvements that can be made, compared to the current status quo. If so, then human-centered decisions are strictly inefficient, because improvements could be made for some entities without causing anyone or anything to be worse off.

There are, however, reasons to be skeptical that such improvements are possible. One longstanding theory in evolutionary biology, dubbed the “Red Queen Hypothesis,” asserts that “each evolutionary advance made by one species is experienced as a deterioration of the environment by others.”<sup>189</sup> The Red Queen scenario—so called for the character in Lewis Carroll’s *Through the Looking-Glass*—comes about because, over sufficient time horizons, evolutionary pressures fill the environment so

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<sup>188</sup> Wilfrid Sellars, *Empiricism and the Philosophy of Mind* 76 (Harv. Univ. Press 1997) (1956) (noting that the “space of reasons” is one “of justifying and being able to justify what one says,” i.e., one that requires quite sophisticated communicative capacities).

<sup>189</sup> Nils Chr. Stenseth, *Where Have All the Species Gone? On the Nature of Extinction and the Red Queen Hypothesis*, 33 *Oikos* 196, 196 (1979).

that there are few if any unexploited opportunities.<sup>190</sup> The long-run stability of extinction rates was the original empirical basis for the hypothesis,<sup>191</sup> but controlled experiments of miniature evolutionary environments have provided additional support.<sup>192</sup> If the Red Queen Hypothesis generally holds true, then there will be no pure Pareto improvements in the natural world because any advantage for one necessarily results in disadvantages for another.

Even if there are no Pareto improvements, it is possible that the notion of Kaldor-Hicks efficiency could be invoked to identify market failures in the extended human–non-human market.<sup>193</sup> Imagine a situation where the diffuse behavior of many individual farmers caused the degradation of an ecosystem. If the value of farming activity is lower than the value of lost ecosystem services to impacted people, then this is a straightforward market failure purely from a human-centered perspective. But it could be the case that farming activities have greater value to people than ecosystem services but cause substantial harms to non-humans. If so, the addition of guardians for non-human interests might tip the scales if the net non-human willingness to pay to avoid the farming activities was sufficiently large to override the net human benefits.

A guardian's willingness to pay will naturally be based on a budget constraint. If the guardian's budget is zero, then the outcome will be identical to the outcome under an entirely human-centered approach, which is approximately the status quo.<sup>194</sup> Under the market analogy, then, the question can be translated into one concerning the distributional justice of the status quo: Is it just for all of the wealth of the world to be in human hands? With its emphasis on efficiency, the Kaldor-Hicks criterion has nothing to say about this question.

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<sup>190</sup> Id. at 197–99, 223.

<sup>191</sup> Id. at 197.

<sup>192</sup> Levi T. Morran, Olivia G. Schmidt, Ian A. Gelarden, Raymond C. Parrish II & Curtis M. Lively, Running with the Red Queen: Host-Parasite Coevolution Selects for Biparental Sex, 333 *Science* 216, 216 (2011).

<sup>193</sup> We might imagine that transaction costs could create space between an evolutionarily stable equilibrium and the Pareto frontier.

<sup>194</sup> Karen Bradshaw argues that, to a limited degree, non-human animals have been granted some property rights. Karen Bradshaw, *Animal Property Rights*, 89 *Univ. Colo. L. Rev.* 809, 823 (2018). But even under a generous interpretation, as a share of the wealth of the world, the portion granted to non-humans is vanishingly small. The question of whether non-humans deserve more is one that sounds in justice and cannot be answered based on the existing state of the law.

The market metaphor, then, only carries the inquiry so far. Assuming that the relevant entities and their interests can be defined and that guardians can be appointed (at least theoretically) who can articulate and defend those interests in a set of market transactions, making a sensible comparison still requires the further step of evaluating claims concerning the justness of the existing distribution of wealth between humans and non-human entities.

There are plenty of theories about distributional justice that could be brought to bear on this question. A utilitarian social welfare function is concerned with distribution inasmuch as there is diminishing marginal utility to consumption. Other social welfare functions place additional weight on the least well-off, such as the prioritarian view forwarded by Professor Derek Parfit.<sup>195</sup> Rawls counseled in favor of maximizing advantage for the worst-off in society.<sup>196</sup>

However, serious difficulties arise when any of these concepts are applied to non-human entities. The metaphor of the original position is a common starting place to reason about theories of distributional justice. Perhaps it is possible to extend the guardianship concept to include an original position where deliberators faced lotteries that included both human lives and the lives of guardians (whose utility would be tied to the well-being of the entities that they represent). But even at this basic step, two difficult questions are immediately presented: the first concerns the definition of the relevant entities to be represented; the second concerns the equality of those agents. The first question recapitulates the issue discussed in Section II.B in terms of identifying the types of entities that should be afforded consideration (i.e., given a guardian slot in the original-position lottery). The second question is whether, in the original position, deliberators ought to give equal weight to all possibilities. If so, the prospect of an individual human life would be weighted equally to the prospect of being the guardian for a particular rat's life, which would be weighted equally to the prospect of being the guardian for the species *Rana temporaria* (the common frog). For human-centered theories of justice, the moral equality of persons is foundational and mostly non-controversial. But extending this notion to non-humans is anything but non-controversial, and there are few even among ardent defenders of animal welfare or bio-centric values who are willing to place the interests

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<sup>195</sup> Derek Parfit, *Equality and Priority*, 10 *Ratio* (n.s.) 202, 213 (1997).

<sup>196</sup> See Rawls, *supra* note 140, at 13.

of humans and non-human entities on the same moral footing.<sup>197</sup> If the kind of equality that extends between persons is not applicable to entities in the broader natural world, then some alternative basis for envisioning deliberation in the original position is needed.

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In this Part, we raised several conceptual difficulties faced by rights for nature. We first argued that framing environmental policy in terms of rights does not avoid the need to make comparisons between alternative options and their effects on humans and non-humans. Environmental policy frequently has many complex effects in the world that are both good and bad, and rational decision making requires that these effects be anticipated and that comparisons be made. To do so, it is necessary to identify the entities that are affected and to articulate the interests of those entities for purposes of comparison. In the case of nature's rights, even arriving at a suitable definition of the relevant entities raises several challenges, especially if biological aggregates such as species or ecosystems are considered. If these challenges can be surmounted, an additional set of problems arises when determining the interests of these entities. The standard approaches from existing practice, which use preferences or subjective well-being as the relevant measure, are inapplicable to at least some non-human entities, and certainly inapplicable to biological aggregates. The most promising approach for determining interests is likely to be some notion of objective well-being.

The final set of challenges arises when a policy's effects on the interests of non-humans must be compared to each other. One could imagine a theoretical market where people and the guardians of non-human interests bargain with each other, which would be one way to achieve comparability. One implication of the Red Queen Hypothesis is that, in such a market, there are unlikely to be Pareto-improving options, so some other normative criterion is needed. The potential Pareto test (i.e., Kaldor-Hicks efficiency) is one possibility, but it takes the status quo distribution of wealth as a given, and so non-human entities (which lack wealth and provide their services for free) have no purchasing power. If this distribution is just, then an entirely human-centered approach to policy making is appropriate. Criticizing the status quo distribution of wealth between humans and non-humans requires a theory of distributional justice. Such a theory must grapple with a foundational issue of equality

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<sup>197</sup> See, e.g., Taylor, *supra* note 157, at 218.



and how that concept should be applied between humans and non-human entities. This question remains deeply contested and open to significant disagreement, even among those who argue that non-humans deserve some moral consideration.

This Part has not provided an impossibility proof that establishes conclusively that there is no conceivable coherent articulation of nature's rights that is extended generally to non-human entities. Rather, we have raised a large number of dilemmas and objections that any such articulation would need to address. None of these seem trivial, and some may ultimately prove to be insurmountable.

