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How to cite:

Schapper, Andrea; Visseren-Hamakers, Ingrid J; Humphreys, David and Bliss, Cebuan (2022). Mainstreaming the Animal in Biodiversity Governance: Broadening the Moral and Legal Community to Nonhumans. In: Visseren-Hamakers, Ingrid J and Kok, Marcel T.J. eds. Transforming Biodiversity Governance. Earth Systems Governance. Cambridge: Cambridge University Press, pp. 179–199.

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Version: Version of Record

Link(s) to article on publisher's website:

<https://www.cambridge.org/core/books/transforming-biodiversity-governance/mainstreaming-the-animal-in-biodiversity-governance>

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Mainstreaming the Animal in Biodiversity Governance: Broadening the Moral and Legal Community to Nonhumans

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9.1 Introduction

The individual animal has often been neglected in biodiversity governance debates, with animals mainly considered in terms of species, biodiversity, wildlife or natural resources. Indeed, and somewhat counterintuitively, biodiversity governance is not always animal-friendly. Think, for example, of the issues of wildlife management, (“sport”) hunting, captive breeding, reintroduction and relocation of endangered species, and the use of animal testing in conservation research (De Mori, 2019). For some issues, the relationship is more complex, for example the “management” of Invasive Alien Species (IAS), which is detrimental to the individuals of the species considered “invasive” but beneficial to native species and habitats (Barkham, 2020). Elsewhere, economic development and incentives impact both biodiversity and animal concerns, such as the negative effects of animal agriculture (see Visseren-Hamakers, 2018a; 2020 for more detailed overviews of these relationships). How can we transform biodiversity governance in order to incorporate individual animal interests (Bernstein, 2015)? That is the central question of this chapter.

To answer this question, we apply an integrative governance perspective to link animal and biodiversity governance systems. Integrative governance can be defined as the theories and practices focused on the relationships between governance instruments (policies and rules) and systems (the entirety of instruments on a specific issue at a certain level of governance, from the global to the local) (Visseren-Hamakers, 2015; 2018a; 2018b). Our main argument focuses on integrating the interests of the individual animal in order to enable a shift from dominant anthropocentric ontologies to a more ecocentric approach, thereby improving human–nonhuman relationships and preventing further biodiversity loss without compromising our ethical obligations. The chapter argues that transformative biodiversity governance requires integrating animal rights and rights of nature approaches to enable a shift from dominant anthropocentric ontologies to a more ecocentric approach.

We review relevant literature and policy developments through an integrative governance perspective (Visseren-Hamakers, 2015) that brings together debates which, to date, have remained rather disconnected, including those in philosophy, political science, law and veterinary sciences. We also discuss attempts to integrate these debates. We have organized the review into academic and policy debates around: animal rights; animal welfare; rights of nature and integrative approaches, including One Health, One Welfare and compassionate

conservation. Our literature review outlining academic debates is based primarily on secondary sources, but also includes gray literature and documents including legislative texts, policy papers, and reports by international and civil society organizations. The chapter does not provide a comprehensive overview of animal and biodiversity governance around the world, but rather aims to show how different concepts are operationalized in various contexts. Below, we first review the different debates and practices. The discussion section integrates the debates and reflects on their transformative potential, and the conclusion reflects on their implications for transformative biodiversity governance.

9.2 Animal Rights

9.2.1 *The Academic Debate*

The idea that animals are rights-holders has origins in political theory, philosophy and law. Until today, the discourse and practice on animal rights, including the animal rights movement, has been inspired by normative thinking on interspecies justice, in other words justice for and between human and nonhuman animals (Donaldson and Kymlicka, 2011; Nussbaum, 2006; Regan, 1983; Singer, 1975). Cavalieri, for example, proposes deleting the word “human” from human rights (Cavalieri, 2001), thus expanding our understanding of rights to other species.

Two influential monographs on animal ethics were published in the 1970s and early 1980s: *Animal Liberation* by Peter Singer (1975); and *The Case for Animal Rights* by Tom Regan (1983). Singer proposes a more sophisticated account of equality, extending it to all beings irrespective of gender, ethnicity or, indeed, species. He builds on the concept of speciesism (Ryder, 1971), which, analogous with racism, discriminates against species other than one’s own. Following the eighteenth/nineteenth century philosopher Jeremy Bentham, who suggests that we should not ask whether animals can reason or talk but whether animals can suffer, Singer proposes we consider their sentience. He argues that the capacity to suffer gives one the right to equal consideration with others. To avoid vast suffering of nonhuman animals, humans need to make radical changes not only to their diet, farming methods, scientific experiments, practices of hunting, trapping and wearing fur, but also to entertainment, including circuses, zoos and rodeos (Singer, 1975). Singer is not against using animals but argues that their interests should be considered on an equal basis to those of humans.

Regan (1983) agrees with Singer that speciesism is unjust and wrong. However, what he conceives as wrong is to view animals as human resources, that is, to eat them, to exploit them for entertainment, sport, or any commercial activity, or to surgically manipulate them for medical research. Regan denies that animal husbandry methods should become “more humane”; he supports the complete abolition of commercial animal agriculture (Regan, 1983: 337). He also criticizes the utilitarian perspective of Singer: the value of animals cannot be reduced to their usefulness for the greater good of others (Regan, 1983: 343). It is our duty to recognize their rights and, as such, Regan views the animal rights movement as part of the human rights movement. Thus, in animal ethics one can differentiate between

interest theories of rights for eliminating animal suffering, such as Singer's, and anti-use theories supported by Regan (Regan, 1983; see also Ahlhaus and Niesen, 2015: 16).

More recently, in *Zoopolis: A Political Theory of Animal Rights* (2011), Sue Donaldson and Will Kymlicka argue for a more comprehensive approach to animal rights that varies according to the relational nature of specific groups of animals to humans. Such an approach integrates universal negative rights, such as the absence of suffering, with differentiated positive rights, such as healthcare for domesticated animals, depending on the character of the human–animal relationship (Donaldson and Kymlicka, 2011: 11; see also Ahlhaus and Niesen, 2015: 18). Donaldson and Kymlicka argue that liberalism today combines universal human rights with more relational, bounded and group-differentiated rights. Upon this base, they claim, citizenship theory can be fruitfully used to “combine traditional animal rights theory with a positive and relational account of obligations” (Donaldson and Kymlicka, 2011: 14).

