

## LAW

# A rights revolution for nature

Introduction of legal rights for nature could protect natural systems from destruction

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Scientific evidence indicates that the global environmental crisis is accelerating and that environmental laws have not been able to reverse the trend (1). A movement to recognize nature as a rights holder argues that existing laws regulate, rather than stop, the destruction of the natural world (2). Instead of incrementally reforming such laws, a growing number of jurisdictions around the world have recognized rights of nature (see the box). This may better protect natural systems, though questions remain and contributions from various disciplines will be necessary to implement this rights revolution and ensure its effectiveness.

Ideas about rights have changed over time. The modern idea that there exist some universal human natural rights that do not come from governments and cannot be taken away emerged during the Enlightenment. For example, the 1776 American Declaration of Independence held that the rights to life, liberty, and the pursuit of happiness were self-evident. The 1789 French Declaration of the Rights of Man and of the Citizen announced that the purpose “of all political associations is the preservation of the natural and imprescriptible rights of man,” such as the right to liberty. These expressions of natural human rights provided a vocabulary for arguing that slavery and other rights violations were wrong. Following the devastating human rights violations of World War II, the United Nations adopted the Universal Declaration of Human Rights, recognizing the inherent dignity of all humans and a broad array of rights. Many of these rights are not yet a reality for many people, but the declaration provides a moral blueprint for more-just societies.

Rights-of-nature advocates posit that environmental devastation is a moral wrong that ought to be stopped. This claim is not grounded in scientific evidence but is no less valid than the assertion that harming humans is a moral wrong. Neither human

rights nor nature rights can be demonstrated through a scientific process, but we can make inferences about what justice requires on the basis of what we know to be necessary for the flourishing of humans or of nature (3).

The rights-of-nature movement is similar to the animal rights movement in that it seeks to promote the rights of nonhuman life (4). However, animal rights, like human rights, traditionally prioritize the individual. According to Regan (5), all individual living beings have inherent value and, therefore, rights by virtue of being alive. Rights of nature go beyond the animal rights discourse. Proponents have focused on rights of natural communities, ecosystems, or other natural entities that are alive or sustain life, such as mountains or Mother Earth. Parallels can be made with collective rights, such as the rights of nations to self-determination or a right to cultural protection (6).

## GROUNDS FOR RIGHTS OF NATURE

Rights for collectives, rights for animals, and rights of nature may be most easily grounded in the interest theory of rights. According to Raz, a person or other entity has a right if and only if they are capable of having rights, and some aspect of their interest or well-being is “a sufficient reason for holding some other person(s) to be under a duty” (7). Some interests of nature that have been argued to be sufficient to produce rights include existence, habitat, and fulfilling ecological roles (8, 9). The interest theory itself does not resolve whether nature is capable of having rights, but Raz suggests that entities that have value for their own sake, rather than for the value they provide others, can have rights (7). Rights-of-nature advocates make a moral assertion that nature does have this intrinsic value.

Other rights arguments stem from religion or spirituality. Enlightenment human rights theories often identified the biblical God as a source of human rights, but non-Western religions and especially indigenous spiritualities have influenced the rights-of-nature discourse. Rights-of-nature thinking frequently blends Western rights concepts with non-Western spirituality, sometimes as a means to remedy a previous usurpa-

tion of nature from another people’s use. For example, New Zealand’s recognition of the Whanganui River and surrounding area as the legal person Te Awa Tupua arose out of a treaty settlement with a Maori tribe and that tribe’s spiritual connection to the river. Similarly, the Ecuadorian constitution recognizes the rights of Pacha Mama, an indigenous earth goddess. Ecocentric laws can also be compatible with monotheistic spirituality, as illustrated by Pope Francis’s encyclical *Laudato si*, which condemns “tyrannical anthropocentrism” and calls for a new legal framework to protect ecosystems.