In the next Part, we turn to an alternative approach to nature's rights that attempts to sidestep some of these difficulties by abandoning an aggregative approach in favor of one that lodges rights in the biotic community as a whole rather than in its constituent entities.

### III. TOP-DOWN RIGHTS

Our analysis in Sections II.B and II.C conceives of nature's rights as individualistic in the sense that the rights extend to individual non-human entities, such as species or ecosystems, that are specific and bounded (at least in theory). The difficulties for nature's rights that we describe above arise out of the need to make comparisons at an aggregate level when policies have beneficial effects for some entities but harmful consequences for others. But perhaps this approach is misguided. In this Part, we examine an alternative approach, which grounds nature's rights at the collective rather than the individual level. This approach avoids the problems of comparison discussed above but raises different difficulties that have no more obvious solutions.

#### *A. The Biotic Community*

In his classic formulation, Professor Aldo Leopold defines his "land ethic" as follows: "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."<sup>198</sup> The emphasis for Leopold is at the community level, rather than the individual one. Our discussion above centers on a bottom-up approach to comparison, where consequences are analyzed at the level of the individual or specific collectives and then aggregated. A top-down

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<sup>198</sup> Aldo Leopold, *A Sand County Almanac* 224–25 (1949).

approach might attempt to start with the community as a whole, rather than dividing the community into its constituent parts. Such a model would avoid problems of aggregation.

Leopold's biotic community represents nature from the top down, as a whole, individual entity.<sup>199</sup> Here, the word "individual" can be thought of as taking on meaning from its Latin roots *in* (as in "not") and *dīviduus*, the noun form of the verb *dividere* "to divide."<sup>200</sup> Thinking of nature as an individual implies that, in some sense, it is not divisible: colloquially, the whole is more than the sum of its parts. Leopold's nature ethic gives a moral gloss on nature's individuality by calling attention to obligations to the community, rather than to any constituent thereof.

The concept of the biotic community is one way to represent the idea of nature as a non-divisible whole. Another well-known formulation is the *Gaia hypothesis*, developed by chemist James Lovelock and microbiologist Lynn Margulis.<sup>201</sup> Under the Gaia hypothesis, the planet can be thought of as a complex, self-regulating system that maintains the conditions necessary for life. Although Lovelock and Margulis have been fairly circumspect about attributing personhood to this planetary scale system,<sup>202</sup> others have expanded on the idea to support the notion of a separate moral status for the more-than-human world.<sup>203</sup> The Ecuadorian constitution represents nature as *Pachamama*, a term borrowed from

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<sup>199</sup> It is possible that Leopold meant the "biotic community" in local rather than global terms. See *id.* at 129–32 (understanding ecological effects by "thinking like a mountain"). If so, Leopold's biotic communities would be akin to other aggregates (such as ecosystems or species) that are discussed above in Part II. For purposes of the discussion that follows, we interpret the biotic community as extending to the global scale.

<sup>200</sup> Individual, Oxford English Dictionary (3d ed. 2014); Charlton T. Lewis & Charles Short, *In-dividuus*, A Latin Dictionary (1879), <http://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.04.0060:entry=individuus> [<https://perma.cc/T6KU-XWLE>].

<sup>201</sup> J.E. Lovelock, *Gaia as Seen Through the Atmosphere*, 6 *Atmospheric Env't* 579, 579 (1972); James E. Lovelock & Lynn Margulis, *Atmospheric Homeostasis by and for the Biosphere: The Gaia Hypothesis*, 26 *Tellus* 2, 3 (1974).

<sup>202</sup> According to Margulis, Gaia "is not an organism" but "an emergent property of interaction among organisms." She defined Gaia as "the series of interacting ecosystems that compose a single huge ecosystem at the Earth's surface. Period." Lynn Margulis, *Symbiotic Planet: A New Look at Evolution* 119–20 (1998).

<sup>203</sup> See David Abram, *The Spell of the Sensuous: Perception and Language in a More-Than-Human World* 302 n.62 (1996) ("Whatever the scientific fate of the Gaia hypothesis, . . . [it] ultimately encourages us to speak of the encompassing earth in the manner of our oral ancestors, as an animate, living presence.").

Quichua and Aymara languages which carries the connotation of an independent, holistic entity.<sup>204</sup>

The biotic community (and related ideas) could be incorporated into nature's rights in two ways. One way would be to acknowledge this planetary-scale entity as one of the many different entities that are protected, alongside individual animals and smaller-scale collectives such as ecosystems and species. This approach would do nothing to address the problems of aggregation discussed in Part II—it would simply add one more entity to an already-crowded world of moral consideration.

The alternative is to equate nature's rights with a planetary-scale entity, so that any and all interests at a smaller scale are subsumed. This alternative alleviates the need to engage in any aggregation, because there is only one relevant entity. The effects of a policy on the interests of the biotic community as a whole would be the measure of whether it was good or bad, at least with respect to nature's rights.

The following Sections examine problems for a top-down understanding of nature's rights. One objection to the top-down model is that it inappropriately conflates the interests of morally distinct entities. If animals, species, or ecosystems should be given separate moral consideration, then treating them as mere contributors to some meta-interest of the community is a mistake. A related but distinct objection is that it is not clear where humans fit within the biotic community. If human beings are included in the community, then human activities that seem to have negative environmental consequences (such as greenhouse gas emissions) are entirely natural, akin to a naturally occurring forest fire. But if humans are to be excluded, it is not clear why. Even assuming away these problems of separation, additional complications arise because the interests of the biotic community as a whole defy expression on a single dimension, making it difficult to understand the effects of policy choices on those interests.

### *B. Problems of Separation*

One objection to the *one-entity approach* concerns the notion of separateness. As mentioned above, a classic critique of utilitarianism is that it treats humankind as a collective entity, with each person's moral

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<sup>204</sup> See Rosaleen Howard-Malverde, "Pachamama Is a Spanish Word": Linguistic Tension Between Aymara, Quechua, and Spanish in Northern Potosí (Bolivia), 37 *Anthropological Linguistics* 141, 141–43 (1995).

value limited to his or her contribution to the aggregated whole. Rawls, in particular, is associated with this critique, but it has been taken up by many others.<sup>205</sup> Only if persons are treated as morally distinct and separate does it make sense to be concerned with fairness over the distribution of well-being. Without separateness, fairness loses its normative bite because utility or well-being would simply be interchangeable across persons.<sup>206</sup> Rawls's critique has largely been accepted, and many contemporary formulations of the social welfare function explicitly account for such distributional concerns.<sup>207</sup>

An analogy to the separateness of persons could also be made for animals. Human beings are not unique in their concern for fairness. Certainly, anyone who has observed animals feeding—from puppies scrambling at the kibble bowl to lions tearing at a dying antelope—would not characterize the behavior as share-and-share-alike. But, more scientifically, Professors Sarah Brosnan and Frans B.M. de Waal have shown in experimental settings that nonhuman primates “respond[] negatively to unequal reward distribution” and indeed refuse to participate in experiments when they witness others given greater rewards for equal effort.<sup>208</sup> Although extreme altruism is found in some species,<sup>209</sup> even relatively cooperative animals such as capuchin monkeys aggressively pursue their own interests and resist unfair outcomes.<sup>210</sup>

If separateness is recognized for animals or aggregates, such as species or ecosystems, then many of the problems discussed above arise. In particular, there is a need to make comparisons when some individuals or aggregates are benefited and some are harmed. For humans, such comparisons can at least be made in terms of a common unit of exchange, but no such common currency exists for non-human entities. In addition, there would also need to be some means to make comparisons between effects on individual animals, effects on local aggregates like species and

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<sup>205</sup> See, e.g., Dennis McKerlie, *Egalitarianism and the Separateness of Persons*, 18 *Can. J. Phil.* 205, 205, 207–08 (1988).