When referring to human–animal relationships, Donaldson and Kymlicka differentiate between: (a) animals living in the wild forming sovereign communities in their own territories, (b) animals that, similar to migrants or denizens, move into areas of human habitation and (c) domesticated animals that have been bred over generations to coexist with human beings. Domesticated animals, Donaldson and Kymlicka argue, should enjoy citizenship rights (Donaldson and Kymlicka, 2011: 14). Acknowledging domestic animals as citizens with rights is a moral obligation that arises from their integration into human societies, which removes their independence and ability to survive in the wild. Wild animals, in contrast, should be conceived as citizens of their own sovereign communities whose autonomy and territory should be respected. Non-domesticated “liminal” animals living among humans are compared to denizens. They need to be respected as coresidents of urban spaces but are not included in the citizenship scheme of humans and domesticated animals (Donaldson and Kymlicka, 2011: 15).

By employing political concepts, such as citizenship, denizenship, sovereignty, territory, migration and membership, and exploring their use or adaptation in the context of animals, Donaldson and Kymlicka make a clear attempt to promote animal rights beyond mere justifications for rights and justice for animals. While this has been criticized by some scholars because it challenges the distinctive meanings of concepts like citizenship or denizenship (Ladwig, 2015; Seubert, 2015; Stein, 2015), it has also given fresh impetus to the debate on animal rights. If animals are citizens, they are perceived as actors that can directly participate in political communities and be represented through institutions (Donaldson and Kymlicka, 2011). Especially in democratic political systems, Peter Niesen (2019) argues, there is consensus that those affected by laws should be able to influence the process of making these laws. If institutions neglect certain perspectives and interests, they are undemocratic. We therefore need to rethink our relationship with (and domination over) animals (Niesen, 2019: 381). This is reiterated from a post-humanist perspective, which deconstructs species supremacy and anthropocentrism to acknowledge animals' own agency (Braidotti, 2013). This perspective leads us to question whether humans have the “right” to grant animals rights at all.

9.2.2 Political Practice

The modern animal rights movement has been heavily influenced by the work of the philosophers Singer and Regan (Wise, 2016). Additionally, lawyers, scientists, academics, veterinarians, theologians and psychologists have influenced the movement. Consequently, since the beginning of the twenty-first century, a number of lawsuits have been brought forward to protect the interests and rights of animals. Legal scholars have attempted to advance basic animal rights in political practice, often accompanied by scientific evidence that provides a better understanding of the capacities and behavior of animals (Wise, 2016).

An increasing number of animal rights groups have raised awareness of the abusive conditions in which animals are kept, including on factory farms and in medical research laboratories. Rights groups are active at various levels, from local animal shelters to international groups such as PETA (People for the Ethical Treatment of Animals).

At the national level, the animal rights movement has succeeded in achieving stronger legal protection of animals by lobbying for the inclusion of animal rights in national constitutions. Two prominent examples are Switzerland and Germany. Animal protection has long been an issue of debate in the Swiss parliament. The “dignity of creatures” (“die Würde der Kreatur”) was first mentioned in the constitution of the canton Aargau in 1980. It initiated a wider debate about the need to include animal welfare and dignity in the federal constitution (Goetschel, 2000: 12). The discourse on animal protection in Switzerland has been strongly linked to debates about the legal boundaries of genetic engineering. On the basis of a successful animal rights campaign, a constitutional amendment was passed in 1992 that stated that researchers need to respect the “dignity of creatures” (Jaber, 2000). In the course of creating a new constitution in 1998, animal activists tried to strengthen this amendment but were unsuccessful. However, in 2000, the wording of the 1992 amendment was included in the revised constitution (Evans, 2010: 239).

In Germany, a decade-long battle between campaigners and conservative politicians ended with paragraph 20a of the German constitution stating that animals have to be respected and protected by the state (Connolly, 2002). The campaign was started because the basic law protected freedom of research and freedom of profession. As a consequence, courts usually ruled in favor of researchers, even if they conducted experiments that caused animal suffering (Evans, 2010: 235). A political opportunity arose when a Social Democrat/Green government coalition was in power from 1998 until 2002, after animal activists’ efforts to include animal rights in the constitution were blocked by the Christian-Democrat majority in parliament during the 1990s. In 2002, activists increased public awareness after the Supreme Court granted permission to practice a traditional religious slaughter ritual that – according to many campaigners – involved unnecessary cruelty (Judd, 2003: 122). Public opinion against this decision and the support of the Green Party led to a successful constitutional amendment that year. Article 20a of German Basic Law now reads:

“(t)he state protects, in the interest of future generations, the natural basis of life, and the animals, within the framework of constitutional laws and through the making of laws and in accordance with ordinances and through judicial decision.” (German Basic Law, Art. 20a).

Here, we can see the strong link between animal rights, rights of nature and intergenerational justice. Even though the German Animal Protection League was hoping that this constitutional amendment would lead to a number of relevant changes protecting animals in Germany (Connolly, 2002), there are still many problems, mostly relating to animals kept in factory farms and live animal transport. However, legislative changes at the federal and state level following the constitutional amendment of 2002 have almost completely eliminated inhumane research practices involving animals, and keeping animals for fur farming.

Box 9.1: Oostvaardersplassen: Animal Welfare and Rights Versus Conservation

In the Netherlands, the Oostvaardersplassen rewilding project has been subject to controversy after large herbivores (Konik horses, Heck cattle and red deer) introduced by humans starved when they exceeded the carrying capacity of the fenced-in nature reserve. There was a political debate among the Dutch public and animal protection NGOs, who felt responsibility for the welfare of these animals and the duty to prevent unnecessary suffering, and managers stressing the importance of noninterference and allowing natural processes to occur (Kopnina et al., 2019; Lorimer and Driessen, 2014; Ohl and van der Staay, 2012). These animals straddle the divide between wild and domesticated and raise questions regarding our level of responsibility for their welfare, and indeed what their rights are.

9.3 Animal Welfare

9.3.1 *The Academic Debate*

Over the last three decades, animal welfare has accelerated as a field of scientific study. There is no universally accepted definition of animal welfare and the various conceptions in use lead to different ways of assessing the welfare of animals (Weary and Robbins, 2019). Most definitions, however, differentiate between physical elements contributing to, or impeding, the welfare of animals, including malnutrition, exposure, disease and injury, on the one hand, and affective elements like thirst, hunger, discomfort, pain, fear and distress, on the other hand (Mellor, 2016: 8). Challenges to animal welfare can originate in natural and unnatural environments, and to assess the welfare of an individual animal or collective species one needs to consider not only fitness and health, biological needs and wants, but also animals' sensory or emotional experiences, feelings or affective states (Mellor, 2016: 14).