A rights discourse does not rely on economic or utilitarian approaches to valuing nature that aim to maximize some aggregate utility. Rights language has often provided a moral bulwark to defend the vulnerable against such calculations. For instance, child labor is no longer considered the right thing to do even if it would make society wealthier overall. Nevertheless, utilitarian arguments may also support the enactment of rights for nature, if they provide an efficient way to protect the environment for the greater good.

## LEGAL RIGHTS FOR NONHUMANS

Whether nature has moral rights is likely to remain debated, but nature clearly can have legal rights—and does so in jurisdictions that have recognized, granted, or enacted them. Legally recognized rights of nature have stemmed from sources including constitutions, laws, and court decisions (2).

The granting of legal rights to nonhumans is not in itself revolutionary or even unusual. Although moral considerations often influence the development of legal rights (and vice versa), legal rights need not have a moral basis. The law can give rights to all kinds of entities if it finds reason to do so.

Corporations, trade unions, and states are all nonhuman entities that have rights and duties under the law. They have rights to litigate if they are injured and duties not to violate the rights of others. The legal system has no difficulty adjudicating nonhuman rights.

Rights of nature may offer benefits lacking in other types of legal protection for the environment. For example, human rights to a healthy environment would not protect species whose existence may conflict with human activities. Conservation laws such as the Endangered Species Act can protect species but do not give them a right to exist. This protection can therefore be removed at the whim of the legislature (10). If instead species rights were recognized, species or their representatives could seek restitution when harmed even when they are not ex-



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PLICITLY protected by regulations and when their needs conflict with human needs. This may be interpreted as an attempt by one interest group to impose its will on others; however, as with other types of rights, nature rights can lead to a remedy when regulations fail to correct injustices.

## RIGHTS-OF-NATURE IMPLEMENTATION

Thus far, attempts to defend the rights of nature through the legal system have yielded limited results. Ecuador and Bolivia played a pioneering role in recognizing rights of nature (see the box), yet neither has been able to slow their environmental degradation. Though a few court decisions rested on the rights of nature and resulted in positive outcomes for the environment, both countries have continued to implement environmentally damaging policies (11). Other rights recognitions have not survived legal challenges; for example, a Grant Township, Pennsylvania, ordinance that recognized rights of natural communities and ecosystems to exist, flourish, and naturally evolve was held to be preempted by state law as well as to infringe corporate rights (2). Further, rights of nature may be used as a pretext for promoting interests other than nature protection.

A fundamental question to effectively operationalize rights of nature is how to define the rights bearer. This ties in with the larger question of how to define nature (12). Examples of entities whose rights have been recognized include Mother Earth, Pacha Mama, rivers, ecosystems, natural communities, glaciers, species, and the animal kingdom. Each comes with its own definitional challenges.

A solution may be to identify ecologically informed criteria through which natural entities become rights holders (13), similar to the process by which companies can become legal persons through incorporation. Here, science is instrumental to the evaluation of species' habitat needs, community structures, ecological functions, and evolutionary processes. It may be easier to scientifically define species or populations than Mother Earth, and to therefore endow them with rights, but other conceptions of the rights-bearing natural entity may be more compatible with particular legal systems.

Another question relates to what rights nature will have. Some laws have declared natural entities to be legal persons, allowing them to bring legal claims; others recognize property rights, rights to exist and flourish, or rights to be restored. As with many human rights, it is not immediately clear how such rights will be defined—for example, to what type or quality of restoration natural entities may be entitled. Proposals for property rights of species to their habitats (9, 14) may hold promise. Scientists as well as philosophers

## Examples of legal rights for nature

### Bolivia

The Law of the Rights of Mother Earth of 2010 and the Framework Law of Mother Earth and Integral Development for Living Well of 2012 recognize rights of Mother Earth to life, diversity of life, water, clean air, and restoration, among others.

### Colombia

The Supreme Court of Colombia ruled in 2018 that the Colombian Amazon was a subject of rights and ordered that the government take action to protect it. This decision built on the Columbian Constitutional Court's 2016 ruling that the Atrato River had legal personhood and the right to be protected, conserved, and restored.