<sup>206</sup> It bears noting that even if the interests of persons are not treated separately, diminishing marginal utility of consumption would justify some level of redistribution in an unequal society.

<sup>207</sup> See, e.g., Adler, *supra* note 131, at 314–21.

<sup>208</sup> Sarah F. Brosnan & Frans B.M. de Waal, *Monkeys Reject Unequal Pay*, 425 *Nature* 297, 297 (2003).

<sup>209</sup> See generally Edward O. Wilson, *Sociobiology: The New Synthesis* 106–29 (1975) (exploring the biological origins of altruism).

<sup>210</sup> See Brosnan & de Waal, *supra* note 208, at 297.

ecosystems, and effects on the biotic community in general. In the case of the biotic community, there is the problem of defining interests for an entity that lacks subjective experience.

There is a further problem of separation for the one-entity approach, and that is the separation of humanity from the rest of nature. Above, in Part II, nature's rights are described in a pluralistic fashion as covering the interests of many non-human entities of various types. Any specific entity or entities could, in theory, be excluded from coverage under nature's rights without fundamentally affecting the calculus. And there is some reason to exclude humans from nature's rights: people typically enjoy a host of other legal protections that are not extended to non-human entities, so the interests of humans will ultimately be considered when making policy comparisons.

Under the one-entity approach, excluding human beings seems to raise additional conceptual problems that do not exist in the pluralist interpretation of nature's rights. The biotic community would seem to necessarily cover human beings, which are just as much biological organisms as trees, bacteria, and tuna fish.<sup>211</sup> The complex adaptive system described by the Gaia hypothesis likewise includes humans, which arise from and contribute to planetary environmental processes. The sweep of developments in biology and related disciplines since at least Darwin has further embedded human beings within their broader natural context, eroding the idea that *Homo sapiens* are a thing separate and apart from the rest of the biological world. Environmental ethics have also largely rejected the notion that humans are separate from nature in any fundamental sense.<sup>212</sup>

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<sup>211</sup> The influence of modern humans is particularly strong compared to other species, although that influence emerged gradually over time. If humans are understood as distinct from the biotic community due to this influence, it would raise the question of when, after *Homo sapiens* became a distinct species, its influence was sufficiently grave that it broke off from the biotic community as a whole.

<sup>212</sup> Many environmental ethicists reject the notion that humans are separate from nature in any fundamental sense. See generally *Uncommon Ground: Rethinking the Human Place in Nature* (William Cronon ed., 1995) (collection of essays exploring consequences of human-nature connection for environmental law and ethics). Of course, there is a long philosophical tradition that does separate humans from the rest of nature, based on characteristics such as the capacity for reason. Immanuel Kant, *Groundwork of the Metaphysics of Morals* 37 (Mary Gregor ed. & trans., Cambridge Univ. Press 1998) (1785) (distinguishing between "persons"—rational beings who are ends in themselves—and "things"—non-rational beings that have worth only as means). For a recent example, see George Kateb, *Human Dignity* (2011) (arguing that humans have a special responsibility of stewardship that other species do not). But such accounts are very much at odds with the one-entity approach, with its holistic

And, just as humans may not be separable from nature, human activities have had such a profound effect on the planet, especially since industrialization, that it is difficult to separate nature from humanity.<sup>213</sup> From plastic waste found at the depths of the oceans to air pollutants in the upper atmosphere, there is scarcely any corner of the planet that has not been affected by human activity in some way. Currently, human beings and our livestock mammals outweigh wild mammals twenty-fold; chickens and other domesticated birds outweigh all wild birds.<sup>214</sup> Since the dawn of agriculture, humans have reduced plant mass by half.<sup>215</sup> Since the time of early hominids, humans and our biological ancestors have been deeply interwoven into surrounding biological systems, but now even the wildest places on earth are influenced by human activity.

The inseparability of nature and humanity might imply that people should be included within the one-entity that is equated with nature's rights. But this gives rise to a different problem. If human beings are understood as a component of the biotic community (or Gaia) then our conduct is just as natural as anything else; nutrient pollution from industrial agriculture, the construction of dams, and the hunting to extinction of large mammals are natural processes. But if nature's rights are to mean anything, then these are the kinds of activities that would be curtailed. Interfering with natural processes for the purpose of protecting nature's rights seems to raise the specter of a contradiction.

These two problems of separation may be sufficient to undermine the attempt to use a top-down approach to define nature's rights. Nevertheless, they are not necessarily dispositive for those who are unconvinced of the need to respect separateness between animals and who believe that human beings can meaningfully be treated as distinct from the rest of the natural world—perhaps on the basis of human beings' capacity for moral reasoning. The following Section describes additional challenges that a top-down approach must address.

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emphasis on interdependence and the embeddedness of humans within broader natural systems.

<sup>213</sup> See generally Jedediah Purdy, *After Nature: A Politics for the Anthropocene* (2015) (exploring implications of pervasive human influence over the environment).

<sup>214</sup> Yinon M. Bar-On, Rob Phillips & Ron Milo, *The Biomass Distribution on Earth*, 115 *Proc. Nat'l Acad. Sci.* 6506, 6507–08 (2018).

<sup>215</sup> Elizabeth Pennisi, *Plants Outweigh All Other Life on Earth*, *Sci. Mag.* (May 21, 2018), <https://www.sciencemag.org/news/2018/05/plants-outweigh-all-other-life-earth> [<https://perma.cc/S7VD-32J5>].

*C. Dimensionality and Frontiers*

Even if the problems of separation discussed above can be resolved, another difficulty is raised by the question of how to define the interests of the biotic community as a whole. If, as a practical matter, indicators of environmental quality do not correlate with each other in a convenient fashion, then there will be a high degree of dimensionality, even when the interests of only one entity are considered.

The Environmental Performance Index (“EPI”), created by the Yale Center for Environmental Law and Policy, places all countries’ environmental performance on a single scale that runs between zero and one hundred. The EPI is based on a set of thirty-two indices that are collected by the Yale team.<sup>216</sup> These indices are then weighted and translated into eleven “issue categories” which are air quality, sanitation and drinking water, heavy metals, waste management, biodiversity and habitat, ecosystem services, fisheries, climate change, pollution emissions, water resources, and agriculture.<sup>217</sup> These issue categories are then weighted again to form two “policy objectives,” which are environmental health and ecosystem vitality.<sup>218</sup> Finally, these two policy objects are weighted to form the final EPI.<sup>219</sup>

The performance index constructed by the Yale team naturally reflected a number of choices concerning the underlying indices and the weighting scheme to translate those indices into the overall EPI. These choices, although taken at a more aggregated level, recapitulate the difficulties of definition and interests discussed in Part II. For example, weighing air quality against biodiversity requires a difficult balancing inquiry that involves defining the underlying weight-bearing entities and their interests.

Absent a compelling weighting mechanism, the aggregated EPI is better thought of as shorthand for the underlying indices. But, understood in this way, the EPI raises problems of multiple outcome variables, which, if uncorrelated, will be extremely difficult to meaningfully interpret. Some of the issue categories positively correlate with each other, but many do not. The average absolute correlation is 0.37, but some of the

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<sup>216</sup> See Z.A. Wendling et al., 2020 Environmental Performance Index 1 (2020), <https://epi.yale.edu/downloads/epi2020report20210112.pdf> [https://perma.cc/Y54P-8PZX].

<sup>217</sup> Id.

<sup>218</sup> Id.