Important ideas on animal welfare originate in the 1965 *Report of the Technical Committee to Enquire into the Welfare of Animals Kept under Intensive Livestock Husbandry Systems*, also known as the Brambell report, published in the UK. The report highlighted that farm animals should be guaranteed five freedoms: to “stand up, lie down, turn around, groom themselves and stretch their limbs” (FAWC, 2009). In reaction to the Brambell report, the UK Farm Animal Welfare Advisory Committee (FAWAC) was established, and subsequently the Farm Animal Welfare Council (FAWC). John Webster, a former Professor of Animal Husbandry at the University of Bristol, helped develop the

five freedoms. In his book *Animal Welfare: A Cool Eye Towards Eden*, he explains the usefulness of this framework in order to assess animal welfare:

Preserving the concept of the “Five Freedoms”, I attempted to produce a logical, comprehensive method for first analysis of *all* the factors likely to influence the welfare of farm animals, whether on the farm itself, in transit or at the point of slaughter. (Webster, 1994: 11).

Minimum standards based on the five freedoms have been modified by the FAWC, which in 2019 was renamed the Animal Welfare Committee (AWC), and were supplemented by five provisions detailing how to implement them. The AWC today classifies animals’ quality of life as a good life, a life worth living and a life not worth living (FAWC, 2009: iii). Furthermore, in 2018, the UK Government acknowledged animal sentience, which it defines as “the capability to experience pain, distress and harm” (FAWC, 2018), reiterating its commitment to Article 13 of the Lisbon Treaty of the European Union (EU), which recognizes animal sentience. Such recognition paves the way for the acknowledgment of the individual animal in biodiversity governance.

Considerations on animal welfare, including relevant welfare and assessment schemes in the UK and beyond, are still guided by the five freedoms and respective provisions (Mellor, 2016: 2). The 2009 FAWC report includes:

- *Freedom from hunger and thirst*, by ready access to water and a diet to maintain health and vigour;
- *Freedom from discomfort*, by providing an appropriate environment;
- *Freedom from pain, injury and disease*, by prevention or rapid diagnosis and treatment;
- *Freedom to express normal behavior*, by providing sufficient space, proper facilities and appropriate company of the animal’s own kind;
- *Freedom from fear and distress*, by ensuring conditions and treatment, which avoid mental suffering (FAWC, 2009: 2).

Even though the language of “freedom” is akin to the human rights language employed in international agreements (e.g. in the Universal Declaration of Human Rights), there is a clear distinction between animal rights and animal welfare approaches. Whereas animal rights proponents emphasize that it is morally wrong for humans to use or exploit animals, animal welfarists are concerned with reducing suffering. Welfarists’ acceptance of the instrumental use of animals by humans is in accordance with anthropocentric thinking, and in line with arguments brought forward by Singer. This utilitarian perspective is contrary to the philosophical ideas of Regan and animal rights proponents, who argue against using animals as a resource to be exploited by humans at all. Still, the five freedoms and pertinent animal welfare schemes are criticized by others for being normative and too idealistic to serve as a code of recommendation for welfare assessment (McCulloch, 2013).

Furthermore, the five freedoms have been criticized for being tailored to contexts of animal exploitation (Haynes, 2011), and focused on “negative freedoms” in which “freedom from” (e.g. hunger, disease and fear) is emphasized. The exception is “freedom to express normal behavior” (FAWC, 2009). Scholars have suggested that this focus on negative experiences may not be sufficient because animal welfare should also comprise positive elements, such as being housed in species-relevant environments and encouraging

animal-to-animal interaction (Mellor, 2016: 2). A more subjective measure of welfare, qualitative behavior assessment (QBA), goes some way to countering the criticisms on the five freedoms. QBA proposes an integrative measurement to assess the behavior of an animal and its interaction with its environment (Wemelsfelder and Lawrence, 2001).

9.3.2 Political Practice

Conceptualizations of animal welfare, and in particular the five freedoms, have had considerable impact on policy development from the global to the national level.

The World Organisation for Animal Health (OIE), established in 1924, is an intergovernmental organization with 182 member states. It focuses mainly on the health of domesticated animals kept for food. It has developed animal welfare standards, included in the regularly updated *Terrestrial Animal Health Code*, and an animal welfare strategy in 2017 that covers standards related to transport, slaughter and the use of animals in research (OIE, 2020a). The organization supports member countries in the implementation of the standards (OIE, 2020b; Visseren-Hamakers, 2018a). Pertinent to this chapter, the OIE's revised mandate to improve animal health and welfare worldwide extends its scope to wild animals (OIE, 2002). Nevertheless, the focus of its dedicated wildlife working group, created in 1994, is almost exclusively on wildlife diseases, rather than welfare (OIE, 2020c). In sum, the OIE remains predominately anthropocentric in its aims.

Additionally, the creation of a *United Nations Convention on Animal Health and Protection* (UNCAHP) is currently under consideration. The draft convention is an initiative of the Global Animal Law Project (2018). The 2018 draft affirms that animals are sentient beings and acknowledges the five freedoms in its preamble. It proposes general measures in relation to non-cruelty and good treatment, and recommends the creation of a United Nations (UN) institution on animal health, welfare and protection. Another development at the global level concerning animal welfare advocacy was the launch in 2021 of the World Federation for Animals (WFA), a collaboration of animal protection organizations (WFA, 2021).

At the regional level, in Europe, the five freedoms are reflected in the welfare assessment criteria of the European Welfare Quality® scheme. The criteria established are used as assessment standards to determine levels of animal welfare and inform EU citizens on meat products (McCulloch, 2013). The EU Strategy for Protection and Welfare of Animals (2012–2015) was evaluated between 2019 and 2020 to assess whether its objectives were delivered. The final report states that the uneven level of protection for different animal species is at odds with the recognition by the EU of animal sentience and that EU citizens' concerns for animal welfare have increased since 2012 (EU, 2020). The African Union established its Animal Welfare Strategy in Africa (AWSA) in 2017, which refers to One Health and One Welfare approaches and includes all animals, including kept animals and animals in the wild (AU-IBAR, 2017). Meanwhile, the Association of Southeast Asian Nations (ASEAN) has established Good Animal Husbandry Practices (GAHP), currently focused on livestock important to the region, namely chickens and pigs (ASEAN, 2020).