### Ecuador

The 2008 Constitution of the Republic of Ecuador recognizes rights of Pacha Mama or nature, which include integral respect for its existence, life cycles, structure, functions, and evolutionary processes, as well as restoration.

### India

In 2018, the Uttarakhand High Court declared the animal kingdom to be

legal entities with the rights, duties, and liabilities of a living person. An earlier decision of that court recognized rights for the Ganges and Yamuna Rivers, but that decision has been stayed by the Supreme Court of India.

### New Zealand

A treaty settlement agreement reached by Maori tribes and the New Zealand government led to a 2017 law that recognized the legal person Te Awa Tupua as an "indivisible and living whole, comprising the Whanganui River from the mountains to the sea." This legal person has both rights and duties, including property rights in its riverbed.

### United States

Tamaqua Borough, Pennsylvania, passed a local ordinance in 2006 to recognize the rights of natural communities and ecosystems; subsequently, additional municipalities recognized rights of nature in multiple states. Some of these ordinances have been struck down by courts.

and jurists will be instrumental to interpreting what these rights may entail.

This leads to the question of how nature may claim its rights. Guardians with appropriate expertise could be appointed as representatives (15), similarly to how guardians are appointed for incapacitated humans. Alternatively, the public may be empowered to bring litigation on behalf of natural entities. Either way, interdisciplinary approaches will be needed to determine when the rights of natural entities are violated and how rights violations can be remedied.

Another central issue will be how conflicts between rights of nature and corporate or human rights and interests will be adjudicated. This weighing will determine whether rights of nature will be effective. Although rights of nature do not aim to halt all human activities, they do aim to render the most environmentally destructive human activities illegitimate. For example, if koala populations have rights to their habitat, courts could hold the massive bulldozing of koala habitat to be illegal even if not explicitly prohibited by existing environmental laws.

Adjudicating conflicts between rights of nature and human activities will be controversial, but no more so than conflicts between, for example, human rights to free expression and nondiscrimination. Conflicts between nature and human activities hap-

pen on a massive and systematic scale. When people and corporations have rights and nature does not, nature frequently loses, as evidenced by the continuing deterioration of the environment. Rights of nature may help to prevent this one-sided outcome. ■

## REFERENCES AND NOTES

1. G. M. Mace et al., *Nat. Sustain.* **1**, 448 (2018).
2. D. R. Boyd, *The Rights of Nature: A Legal Revolution That Could Save the World* (ECW Press, 2017).
3. M. Nussbaum, *Frontiers of Justice: Disability, Nationality, Species Membership* (Harvard Univ. Press, 2006).
4. O. A. Houck, *Tulane Environ. Law J.* **31**, 1 (2017).
5. T. Regan, *The Case for Animal Rights* (Univ. of California Press, 2004).
6. P. Jones, in *Human Rights: Moral or Political?* A. Etinson, Ed. (Oxford Univ. Press, 2018), pp. 441–459.
7. J. Raz, *The Morality of Freedom* (Clarendon Press, 1986).
8. T. Berry, *Evening Thoughts: Reflecting on Earth as a Sacred Community* (Counterpoint Press, 2015).
9. J. Hadley, *Animal Property Rights: A Theory of Habitat Rights for Wild Animals* (Lexington Books, 2015).
10. G. Chapron, Y. Epstein, A. Trouwborst, J. V. López-Bao, *Nat. Ecol. Evol.* **1**, 86 (2017).
11. L. J. Kotzé, P. Villavicencio Calzadilla, *Transnat. Environ. Law* **6**, 401 (2017).
12. U. Pascual et al., *Curr. Opin. Environ. Sustain.* **26–27**, 7 (2017).
13. S. J. Schaefer, *J. Energy Environ. Law* **9**, 70 (2018).
14. K. Bradshaw, *Univ. Colo. Law Rev.* **89**, 809 (2018).
15. C. D. Stone, *Should Trees Have Standing? Law, Morality, and the Environment* (Oxford Univ. Press, 2010).

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