<sup>219</sup> Id.

scores are negatively correlated.<sup>220</sup> The average positive correlation is 0.32. The lack of an underlying low-dimensional structure to the Yale EPI indicates that a top-down approach to nature's rights raises serious methodological challenges related to measurement.<sup>221</sup> If policies have effects along multiple dimensions, then absent some defensible scheme for weighing effects against each other, it can be impossible to know whether a policy promotes or undermines the interests of the biotic community. A lack of a single overarching dimension implies that choices may not be describable in terms of whether they promote or harm the interests protected by nature's rights.<sup>222</sup>

But there is an alternative formulation of nature's rights that fits more comfortably with a multidimensional representation of the relevant interests. This alternative uses the relevant dimensions to create what amounts to a frontier for permissible human activity. As long as the number of dimensions is suitably small, this frontier-based approach is plausible.

The notion of a constrained policy space is familiar enough from the context of other rights. If rights are understood as trumps, then policies that interfere with those rights are prohibited.<sup>223</sup> Problems arise when there is a conflict between rights and there is no underlying principle that can be invoked to resolve the conflict. But the mere existence of multiple non-reducible rights does not necessarily imply that such conflicts will arise. Whether or not conflicts arise is a matter of the nature of the rights and the contexts in which they are invoked.

In the context of the one-entity approach to nature's rights, the dimensionality arises from the fact that various high-level features of the natural environment (such as healthy forests and climate stability) do not *necessarily* track each other: there may be policy steps that could be taken that increase the health of a forest but reduce climate stability. That does not imply that there is no mutuality and that some of the high-level

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<sup>220</sup> The EPI data is available at EPI Downloads, EPI2020 Results, <https://epi.yale.edu/downloads> [<https://perma.cc/9YVK-7YM3>].

<sup>221</sup> A principal components analysis of the issue category variables indicates that, although the first component accounts for nearly half the total variance, seven components are needed to account for ninety percent.

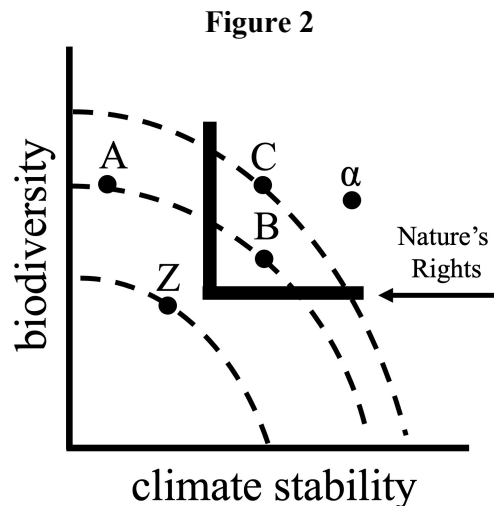
<sup>222</sup> Even if there were a single overarching dimension of environmental performance, that would not be the end of the inquiry—the moral basis for using the index to limit human activities would need to be defended.

<sup>223</sup> See Dworkin, *supra* note 104, at xi.



features might not sometimes respond in a similar direction to policy choices. But multidimensionality implies at least the potential of conflict.

Even if all of the constituents of the healthy function of nature cannot be reduced to a single dimension, perhaps they can be expressed over a small number of dimensions. These rights would set the limits of permissible human activity. Tradeoffs within a dimension would clearly be permissible: for example, if biodiversity is a dimension, it would be permissible for a project to reduce biodiversity in one place if it makes up for the loss elsewhere. But tradeoffs across the dimensions are impermissible if they cross the relevant threshold: even a project with very large benefits for the climate would be impermissible if it reduces biodiversity below the rights-protected level. Figure 2 illustrates the idea in two dimensions.



Note: Nature's rights are expressed as minimum thresholds in a space of tradeoffs between climate stability and biodiversity. The state  $\alpha$  is a hypothetical scenario where human activities have no negative environmental effects. Both states B and C are consistent with nature's rights, although B has greater environmental costs on both dimensions. Dotted lines represented tradeoffs along a curve that defines aggregate human well-being. States A and B fall on the same curve, but state A interferes with nature's rights. In state A, it is possible to avoid the rights violation without reducing aggregate human well-being by trading some biodiversity for some climate stability. State Z violates

nature's rights, and there is no way to cure the violation without a reduction in human well-being.

An important consequence of this alternative formulation of nature's rights is that it does not define an overall interest for nature. If human activities create effects that cause a relevant threshold to be crossed, they violate nature's rights; where they do not cross the threshold, they do not violate the nature's rights. There is a zone of permissible activities where nature's rights are simply not implicated, and within this zone nature's rights have nothing to say about human decision making.

For this formulation to be plausible, the number of dimensions must be kept manageable to avoid inevitable rights conflicts. If the dimensions include the well-being of many local aggregates, like ecosystems or species, then rights conflicts would be unavoidable and some mechanism for making inter-entity comparisons of costs and benefits would be needed. A small number of dimensions might be based on the seven Yale EPI "issue categories" within the ecosystem vitality policy objective: biodiversity and habitat, ecosystem services, fisheries, climate change, pollution emissions, agriculture, and water resources. Thresholds could be constructed on each of these dimensions, and human conduct could be accordingly limited to actions that do not cause one of the thresholds to be crossed. The resulting policy space could be thought of as being constrained by a frontier where nature's rights restrict human activity.

The frontier approach avoids many of the difficulties discussed in Part II. It avoids problems associated with aggregation by working from the top down and limiting the dimensions in such a way to avoid inevitable rights conflicts. The construction of thresholds also eliminates the need to define the relevant interests, because comparison is not needed: the thresholds are absolute trumps that act in the way of traditional rights as side constraints. Of the possible formulations of nature's rights discussed in this Article, the frontier approach may be the most attractive.

Nevertheless, there are important shortcomings of even this approach. One set of problems arises from uncertainty. It may often be the case that there is empirical uncertainty concerning the effects of human activities on one of the relevant dimensions. For example, it may simply be unclear whether the construction of a single dam would have a sufficient effect that it results in crossing one of the nature's rights thresholds. Any individual case would involve a decision concerning whether there is an unacceptable risk that a threshold is violated. Depending on how the relevant probabilities are understood, this risk may be non-zero for all

possible human activities, and some judgment would need to be made concerning what constitutes a *de minimis* risk that can be ignored.<sup>224</sup>

Another source of uncertainty is normative and concerns where the thresholds should be set. There may be considerable disagreement about how to convert nature's rights into thresholds along the relevant dimensions based on alternative understandings of the extent of humanity's obligations to nature or the importance of one or the other dimensions. Normative uncertainty would convert a single threshold into a probability distribution of possible thresholds, with an expected value and probabilities around that expectation. Just as is the case for empirical uncertainty, individual cases would present the question of whether an activity created an unacceptable risk of crossing a threshold.

Of course, environmental policymaking in the face of uncertainty is nothing new. There is a host of important empirical questions in ecology, toxicology, epidemiology, and climate science that are relevant for environmental policy but are only vaguely understood. There are also many areas of conflicting values where the social, moral, economic, and political dimensions of environmental policy are contested. But the frontiers approach to nature's rights simply adds to all of these uncertainties by requiring decision makers to empirically estimate and ascribe normative significance to the effects of their choices on high-level global phenomenon.

A related problem concerns how cumulative effects should be understood. Given the scale of the planet, human activities only really have effects on a cumulative basis. A threshold understanding of nature's rights implies that all human activities are perfectly permissible, except for the very last action that pushes over a threshold. This understanding is entirely insensitive to the other costs and benefits of the activities in question. This feature of the frontiers approach creates problems of both efficiency and justice on the human side of the equation, as the allowable scope for human impacts may be occupied by activities that have little social value or benefit only a select few. In particular, rich industrialized nations have contributed much to the current level of environmental degradation, but it may be the actions of a less developed country that

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<sup>224</sup> See generally Michael A. Livermore & Richard L. Revesz, Rethinking Health-Based Environmental Standards, 89 N.Y.U. L. Rev. 1184, 1186–90 (2014) (discussing the “stopping point problem” in the context of air quality regulation). Balancing would require that an interest be defined such that it could be compared to the costs of refraining from the activity.

pushes human activity over the nature's rights threshold and must therefore be limited—a result that raises clear justice concerns.