An overview of animal welfare policies of different countries, as developed by the animal welfare NGO World Animal Protection (2020), shows a tremendous difference in the manner in which animal welfare is recognized and operationalized around the world. In its ratings of welfare policies, not one country receives an A, the highest possible score, with a handful of European countries (Austria, Denmark, the Netherlands, Sweden, Switzerland and the UK) receiving a B. In the UK, for example, the 2006 UK Animal Welfare Act includes duties of animal owners that are based on the five freedoms, including protection from pain, suffering, injury and disease, as well as the duty to provide a suitable environment, an appropriate diet and adequate housing, and to enable normal behavior patterns (UK Animal Welfare Act, 2006). The five freedoms are also an integral part of a number of welfare codes and schemes in the UK. Examples are various Department of Environment, Food and Rural Affairs (Defra) codes of recommendations for the welfare of livestock, for instance for meat chickens and breeding chickens (2002), pigs (2003) and cattle (2003).

Box 9.2: Combining Animal Rights and Welfare Approaches in India

An interesting example on how a combination of animal rights and welfare can be realized is the country case of India. Its constitution stipulates that "...compassion for living creatures" is considered a duty of every citizen (The Constitution of India 1950, amended 2019). Supreme Court decisions, like the 2014 ruling banning the use of bulls for Jallikattu events, directly refer to the dignity of animals, animal rights and animal welfare – and the court considered itself as the guardian of the rights of animals. Court rulings even recognize a transition from anthropocentric perspectives to ecocentric approaches in animal welfare legislation (Animal Welfare Board of India, 2014). Respect for animals' dignity and intrinsic value is the basis for a number of specific practices, such as prohibition of hunting, reduced meat production and consumption, and encouraging ethically tenable global conservation practices that do not inflict unnecessary harm (Wallach et al., 2018).

9.4 Earth Jurisprudence and Rights of Nature

The idea that nature has rights is recognized in many indigenous cultures in the Americas (Gill, 1987; Weaver, 1996; see also Chapter 2), resonating particularly strongly in the Andes mountains. *Pachamama*, or Mother Earth, is an Andean goddess who, as the giver of life, has rights irrespective of human desires. A concept related to *Pachamama* (sometimes written as *Pacha Mama*) is *buen vivir*. The term is usually translated into English as "living well" or "good living." *Buen vivir* articulates a notion of community and citizenship that embraces all life, with collective rights, including those of nature, prevailing over individual rights (Villalba, 2013).

9.4.1 The Academic Debate

The idea of "rights of nature" has gained tentative acceptance in the United States through Christopher Stone's landmark paper "Should trees have standing?" (Stone, 1972). Stone

extended the concept of standing (*locus standi*) to insist that it is unfair for trees to be denied legal protection because they cannot speak and concludes that guardians who wish to defend the rights of trees should be permitted to bring legal action against those whose actions would harm them (Stone, 1972). Stone's paper led to a dissenting opinion in the US Supreme Court. In *Sierra Club v. Morton*, the Sierra Club opposed a development in the Sequoia National Forest on ecological grounds. The court ruled that the Sierra Club had no standing in the case as neither the club nor its members would be harmed by the development (Baude, 1973). However, Justice William Douglas dissented, citing Stone's paper to argue that natural objects should have legal standing, thereby giving guardians the ability to sue for their preservation (Hogan, 2007).

Roderick Nash (1989) saw the extension of rights to other species and natural objects as a broadening of liberal political theory. He argued that freedom of human action should be limited to prevent people from interfering with the rights of other species. Thomas Berry argued that healthy communities cannot be defined solely in terms of the health of people; the health of the natural environment within which a community of people lives also needs to be considered. To Berry, any part of the Earth community has "the right to be, the right to habitat, and the right to fulfil its role in the ever-renewing processes of the Earth community" (Berry, 2011, 229). So a river has the right to flow, a tree has the right to grow, a wild animal has the right to roam free in nature and ecosystems have the right to evolve and adapt.

Proponents of Earth jurisprudence argue that nature should be treated as a subject that requires transformative change to secure legally guaranteed rights, rather than an object owned through property rights to satisfy the instrumental needs of humans. There are diverse conceptions of "environmental personhood" (Gordon, 2019). Legal scholar Cormac Cullinan builds on the work of Berry to argue that modifying contemporary legal systems will not protect nature. Instead, a thorough transformation of the law, in which humans are recognized as just one species in the Earth community, is needed (Cullinan, 2011). Humans should limit their actions in order to uphold nature's rights both for moral reasons (it is right to do so) and for instrumental reasons (human rights ultimately depend on the conservation of nature). Under Earth jurisprudence, therefore, obligations are owed not only to humans but to other species and natural features (Burdon, 2015).

An important academic debate on the relevance of Earth jurisprudence for biodiversity conservation concerns property rights. The liberal notion of private property is essentially individualistic, often emphasizes rights rather than duties and privileges the legal property owner while excluding other stakeholders. Proponents of Earth jurisprudence argue that contemporary property rights are inconsistent with biodiversity conservation. Peter Burdon distinguishes between two approaches to private property. In one view, private property is "inconsistent with ecocentric ethics and ought to be discarded as a social institution" (Burdon, 2015: 101). In this view, private property establishes a hierarchy, with humans having ownership and dominion over nature. The second, reformist, approach sees private property as an "evolving social institution" that needs to be reconceptualized to take into account the impacts of property use on other people and nature (Burdon, 2015). In the case

of biodiversity governance, nature's limits should be respected in order to avoid the devastation that humans can cause when property rights are unconditional and unrestricted.

Much contemporary biodiversity policy is based on private property rights and recognizes, implicitly or explicitly, that property owners are entitled to use nature without restrictions, including degrading it. The policy of payments for ecosystems services (PES), for example, rests on the notion that if landowners voluntarily give up a measure of free use in order to provide ecosystem services for the community then payment should be made by that community. PES makes sense in a neoliberal policy context, where owners are free to "sell" on markets the ecosystem services they "provide" to those who benefit from them (see also Chapters 4 and 6).

Earth jurisprudence disputes this logic, arguing that private property is an evolving social construct that needs redefining to take into account our responsibilities to other people and to the community of life. While this runs counter to the liberal notion of property, it is central to the intimate relationship with the land of many indigenous communities, who recognize custodianship as well as ownership. Earth jurisprudence, therefore, articulates a very different notion of property, one in which ethical responsibility to other species is integral and that regulates not just relations between people, but between people and the Earth community.