The problem of cumulative effects is especially difficult given the context in which nature's rights are typically expressed: national constitutional provisions that will be enforced through courts. Other than stopping local activities, there is nothing that a single national court can do to prevent a nature's right threshold from being crossed. If, at a global level, human activities have pushed close to a threshold, then halting an individual project in one country is exceedingly unlikely to prevent the threshold from being crossed by another project elsewhere. This creates the problem that, as soon as nature's rights start to have some bite, in terms of being relevant for individual cases, then they immediately lose their importance because crossing the threshold becomes inevitable without a global Leviathan.

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In this Part, we raised a number of difficulties associated with a top-down notion of nature's rights that focuses on the interests of the biotic community as a whole. One set of objections is that such a notion of nature's rights ignores the separate interests of the constituents of the biotic community, including individuals but also biological aggregates such as species or ecosystems. Under a top-down approach, the sacrifice of some individuals or aggregates for the sake of the whole raises no problems of justice or fairness. A related objection questions whether human beings can properly be understood as separate from the biotic community. If not, then human activities are as natural as any other, and it is not clear why climate change (or other human-caused environmental effects) should have a different status than other natural phenomena.

A second set of issues arises when attempts are made to articulate and measure the interests of the biotic community as a whole. As a matter of fact, various indices of environmental quality do not correlate with each other, and so there is a degree of multidimensionality even when only the interests of the biotic community as a whole are considered. One possible approach to dealing with this problem is to use the concept of nature's rights to construct a set of thresholds, or frontiers, that determine the limits of permissible human influence on the natural environment. Although the frontiers approach addresses some of the difficulties of multidimensionality, it raises its own issues of prioritization and implementation.

In the final Part, we turn to nature's rights in practice, discuss non-instrumental goals that constitutional nature's rights might have, and end by considering alternative uses of constitutional reform to promote environmental goals.

#### IV. NATURE'S RIGHTS IN PRACTICE

In this Part, we move from the conceptual issues in the prior discussion to the question of how nature's rights play out in practice. We first focus on the experience of Ecuador, which was the first country to articulate nature's rights in its constitution. We find that courts there have faced a number of difficulties when adjudicating nature's rights in concrete cases. We next turn to symbolic, expressive, and cultural reform justifications for nature's rights, noting that they may have some value, even if they are not vindicated in practice. In the final Section, we focus on the new field of empirical comparative constitutional law that could shed light on the types of rights that are most likely to lead to substantive environmental results.

##### *A. The Experience in Ecuador*

Ecuador is the leading jurisdiction, so it provides the best examples of how nature's rights work in practice. When Ecuador adopted its rights of nature regime, there was a great deal of optimism among supporters of this approach.<sup>225</sup> Some have claimed that the recognition of rights of nature would fundamentally shift worldviews in ways that would facilitate the economic and behavioral changes necessary to combat climate change and address other severe environmental risks.<sup>226</sup> However, even among environmentalists and indigenous groups, there were also skeptics,<sup>227</sup> who considered recognition of rights for nature to have little

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<sup>225</sup> See generally Esperanza Martínez, Prólogo, *in* *La Naturaleza Con Derechos: De la Filosofía a la Política* 7, 13–20 (Alberto Acosta & Esperanza Martínez eds., 2010) (arguing for the transformational potential of nature's rights). But see Mary Elizabeth Whittemore, *The Problem of Enforcing Nature's Rights Under Ecuador's Constitution: Why the 2008 Environmental Amendments Have No Bite*, 20 *Pacific Rim L. & Pol'y J.* 659, 661 (arguing that, "all things considered, successful execution of the environment provisions is unlikely in Ecuador's legal and political environment").

<sup>226</sup> Fundación Pachamama, *Reconocimiento de los Derechos de la Naturaleza en la Constitución Ecuatoriana* 12 (2010).

<sup>227</sup> Whittemore, *supra* note 225, at 661.

to do with policy success.<sup>228</sup> For some indigenous organizations, rights of nature were also a potential threat to their autonomy and local power structures.<sup>229</sup>

Concerns that Ecuador's constitutional changes would have little practical significance seem to have been borne out. Professors Craig Kauffman and Pamela Martin discuss the application of the rights of nature in Ecuador between 2008 and 2016.<sup>230</sup> The authors analyze thirteen cases where the rights of nature were applied: six constitutional challenges that sought restoration and prevention of future harm to ecosystems, three criminal cases against parties who were alleged to have violated nature's rights, and four administrative actions seeking fines and other sanctions.<sup>231</sup>

Kauffman and Martin find that every challenge to important infrastructure projects and development initiatives that invoked nature's rights ultimately failed.<sup>232</sup> One case examined by Kauffman and Martin involved a challenge to a large-scale mining concession in the Amazonian province of Zamora Chinchipe known as "Condor-Mirador." The mining project was located in one of the most biodiversity-rich areas of the planet, home to several endangered endemic species. According to an undisputed environmental impact statement, environmental effects from the project included the total destruction of ecosystems and the extinction of species.<sup>233</sup> Environmental activists challenged the governmental permits that allowed these activities, arguing that they violated nature's rights.<sup>234</sup> The courts ruled against the plaintiffs, holding that the government's interests were sufficiently important to overcome the nature's rights claims, but providing little reasoning for this conclusion.<sup>235</sup>

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<sup>228</sup> As Patricia Siemen from the Center for Earth Jurisprudence warned, without political support, environmental rights "won't be enforced." Brandon Keim, *Nature to Get Legal Rights in Bolivia*, *Wired* (Apr. 18, 2011), <https://www.wired.com/2011/04/gulf-natural-rights/> [<https://perma.cc/XK4N-FL6E>].

<sup>229</sup> Akchurin, *supra* note 81, at 956.

<sup>230</sup> Craig M. Kauffman & Pamela L. Martin, *Can Rights of Nature Make Development More Sustainable? Why Some Ecuadorian Lawsuits Succeed and Others Fail*, 92 *World Dev.* 130, 131 (2017).

<sup>231</sup> *Id.* at 134; Craig M. Kauffman, *Rights of Nature Lawsuits in Ecuador*, *Env't Pol. & Env't Pol'y*, <https://blogs.uoregon.edu/craigkauffman/rights-of-nature-lawsuits-in-ecuador/> [<https://perma.cc/H6YC-ZDRW>].

<sup>232</sup> Kauffman & Martin, *supra* note 230, at 135–36.

<sup>233</sup> *Id.* at 134–35.

<sup>234</sup> *Id.* at 135.

<sup>235</sup> *Id.*

On the other hand, the government has prevailed in all cases in which it has invoked the rights of nature in its favor.<sup>236</sup> For example, Kauffman and Martin cite a case in which the government sought to increase industrial mining activities in the province of Esmeraldas. But to do so, it first had to eliminate informal unauthorized mining.<sup>237</sup> The government invoked rights of nature in the courts to request permission to use the armed forces to destroy privately owned heavy mining equipment.<sup>238</sup> Based on their analysis of the cases, Kauffman and Martin argue that nature's rights were largely illusory and were used to simply justify the operation of state power, without placing meaningful limits on the exercise of that power.

Why have nature's rights had such little effect? Leaving aside problems like governmental interference with the courts, one possible explanation is that the conceptual problems discussed above are finding their way into the cases. Upon inspection, it becomes clear that the conceptual problems raised above are presented to the courts in nature's rights cases, forcing judges into difficult intellectual terrain. Several repeated patterns arise in these cases. One is multiple parties that claim to speak on behalf of nature, with no obvious grounds for arbitrating these claims. Rights conflicts also arise, and the court must balance nature's rights against other legally protected rights. Finally, the court must engage in the task of determining the net effects of policy choices on nature's rights. The court struggles mightily with these difficult tasks, and, although it ultimately resolves the relevant claims, it does not find satisfactory grounds for doing so. The resulting decisions have not led to any clear benefit and are likely to sow continued legal confusion.<sup>239</sup>

### *1. Representational Claims*

A common issue is the need for the Court to arbitrate representational claims when multiple parties claim to represent nature. Generally, the

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<sup>236</sup> Id. at 136–37.

<sup>237</sup> Id. at 137.

<sup>238</sup> Id.

<sup>239</sup> The conceptual problems outlined in Parts II and III would make it difficult, or impossible, to say whether nature's rights have been appropriately vindicated in any given case. Nevertheless, we can evaluate judicial decisions involving nature's rights on more general grounds. These include whether nature's rights cases tend toward outcomes that the proponents of nature's rights favor, whether decisions involving nature's rights claims are predictable, and whether the reasons given by courts in nature's rights cases are non-arbitrary and relate in a reasonable way to case outcomes.

Court has avoided directly confronting this issue by allowing many different parties to offer arguments grounded in nature's rights, and then decide the relevant matter on substantive grounds.

For example, in one case, an association of agricultural workers challenged a Ministry of Environment action that protected some public lands.<sup>240</sup> The grounds for the challenge was that the agency's declaration was inadequately protective.<sup>241</sup> Both the plaintiff association and the Ministry claimed to speak on behalf of nature's rights.<sup>242</sup>

The Ministry claimed that the plaintiff could not raise rights-of-nature-based claims because the law that granted the Ministry the power to declare protected lands also implicitly designated it the sole representative of nature's rights on land-protection matters. The Court rejected that argument.<sup>243</sup> After offering a rhetorically rich endorsement of the substantive goals of the relevant constitutional provisions,<sup>244</sup> the Court concluded that they also contained procedural elements that explicitly allowed all persons, individually or collectively, to request the protection of nature's rights.

However, this procedural victory came with an important caveat, which is that the Court went on to grant the Ministry considerable discretion in the exercise of its powers. The Court largely accepted the Ministry's claims that the challenged actions protect "land of scientific, scenic, educational, touristic and recreational" value and affirmed the technical and scientific basis for the Ministry's decision without engaging in any probing analysis.<sup>245</sup> The Court further found that the relevant law granted the Minister of Environment the exclusive prerogative to decide which

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<sup>240</sup> Corte Constitucional del Ecuador [Constitutional Court of Ecuador], Apr. 27, 2016, Sentencia No. 034-16-SIN-CC 1.

<sup>241</sup> *Id.* at 6.

<sup>242</sup> *Id.* at 14.

<sup>243</sup> *Id.*

<sup>244</sup> The court began by claiming that the constitutional change represented a "rupture with the traditional paradigm of considering nature a simple object." Under this "new paradigm . . . nature is an independent subject of constitutional rights." The court went on to state that "the Constitution breaks with an anthropocentric worldview, according to which humans are the center and end of all things, to a biocentrism one that recognizes that nature does not need humans but humans need nature." La Corte Constitucional del Ecuador [the Constitutional Court of Ecuador] 27 Apr., 2016, Sentencia No. 034-16-SIN-CC 13 (translation by the author).

<sup>245</sup> Corte Constitucional del Ecuador, Sentencia No. 034-16-SIN-CC 16 (translation by the author).



should be protected, which effectively shielded it from judicial oversight of its decisions, including based on rights-of-nature arguments.

This case is illustrative of the general approach taken by the court with respect to representational questions. The language of the constitution is quite clear that any party can bring claims on behalf of nature, and so the court does not erect any formal procedural barriers to such claims. But, as a practical matter, it gives some representative much greater deference than others when evaluating the merits of those claims and draws sufficiently narrow boundaries around its own competency that it is unlikely to come into conflict with government actors.

## *2. Conflicts Between Rights*

In addition to arbitrating conflicting claims concerning who can speak on nature's behalf, the Court has also had to decide conflicts between nature's rights and other constitutional rights.

Ecuador's constitution includes many rights, including rights to property and a socioeconomic right to work. In several instances, litigants have presented cases where these diverse rights come into conflict. One such case involved a shrimp farm that was located in a reserve that had been recently declared by the Ministry of the Environment. The farm challenged the declaration, arguing that it violated the property and socioeconomic rights of owners and workers.<sup>246</sup> The trial and appellate court agreed, but the Constitutional Court of Ecuador ruled that these rights had to be balanced against nature's rights, which were promoted by the Ministry's decision.<sup>247</sup> In a similar decision, the court overturned a lower court decision that found that the Ministry of the Environment had illegally seized mining equipment, in violation of property and socioeconomic rights. In arriving at this decision, the court found that the lower court had appropriately found that "the rights to property and to work were violated," but did not appropriately weigh those rights violations against the rights held by nature.<sup>248</sup> The court did not provide any guidance on how these balancing inquiries should be carried out in either case.

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<sup>246</sup> La Corte Constitucional del Ecuador [the Constitutional Court of Ecuador], May 20, 2015, Sentencia No. 166-15-SEP-CC 14.

<sup>247</sup> *Id.* at 13–14.

<sup>248</sup> *Id.* at 15–16 (translation by the author).

### 3. *Net Effects on Nature*

The Court has also had to arbitrate positions in which interests arguably covered by nature's rights are on both sides of a dispute. Perhaps the best example was in litigation by the City of Mera challenging a fine imposed by the Ministry of Environment on the city for its failure to have the proper permits in place before moving forward with a project to increase the capacity of its water treatment facility.<sup>249</sup> The lower court in that case held that, by interfering with the city's efforts to improve water quality, the Ministry had violated nature's rights. It therefore vacated the fine.<sup>250</sup> The Constitutional Court reversed, holding that by failing to secure the proper permits, it was the city that had violated nature's rights. In making this finding, the court provided only a cursory and conclusory justification, simply stating that the Ministry's decision protected nature's rights, and therefore could not also violate nature's rights.<sup>251</sup> It provided no explanation for why this could not also be true of the city, or how to address similar future cases where government decisions have both positive and negative environmental effects.

#### *B. Symbolic, Expressive, and Cultural Reform Justifications*

One possible objection to the discussion in Parts II and III and the examination of the experience in Ecuador is that it misses the point of nature's rights: rather than serve as vehicles for immediate substantive impact, nature's rights are intended to perform symbolic, expressive, or cultural reform functions. Under this understanding of nature's rights, conceptual problems or practical issues in their implementation may be irrelevant—what matters is the ability of constitutional protections for nature's rights to carry out these other functions.

There are many potential pathways for law to influence how people act. Law can change incentives, either by subsidizing favored conduct or imposing costs on disfavored conduct.<sup>252</sup> Alternatively, some people might follow the law because they have a felt obligation to do so, even if

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<sup>249</sup> La Corte Constitucional del Ecuador [the Constitutional Court of Ecuador], Sept. 2, 2015, Sentencia No. 293-15-SEP-CC 2–3.

<sup>250</sup> *Id.* at 13.

<sup>251</sup> *Id.*

<sup>252</sup> See generally Frederick Schauer, *The Force of Law 5* (2015) (arguing for the particular role of sanctions in understanding the distinctive nature of law); Richard A. Posner, *Economic Analysis of Law* 183–84 (3d ed. 1986) (focusing on ex-ante incentive effects of law).

enforcement is law or non-existent.<sup>253</sup> Or, as emphasized by some scholars, law can convey information.<sup>254</sup> This information might affect decisions by helping people coordinate—for example, by setting expectations about what side of the road to drive on. Law might also convey information about values, or what is considered acceptable or unacceptable behavior.<sup>255</sup> For example, local bans on smoking in public places may have helped shift social norms concerning smoking.