9.4.2 Political Practice

In 1982 the United Nations General Assembly (UNGA) adopted the World Charter for Nature (Wood, 1984). The charter contains twenty-four principles, some of which are now invoked in Earth jurisprudence, including the statements that "Nature shall be respected and its essential processes shall not be impaired" (United Nations, 1982: article 1) and "The genetic viability on the earth shall not be compromised; the population levels of all life forms, wild and domesticated, must be at least sufficient for their survival, and to this end necessary habitats shall be safeguarded" (United Nations, 1982: principle 2). The charter contains the first political recognition by the UN of "harmony with nature," a phrase that has been repeated in subsequent international environmental declarations, including the 1992 Rio Declaration on Environment and Development (United Nations, 1992).

In 2008, Ecuador became the first country to include rights of nature in its constitution, article 71 of which declares:

Nature, or Pacha Mama, where life is reproduced and occurs, has the right to integral respect for its existence and for the maintenance and regeneration of its life cycles, structures, functions and evolutionary processes. All persons, communities, peoples and nations can call upon public authorities to enforce the rights of nature (Constitution of the Republic of Ecuador, 2008: Article 71).

The Ecuadorian constitution allows any individual or group to take legal action to uphold nature's rights, a provision that is consistent with Stone's idea of guardians. Indigenous peoples were represented in the drafting process by the Confederation of Indigenous Nationalities of Ecuador (CONAIE), which paved the way for the inclusion of rights of nature in the constitution. In 2011, the first court case to uphold the rights of nature was

brought, namely *Wheeler v. Director de la Procuraduria General Del Estado de Loja*. The court ruled that the dumping of road debris into the Vilcabamba River violated nature's rights and ordered the removal of the debris in order to restore the right of the river to flow (CELDF, 2015; Daly, 2012).

In 2009, Bolivia adopted a new constitution stipulating that Bolivians have a duty to "protect and defend an adequate environment for the development of living beings" (Constitution of the Plurinational State of Bolivia, 2009: Article 108.16). The following year, the Bolivian legislature passed the Law of the Rights of Mother Earth, which recognizes seven rights of nature:

- the right to life and to exist;
- not to be genetically altered or structurally modified in an artificial way;
- to pure water;
- to clear air;
- to balance;
- to restoration; and
- not to be polluted.

While the federal government in the United States does not recognize rights of nature, there has been some recognition at the subfederal level. In Tamaqua Borough, Pennsylvania, in 2006 an ordinance was issued that recognized natural ecosystems within the borough as "legal persons" for the purpose of preventing sewage sludge dumping on wild land (Tamaqua Borough Sewage Sludge Ordinance, 2006). The ordinance, which represents the first instance a public body in the United States granted personhood to nature, stipulated that corporations causing environmental degradation will lose the rights of personhood. Also, in November 2010, the city of Pittsburgh issued an ordinance banning natural gas drilling and fracking, elevating community rights and the rights of nature over and above those of corporate personhood (Pittsburgh Pennsylvania Code of Ordinances, 2013).

The examples of Ecuador and Bolivia (at the national level) and the United States (at the subnational level) have inspired rights of nature movements in other countries, with rivers being granted legal rights in three other countries, namely Colombia, India (including the Ganges and Yamuna) and New Zealand (the Whanganui River) (Pecharroman, 2018).

In 2010, the World People's Conference on Climate Change and the Rights of Mother Earth met in Cochabamba, Bolivia and agreed a Universal Declaration of the Rights of Mother Earth. The declaration is the most important set of Earth jurisprudence principles produced by civil society groups, although as yet it has no legal status. It aspires to a fundamentally different form of human society in which the rights of nature prevail over other rights: "The rights of each being are limited by the rights of other beings and any conflicts between their rights must be resolved in a way that maintains the integrity, balance and health of Mother Earth" (UDRME, 2010: article 1). Article 1 also states that "Mother Earth is a living being" and "The inherent rights of Mother Earth are inalienable in that they arise from the same source as existence" (UDRME, 2010: article 1). This has similarities to

Gaia theory, which conceives of the Earth as a self-regulating and holistic system of living organisms (Lovelock, 1990). A further civil society initiative is the International Rights of Nature Tribunal, established in 2014. This tribunal hears cases brought by aggrieved parties and those who seek to defend nature's rights in line with the principles of Earth jurisprudence. Prosecutors and judges are appointed by the Global Alliance for the Rights of Nature (Boyd, 2017).

In 2011, the UN established an annual interactive dialogue on "harmony with nature" (UN, 2020), and in 2012 the expression "rights of nature" appeared for the first time in a UNGA resolution. Resolution 66/288, endorsing the "The future we want," the main outcome from the United Nations Conference on Sustainable Development (Rio +20), notes:

We recognize that planet Earth and its ecosystems are our home and "Mother Earth" is a common expression in a number of countries and regions, and we note that some countries recognize the rights of nature in the context of the promotion of sustainable development.

(United Nations, 2012: para.39)

Also in 2012, the eleventh Conference of the Parties (COP 11) to the Convention on Biological Diversity (CBD) passed a decision noting that "biodiversity and development processes can be achieved taking into account non-market-based approaches and respect for 'Mother Earth' and the concept of the rights of nature, and that the valuation of biodiversity and ecosystem services is one, among other, tools available" (CBD, 2012). This decision represents a broadening of the range of approaches that the CBD is prepared to endorse and a recognition that market valuation and PES policy approaches are not always the most effective. Additionally, the International Union for the Conservation of Nature (IUCN) Congress adopted a resolution recognizing the rights of nature "as a fundamental and absolute key element for planning, action and assessment at all levels and in all areas of intervention" (IUCN, 2012). The Summary for Policymakers of the Global Assessment of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) also mentions rights-based approaches and animal welfare (Razzaque et al., 2019).

Relatedly, the crime of ecocide for violating rights of nature is gaining traction. Ecocide is defined as "extensive damage to, destruction or loss of ecosystem(s) of a given territory, whether by human agency or by other causes to such an extent that peaceful enjoyment by the inhabitants of that territory has been or will be severely diminished" (Higgins et al., 2013: 257). Legge and Brooman (2020) propose that international animal law should recognize "animal ecocide" through an amendment to the Rome Statute, which they argue would significantly advance wild animal welfare. They see animal ecocide as the "unnecessary killing or slaughter of a wild or wild-caught animal, by any human agency, or allowing such killing or slaughter to be so caused by any governmental organisation, to such an extent that an animal, or group of animals, lose their sentient capacity to live a natural life according to their species" (Legge and Brooman, 2020: 212). Speciesism is seen as the root cause of ecocide. Recognizing the value and rights of other species would help to prevent such destruction (Jer, 2019; Sollund, 2020).