Some proponents of nature's rights have alluded broadly to the idea that part of their appeal lies with their instrumental value in a project of cultural reform that seeks to promote environmental awareness and better human-nature relationships.<sup>256</sup> For example, Professor Oliver Houck has argued that nature's rights "catalyze a new awareness of our relationship with the natural world."<sup>257</sup> Linda Sheehan has argued that nature's rights can help "change our worldview to nature as subject," which "will start to transform how we live with respect to nature."<sup>258</sup> Professor Maria Akchurin refers to nature's rights provisions as a "normative vision" that can be contrasted with the existing human-centric view expressed by the law.<sup>259</sup> In his foundational work on the subject, Professor Christopher Stone argued that, "in the case of the environment, the Supreme Court may find itself in a position to award 'rights' in a way that will contribute to a change in popular consciousness."<sup>260</sup>

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<sup>253</sup> Rebecca Stone, *Legal Design for the "Good Man,"* 102 Va. L. Rev. 1767, 1806 (2016).

<sup>254</sup> See, e.g., Richard H. McAdams, *The Expressive Powers of Law: Theories and Limits* 9 (2017) (offering a general theory on how law affects behavior via effects on beliefs and attitudes).

<sup>255</sup> Robert Cooter, *Expressive Law and Economics*, 27 J. Legal Stud. 585, 586 (1998).

<sup>256</sup> See, e.g., Laitos, *supra* note 89, at 759, 797–98 (2019) (describing what amounts to expressive theory of nature's rights, although not referring to it as such). As discussed above, indigenous communities often provide pivotal political support for efforts to create nature's rights. See *supra* Part I. The (potential) instrumental value of nature's rights, then, could be understood not only in terms of human-nature relationships but also based on whether they have positive effects on the standing or treatment of these communities within their societies. It is certainly possible for nature's rights campaigns to have strategic value in promoting the broader political goals of indigenous communities. Whether such campaigns are the best use of scarce resources is a pragmatic judgment based on a complex set of political, cultural, social, and behavioral factors.

<sup>257</sup> Oliver A. Houck, *Noah's Second Voyage: The Rights of Nature as Law*, 31 Tul. Env't L.J. 1, 35 (2017).

<sup>258</sup> Linda Sheehan, *Implementing Rights of Nature Through Sustainability Bills of Rights*, 13 N.Z. J. Pub. & Int'l L. 89, 98 (2015).

<sup>259</sup> Akchurin, *supra* note 81, at 962.

<sup>260</sup> Stone, *supra* note 89, at 500–01.

A different, non-instrumental approach to understanding the symbolic or expressive function of law involves some variant of the claim that the “linguistic meaning” of governmental action possesses “foundational moral relevance.”<sup>261</sup> Under this account, law can be evaluated, in part, on the basic ideas that it articulates.<sup>262</sup> Under this theory, laws that express respect for other persons are good, and laws that endorse, for example, racist ideology are bad. Importantly, these judgements can be made apart from the question of whether these laws affect anyone’s behaviors or beliefs. Under this understanding of law as expression, nature’s rights need not have any practical effect to be justified—they would stand or fall on the strength of the moral propositions they endorse.

Whether or not the concerns raised in Parts II and III are relevant turns, in part, on whether nature’s rights are understood in instrumental or non-instrumental terms. Under the intrinsic (non-instrumental) view, whether incorporating nature’s rights into a constitution is good or bad depends on whether they represent a correct formulation of the appropriate relationship between humans and non-human entities. The issues discussed in Parts II and III are relevant to this inquiry. For example, if there is no non-arbitrary way to draw boundaries around biological aggregates in ways that track normatively important categories, then nature’s rights—which require that those boundaries be drawn—would lack a solid foundation. Incorporating rights for ill-defined entities would not appear to improve a constitution, from a purely non-instrumental, expressive standpoint. Likewise, if nature’s rights are understood in a top-down manner, in which the interests of individual animals are ignored in favor of some aggregate measure, then incorporating such rights into a constitution is only appropriate inasmuch as those interests need not be considered.

The importance of the arguments in Parts II and III for the instrumental, cultural reform argument for nature’s rights is less clear. It could be the case that announcing a set of rights that are conceptually incoherent and

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<sup>261</sup> Matthew D. Adler, *Expressive Theories of Law: A Skeptical Overview*, 148 U. Pa. L. Rev. 1363, 1375 (2000). Adler ultimately rejects this type of expressive theory. *Id.* See also Cass R. Sunstein, *On the Expressive Function of Law*, 144 U. Pa. L. Rev. 2021, 2045 (1996) (distinguishing between expressive theories that focus on “norm management” from those that emphasize the “intrinsic” character of some statements).

<sup>262</sup> See generally Elizabeth S. Anderson & Richard H. Pildes, *Expressive Theories of Law: A General Restatement*, 148 U. Pa. L. Rev. 1503, 1504 (2000) (“[W]hat makes an action morally right depends on whether it expresses the appropriate valuations of (that is, attitudes toward) persons.”).

that cannot be implemented in practice could, nevertheless, lead to the development of desirable norms or behaviors. In the nature's rights context, it could be that adopting these rights would lead people to come to understand an important class of consequences of their actions, perhaps then taking steps to limit their greenhouse gas emission. These actions could be justified even on the basis of an entirely human-centered world view. Such effects are largely speculative, but they cannot be dismissed in theory.

That said, it is worth reiterating that there are potential opportunity costs involved with efforts to promote constitutional change. Political attention is finite, and environmentalists cannot focus their efforts on every reform project simultaneously. This means that campaigns for nature's rights necessarily imply that other campaigns that could have been undertaken are not. The relevant strategic question is not whether it is theoretically possible for nature's rights to lead to some beneficial behavioral change, perhaps by "catalyz[ing] a new awareness of our relationship with the natural world."<sup>263</sup> The question is whether that particular pathway toward environmental progress is the most likely to generate the largest policy benefits, compared to other paths that could be pursued.

In the following Section, we illustrate some of the opportunity costs that come with nature's rights, specifically focusing on different types of constitutional reforms that may have more promising returns for the investment of environmentalists' political capital.

### *C. Rights that Matter for Nature*

There is a nascent but growing literature that takes an empirical approach to studying the effects of constitutional rights.<sup>264</sup> This is an inherently difficult area to study due to selection issues and endogeneity—there are no randomized controlled trials for constitutional designs. Nevertheless, there have been serious attempts to tackle the question of whether there are genuine causal influences of constitutional rights on relevant outcomes. In general, the findings of this literature are not heartening.<sup>265</sup> Certainly, it is well known that some countries are

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<sup>263</sup> Houck, *supra* note 257, at 35.

<sup>264</sup> See Cope, Creamer & Versteeg, *supra* note 15, at 155.

<sup>265</sup> See, e.g., Adam S. Chilton & Mila Versteeg, *The Failure of Constitutional Torture Prohibitions*, 44 *J. Legal Stud.* 417, 434 (2015) (finding no evidence that constitutional torture

willing to articulate lofty constitutional commitments that are regularly violated.<sup>266</sup> Nevertheless, the existence of some scofflaws does not mean that constitutional rights have no effect whatsoever. The question is, rather, whether in some cases the existence of a constitutional norm can exert some influence on state conduct, in at least some contexts.

One important lesson for the literature to date is that some types of rights appear to be more effective than others.<sup>267</sup> According to a recent review, “there is little evidence that the freedom of movement, the prohibition of torture, the right to education, and the right to healthcare are associated with changed government behavior.”<sup>268</sup> By contrast, the reviewers find that “there is evidence that the right to unionize, the freedom of association, the right to form political parties, and the freedom of religion improve respect for those rights in practice.”<sup>269</sup> From this disparity, the authors conclude that rights that empower organizations will generally be more effective than those that simply state substantive norms. The theory is that “when rights are designed to be practiced by and within organizations like labor unions and media organizations, these organizations have both the incentives and the means to protect themselves against rights encroachment by the government.”<sup>270</sup> These findings accord with the widely recognized reality that mobilization by activists and civil society groups is essential to the realization (and expansion) of rights in practice.<sup>271</sup>

This general lesson may be usefully applied in the environmental context. Even relatively concrete substantive rights, such as a right to education or health care, do not appear to be effective in practice. Nature’s rights, by contrast, are stated in extremely abstract terms and raise a host

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prohibitions have reduced rates of torture in a statistically significant or substantively meaningful way).