9.5 Integrative Approaches to Animal and Biodiversity Governance

9.5.1 *One Health and One Welfare*

Whereas ideas on animal welfare and animal rights focus on the relationship between human beings and nonhuman animals, while rights of nature focuses on the relationship between humans and nature, conceptions of *One Health* (discussed in detail in Chapter 5) emphasize how all three, namely human, animal and environmental health, are interlinked (Galaz et al., 2015; Zinsstag et al., 2006; 2011). While the idea has been discussed for decades (Cook et al., 2004), the outbreak of avian influenza in the early 2000s considerably strengthened discussions relating to the *One Health* concept. The required cooperation between different international organizations, including the World Health Organization (WHO), the Food and Agriculture Organization (FAO) and the World Organisation for Animal Health (OIE), with oversight from the UN System Influenza Coordination Office, emphasized the need for an integrated, intersectoral, interinstitutional and interdisciplinary response (Galaz et al., 2015: 3). In 2020, the COVID-19 pandemic, almost certainly caused by a novel coronavirus that was transmitted to humans from animals, led to renewed calls to recognize the interrelationship between environmental, animal and human health.

However, the idea of equally integrating human, animal and environmental health has proven difficult to implement in practice. In addition to hierarchies between professional disciplines, institutional preferences for single-sector approaches, the paucity of funding, capacity-building, education and training that hamper One Health implementation, there is also the critique that the One Health agenda is geographically Northern-dominated, is top-down and lacks consideration of local experiences and knowledge (Galaz et al., 2015). Thus, the concept is still weak in its practical application, lacking institutional capacities and interdisciplinary collaboration between the natural and social sciences as well as a fruitful exchange between research and policymakers (Valeix, 2014).

The nascent concept of One Welfare, which is not currently applied at the international level, extends the approach of One Health and highlights the interconnections between animal welfare, human well-being and the environment (Garcia Pinillos et al. 2016; One Welfare, 2020).

9.5.2 *Compassionate Conservation*

Proponents of another approach connecting animal and biodiversity concerns, namely compassionate conservation, argue that conservation objectives need to go beyond protecting species and ecological processes to include animal ethics and a concern for animal welfare (Wallach et al., 2018). This implies not only considering species as a collective but also the interests of individual animals as sentient beings. Hence, compassionate conservationists suggest combining compassion for individuals with conservation of collectives. This can be relevant, for instance, in wildlife management programs or in other areas of conservation practice that opt for killing individual animals from one species to preserve individuals from another species, killing predators to save endangered prey animals, killing introduced or “invasive” species to save native megafauna, killing individual animals for

conservation research, or breeding animals in zoos for conservation and education (Wallach et al., 2018: 1261). According to compassionate conservation, these practices will have to be fundamentally reviewed and reformed in order not to compromise individual animals' well-being for the sake of their own, or another, species (Bekoff, 2013).

Compassionate conservationists propose transforming human–animal interaction in an ethically appropriate and sustainable way based on four principles: do no harm, individuals matter, inclusivity and peaceful coexistence (Wallach et al., 2018). Acknowledging the intrinsic value of individual animals requires moving away from instrumentalist thinking, in which animals have material value for human beings, toward valuing them in their own right, irrespective of benefits to humans. This means decentering humans, giving equal consideration to animals and biodiversity as integral parts of an ecosystem and overcoming the human–nature dichotomy. Empirical evidence suggests that nonanthropocentric perspectives, and a stronger focus on the well-being of animals, are increasingly supported within society. Thus, there has been a profound shift toward acknowledging the intrinsic, as opposed to instrumental, value of animals (Bruskotter et al., 2017).

9.6 Discussion: Integrating the Different Debates

This chapter has reviewed different literatures and policy developments to make the argument for integrating animal rights and rights of nature approaches in biodiversity governance. With many human practices neither sustainable nor ethically sound, it is clear that all of the approaches discussed above, namely animal rights, animal welfare, Earth jurisprudence, One Health and One Welfare, and compassionate conservation, in different ways require a significant rethinking of the relationship between humans, nonhuman animals and nature. At the heart of these approaches is the idea that nature and animals should not merely be treated as objects managed by humans but have equal moral and legal standing with them. The perspectives we have examined vary in terms of how radical their proposals are: Whereas some advocate fundamentally restructuring the relationship between humans and animals, such as animal rights approaches, others suggest the need to diminish inequalities in this relationship, such as animal welfare perspectives.

While academic discussions on animal rights have been ongoing for decades, and their transformative potential is significant, their impact on policy practices has to date been relatively limited due to the prevailing dominance of anthropocentric policy-making. In contrast to animal rights approaches, policies and practices on animal welfare are established and implemented in many countries but often merely reproduce the status quo whereby humans manage and govern animals, albeit with some limited improvements in their living conditions. The transformative potential of animal welfare approaches is therefore limited compared to those on protecting and promoting animal rights. In recent years, rights of nature have been increasingly adopted and implemented internationally and domestically. Ecosystem rights have significant transformative potential, especially if they can be protected by guardians and implemented in court decisions. Integrative perspectives like One Health, One Welfare and compassionate conservation encourage holistic policy

development recognizing the link in human, animal and ecosystem health and well-being, and also hold transformative potential, but have not yet had large-scale effects on the ground.

Based on the review, we argue that in a world that is severely threatened by sustainability challenges such as biodiversity loss, we need to refocus our understanding of governance to acknowledge rights as the basis for conflict resolution, peace and just sustainable development. What we can observe in discourse and practice is a changing understanding of human rights: from individual civil and political rights (with its origins in the 1215 Magna Carta and internationally in the 1948 Universal Declaration on Human Rights), to collective intergenerational rights (such as the 2007 UN Declaration on the Rights of Indigenous Peoples or the International Human Right to a Healthy Environment recognized by the UN Human Rights Council in 2021). The emerging discourses and practices on promoting ecosystem integrity, animal rights and interspecies justice, as discussed in this chapter, can be seen as further steps in this ongoing process of increasingly recognizing rights.

Table 9.1 summarizes the main developments discussed in the chapter. It illustrates that many of these debates have been ongoing for decades, with the integrative approaches developing later. Our integrative perspective highlights that different discourses are actually part of the same process of expanding the moral and legal community to include species, individual animals and nature. With this, the chapter has contributed to inclusive governance debates by making the case for the emancipation of those whose interests are not yet being met (see Chapter 1).

Table 9.1 *Overview of important developments*

Year	Event
1924	World Organisation for Animal Health (OIE) founded
1965	Publication of the UK Brambell report on animal welfare and introduction of the “Five Freedoms”
Early 1970s	Richard Ryder coins the term speciesism
1972	Christopher Stone publishes “Should trees have standing?”
1975	Peter Singer publishes <i>Animal Liberation</i>
1980	Founding of People for the Ethical Treatment of Animals (PETA)
1982	World Charter for Nature adopted at United Nations (UN) General Assembly
1983	Tom Regan publishes <i>The Case for Animal Rights</i>
2000	Swiss constitution includes respect of “dignity of creatures”
2002	German constitution includes the protection of animals
2004	Wildlife Conservation Society conference launches One World, One Health
2005	First OIE global animal welfare standards
2006	Tamaqua Borough in Pennsylvania, USA, recognizes natural ecosystems as legal persons
2008	Ecuador includes rights of nature in its constitution

Table 9.1 (*cont.*)

Year	Event
2009	UN General Assembly declares April 22 International Mother Earth Day
2009	European Union recognizes animal sentience in Article 13 of Lisbon Treaty
2010	Bolivia adopts Law of the Rights of Mother Earth
2010	Draft Universal Declaration on the Rights of Mother Earth
2010	Pittsburgh, USA, passes an ordinance recognizing rights of natural communities and ecosystems
2011	Court case on rights of Vilcabamba River, Ecuador
2011	Draft Universal Declaration on Animal Welfare
2011	First UN interactive dialogue on harmony with nature
2012	Rights of nature acknowledged in UN General Assembly resolution
2013	Marc Bekoff introduces concept of compassionate conservation
2016	Idea of One Welfare published
2017	OIE Global Animal Welfare Strategy
2017	African Union Animal Welfare Strategy
2017	Legal rights for rivers in Colombia, India and New Zealand
2018	UK Government acknowledges animal sentience
2021	World Federation for Animals launched

9.7 Conclusion: Toward Ecocentric Animal and Biodiversity Governance

In this chapter we have analyzed the transformative potential of mainstreaming animal rights and rights of nature in biodiversity governance. We have done so based on an integrative analysis of ongoing academic and policy debates on animal rights, animal welfare, rights of nature and approaches that integrate these debates.

One of the most important insights derived from our review is the recognition of the differences between the discourses on animal rights and rights of nature. The animal rights discourse focuses on animals, arguing that all individual animals have rights, but is silent on the rights of flora and inanimate natural objects such as mountains, which feature prominently in rights of nature discourses that focus on collective rights but are silent on the rights of individual animals. We therefore argue that integrating animal rights and rights of nature approaches is necessary to fully enable ecocentric approaches in biodiversity governance.

Our analysis has several implications for transformative biodiversity governance, in the context of the Post-2020 Global Biodiversity Framework. Rights of nature played a prominent role in the negotiations of the framework. We argue that an integrative approach to rights of nature and animal rights should be included in the (implementation of the) framework.

Mainstreaming the individual animal entails designing conservation practices that are more ethically sound and acknowledging human obligations to nature (Burdon, 2020). Trade-offs between the lives of individual animals and species are not inevitable, but where

there is conflict, for example with species deemed invasive, conservation actions can be implemented in ways that respect individuals. This would for example entail choosing management methods that minimize suffering (Barnhill-Dilling and Delborne, 2021). A further implication of mainstreaming the individual animal would mean taking wild animals into account as individuals in their own right, rather than just thinking of them as resources or disease vectors. In terms of integrative governance, as exemplified by the OIE's tripartite+ collaboration (WHO, FAO, OIE, UNEP), which is particularly focused on One Health, this entails shifting the current anthropocentric focus and not automatically prioritizing the interests of humans. There is already evidence that respect for the lives of individual animals will become increasingly important in the future, such as with the launch of the World Federation for Animals to influence international policy-making.

Transformative change, defined as fundamental change including in terms of paradigms, goals and values (Díaz et al., 2019), in our view requires fundamentally rethinking the relationship between human beings, individual animals and nature, thereby reorienting biodiversity governance from an anthropocentric to an ecocentric perspective. Expanding the moral and legal community to include not only humans, but also nonhuman animals and nature, is an explicit and essential part of the transformative change required to halt biodiversity loss. Such an ecocentric perspective also requires a foundational rethinking of the concept of sustainable development to incorporate proper acknowledgment of the individual animal (see Visseren-Hamakers, 2020), species and entire ecosystems.

Only a fundamental shift to ecocentric approaches, considering ecosystems holistically and recognizing the rights of individual animals and nature, will allow for the establishment of alternative institutions, structures and processes as part of a broader transformative governance for biodiversity and sustainable development (Chaffin et al., 2016; Visseren-Hamakers, 2018a). The shift also requires rethinking core elements of democracy, such as representation, considering theoretical and practical implications of ecological democracy (Kopnina et al., 2021). This will, ultimately, benefit the lives of humans and nonhumans alike, and this approach is embraced in new debates on ecosystem justice, interspecies justice (Nussbaum, 2006) and multispecies justice (Celermajer et al., 2021).

References

- Ahlhaus, S., and Niesen, P. (2015). What is animal politics? An outline of a new research agenda. *Historical Social Research* 40, 7–31.
- Animal Welfare Board of India. (2014). Supreme Court's Judgement on Jallikattu. Available from http://awbi.in/awbi-pdf/sc_judgement_jallikattu_7-5-14.pdf.
- ASEAN. (2020). Establishment of ASEAN Good Animal Husbandry Practices (ASEAN GAHP). Available from <https://bit.ly/3Kclnts>.
- AU-IBAR. (2017). *The Animal Welfare Strategy in Africa*. Nairobi, Kenya: African Union – Inter-African Bureau for Animal Resources (AU-IBAR).
- Barkham, P. (2020). Should we cull one species to save another? *The Guardian*. Available from: <https://bit.ly/3Gm33eS>.
- Barnhill-Dilling, S. K., and Delborne, J. A. (2021). Whose intentions? what consequences? interrogating “intended consequences” for conservation with environmental biotechnology. *Conservation Science and Practice* 3, 1–11.