<sup>266</sup> David S. Law & Mila Versteeg, *Sham Constitutions*, 101 *Calif. L. Rev.* 863, 865–67 (2013).

<sup>267</sup> See generally Adam Chilton & Mila Versteeg, *How Constitutional Rights Matter* (2020) (examining the efficacy of constitutional rights); Chilton & Versteeg, *supra* note 15, at 577.

<sup>268</sup> Cope, Creamer & Versteeg, *supra* note 15, at 171; see generally Chilton & Versteeg, *supra* note 267 (examining in detail the efficacy of these rights).

<sup>269</sup> Cope, Creamer & Versteeg, *supra* note 15, at 171.

<sup>270</sup> *Id.*

<sup>271</sup> See generally Beth A. Simmons, *Mobilizing for Human Rights: International Law in Domestic Politics* (2009) (examining role of mobilization in the vindication of international human rights commitments); Charles R. Epp, *The Rights Revolution: Lawyers, Activists, and Supreme Courts in Comparative Perspective* (1998) (documenting the role of activists, organizations, and democratized access to courts in expanding civil rights and liberties in various jurisdictions).

of difficult conceptual challenges in their basic articulation—at least at first blush, these liabilities would seem to leave them even less likely to have a practical effect on state decision making.

By contrast, specific protections for environmental groups may map more closely onto the organizational rights that have been found to be more effective in practice. In particular, rights that facilitate the creation and maintenance of environmental organizations and protect their ability to raise funds, be free from government harassment, and take part in relevant government processes, could help cultivate the types of groups that are better positioned to push back against government efforts to curtail those rights.

Not only might organizational rights be more likely to be effective, by facilitating robust civil society participation in environmental governance, but they may also ultimately be more likely to influence environmental outcomes.<sup>272</sup> As is the case in the comparative constitutional context, it is difficult to firmly establish a causal connection between participation in environmental advocacy and outcomes. Both likely respond to core features of a society's political order, and so correlations between robust environmental non-governmental organizations and environmental outcomes cannot establish a causal link between the two. But there is plenty of anecdotal and qualitative evidence that environmental advocacy matters.<sup>273</sup>

And, in many countries, effective rights to protect environmental groups are in dire need. The U.N. special rapporteur on the situation of human rights defenders has found that environmental activists have been the targets of state and state-sanctioned violence, have had their sources of funding declared illegal, and have experienced various forms of harassment and exclusions.<sup>274</sup> In its report *Environmental Rule of Law*,

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<sup>272</sup> Cf. Vanberg, *supra* note 15, at 309 (arguing that procedural constitutional constraints have significant advantages over constitutional norms that attempt to secure broader substantive values); see also May & Daly, *supra* note 5, at 237 (suggesting that, collectively, such process rights can raise awareness, provide opportunities to participate, foster empowerment, strengthen local communities, facilitate government accountability, increase public acceptance of decisions, and contribute to the legitimacy of governmental action).

<sup>273</sup> See, e.g., Zygmunt J.B. Plater, *Dealing with Dumb and Dumber: The Continuing Mission of Citizen Environmentalism*, 20 *J. Env't L. & Litig.* 9 (2005); Cary Coglianese, *Social Movements, Law, and Society: The Institutionalization of the Environmental Movement*, 150 *U. Pa. L. Rev.* 85, 87–88 (2001).

<sup>274</sup> See generally United Nations General Assembly, Report of the Special Rapporteur on the Situation of Human Rights Defenders A/71/281 (2016) (describing the “increasing violence, intimidation, harassment and demonization” of environmental activists).

the U.N. Environmental Program emphasized both the importance of public participation in environmental decision making and the many roadblocks that now exist for that participation in many countries.<sup>275</sup> The report also focused on the role of effective constitutional rights of association, assembly, expression, and non-discrimination to specifically protect individuals and organizations engaged in environmental advocacy. The recent arrest and jailing of cheetah conservationists in Iran and a surge in killings of land rights activists in the Philippines and Guatemala underscores the reality that many environmental advocates continue to lack basic civil and political rights.<sup>276</sup>

The question of whether to use limited political resources to promote nature's rights versus political, civil, and procedural rights for individuals and organizations engaged in environmental advocacy is a pragmatic one and turns on a number of unresolved empirical issues. But the evidence that does exist generally supports the view that organizationally oriented rights are more likely to be effective than substantive norms. Given this reality, there is no good reason to believe that nature's rights will fare substantially better. However, prior experience in rights making and enforcing gives some reason to expect that organizational rights have higher success rates. Rights that cultivate a robust environmentalist presence in civil society may, accordingly, have a greater likelihood of being vindicated. The environmental groups that are protected by those rights have an opportunity to participate in the political process, potentially affecting outcomes. Organizational or procedural protections can also sometimes be used directly to achieve policy goals.<sup>277</sup> As these groups pressure decision makers in favor of policies that promote environmental quality, they may do more to vindicate the underlying values that motivate adoption of nature's rights than the rights themselves.

#### CONCLUSION

In the past decade, nature's rights have become an important part of the global conversation about environmental policy. Starting with Ecuador's

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<sup>275</sup> United Nations Environmental Program, *Environmental Rule of Law* 116–34 (2019).

<sup>276</sup> Global Witness, *Enemies of the State?* 7, 23, 30 (2019).

<sup>277</sup> For example, within the United States, there is a long history of environmental organizations using procedural statutes for substantive ends. See generally William W. Buzbee, *Fighting Westway: Environmental Law, Citizen Activism, and the Regulatory War That Transformed New York City* 5 (2014) (documenting many ways groups used procedural challenges in the course of a year-long environmental campaign).



2008 constitutional revisions, nature's rights have spread through formal constitutional reform as well as through judicial interpretation. For some environmental activists, commentators, and political figures, nature's rights represent an important route to addressing pressing environmental concerns.

In this Article, we have expressed some skepticism concerning the functional value of nature's rights. We raise a number of conceptual difficulties that are faced by both bottom-up and top-down conceptions of nature's rights. Although we do not argue that it is impossible to articulate any coherent notion of nature's rights, we do note several important, serious challenges that must be overcome. We also note the difficulties that courts have faced when they have tried to arbitrate nature's rights in practice. These problems are not necessarily fatal, in that nature's rights might serve expressive or cultural reform goals, even if they cannot be vindicated in practice. But, if these concerns cannot be addressed, they would relegate nature's rights to the realm of symbolic rather than practical significance. Finally, we argue that the limitations of nature's rights do not imply that constitutional reform cannot be used to promote environmental goals. Drawing from the literature on empirical comparative constitutional law, we argue that organizational rights that cultivate robust participation in political decision making by environmental groups are both more likely to be effective than generally stated substantive norms, and ultimately more likely to affect substantive outcomes.

There is a host of pressing environmental problems facing societies across the globe. Political institutions—from the local to the global—have not proven themselves adequate to the task of facing and addressing these problems. Although nature's rights may seem like an attractive alternative to these political processes, they are unlikely to deliver the results that their most passionate supporters hope. Rather, constitutional reforms that facilitate more robust participation by the groups that give voice to environmental concerns in political processes are more likely to be effective. Rights that protect and improve environmental politics may ultimately be more effective at vindicating the interests of the non-human world than directly granting rights to nature.