- Baude, P. L. (1973). *Sierra Club v. Morton: Standing trees in a thicket of justiciability*. *Indiana Law Journal* 48, 197–215.
- Bekoff, M. (2013). Compassionate conservation and the ethics of species research and preservation: Hamsters, black-footed ferrets, and a response to Rob Irvine. *Bioethical Inquiry* 10, 527–529.
- Bernstein, M. H. (2015). *The moral equality of humans and animals*. Basingstoke: Palgrave Macmillan.
- Berry, T. (2011). Rights of the earth: We need a new legal framework which recognises the rights of all living beings. In *Exploring wild law: The philosophy of Earth jurisprudence*. P. Burdon (Ed.), pp. 227–229. Wakefield, Kent Town, Australia: Wakefield.
- Boyd, D. R. (2017). *The rights of nature: A legal revolution that could save the world*. Toronto: ECW Press.
- Braidotti, R. (2013). *The posthuman*. Cambridge: Polity Press.
- Bruskotter, J., Vucetich, J., and Nelson, M. (2017). Animal rights and wildlife conservation: Conflicting or compatible? *The Wildlife Professional* 7–8, 40–43.
- Burdon, P. D. (2015). *Earth jurisprudence: Private property and the environment*. Abingdon: Routledge.
- (2020). Obligations in the Anthropocene. *Law and Critique* 31, 309–328.
- Cavaliere, P. (2001). *The animal question: Why non-human animals deserve human rights*. Oxford: Oxford University Press.
- Celermajer, D., Schlosberg, D., Rickards, L., et al. (2021). Multispecies justice: Theories, challenges, and a research agenda for environmental politics. *Environmental Politics* 30, 119–140.
- Chaffin, B. C., Garmestani, A. S., Gunderson, L. H., et al. (2016). Transformative environmental governance. *Annual Review of Environment and Resources* 41, 399–423.
- Community Environmental Legal Defense Fund (CELDF). (2015). Rights of Nature Going Global. Available from <https://celdf.org/rights/rights-of-nature/>.
- Connolly, K. (2002). *German animals given legal rights*. Available from www.theguardian.com/world/2002/jun/22/germany.animalwelfare.
- Constitution of the Plurinational State of Bolivia. (2009). Translated by Luis Francisco Valle V. Printed in San Bernadino, California. Spanish version. Available from <https://bit.ly/34PBOeX>.
- Constitution of the Republic of Ecuador. (2008). English translation from Political Database of the Americas, Georgetown University. Available from <https://bit.ly/3I1D8JP>. Spanish version available from <https://bit.ly/3noJv1T>.
- Convention on Biological Diversity (CBD). (2012). UNEP/CBD/COP/DEC/XI/22, Decision adopted by the Conference of the Parties to the Convention on Biological Diversity at its Eleventh Meeting, XI/22 Biodiversity for poverty eradication and development, 5 December. Available from www.cbd.int/doc/decisions/cop-11/cop-11-dec-22-en.pdf.
- Cook, R. A., Karesh, W. B., and Osofsky, S. A. (2004). *The Manhattan principles on “One World, One Health”: Building interdisciplinary bridges to health in a globalized world*. New York: Wildlife Conservation Society.
- Cullinan, C. (2011). *Wild law: A manifesto for Earth justice*. 2nd ed. Chelsea, VT: Chelsea Green Publishing.
- Daly, E. (2012). The Ecuadorian exemplar: The first ever vindications of constitutional right of nature. *Review of European Community and International Environmental Law (RECIEL)* 21, 63–66.
- De Mori, B. (2019). Animal testing: The ethical principle of the 3Rs from laboratories to “field” research with wild animals. *Etica & Politica / Ethics & Politics* 21, 553–570.
- Díaz, S., Settele, J., Brondízio, E., et al. (2019). Pervasive human-driven decline of life on Earth points to the need for transformative change. *Science* 366, 6471. DOI: 10.1126/science.aax3100.
- Donaldson, S., and Kymlicka, W. (2011). *Zoopolis: A political theory of animal rights*. Oxford: Oxford University Press.
- EU. (2020). Study to support the evaluation of the European Union strategy for the protection and welfare of animals 2012–2015. <https://bit.ly/3qn6ix0>.
- Evans, E. (2010). Constitutional inclusion of animal rights in Germany and Switzerland: How did animal protection become an issue of national importance? *Society and Animals* 18, 231–250.

- FAWC. (2009). Farm Animal Welfare in Great Britain: Past, Present and Future. Available from <https://bit.ly/3ocpZpS>.
- (2018). FAWC advice on animal sentience. Available from <https://bit.ly/3qpAGqP>.
- Galaz, V., Leach, M., Scoones, I., and Stein, C. (2015). *The political economy of One Health research and policy*. STEPS Working Paper 81. Brighton: STEPS Centre.
- García Pinillos, R., Appleby, M., Manteca, X., et al. (2016). One welfare – A platform for improving human and animal welfare. *Veterinary Record* 179, 412–413.
- Gill, S. D. (1987). *Mother Earth: An American story*. Chicago, IL: University of Chicago Press.
- Global Animal Law Project. (2018). UN Convention on Animal Health and Protection. www.globalanimallaw.org/database/universal.html.
- Goetschel, A. F. (2000). Animal cloning and animal welfare legislation in Switzerland. Report by the Foundation for the Animal in the Law, Presented at a symposium at the University of Lüneburg, Germany.
- Gordon, G. J. (2019). Environmental personhood. *Columbia Journal of Environmental Law* 43, 49–91.
- Haynes, R. P. (2011). Competing conceptions of animal welfare and their ethical implications for the treatment of non-human animals. *Acta Biotheoretica* 59, 105–120.
- Higgins, P., Short, D., and South, N. (2013). Protecting the planet: A proposal for a law of ecocide. *Crime, Law and Social Change: An Interdisciplinary Journal* 59, 251–266.
- Hogan, M. (2007). Standing for nonhuman animals: Developing a guardianship model from the dissents in *Sierra Club v. Morton*. *California Law Review* 95, 513–534.
- IUCN. (2012). Resolution WCC-2012-Res-100-EN Incorporation of the Rights of Nature as the organizational focal point in IUCN's decision making. Available from <https://bit.ly/338SvBD>.
- Jaber, D. (2000). Human dignity and the dignity of creatures. *Journal of Agricultural and Environmental Ethics* 13, 29–42.
- Jer, S. B. (2019). Ecocide or environmental self-destruction? *Environmental Ethics* 41, 237–247.
- Judd, R. (2003). The politics of beef: Animal advocacy and the kosher butchering debates in Germany. *Jewish Social Studies* 10, 117–150.
- Kopnina, H., Leadbeater, S., and Cryer, P. (2019). Learning to rewild: Examining the failed case of the Dutch “new wilderness” Oostvaardersplassen. *International Journal of Wilderness* 25, 72–89.
- Kopnina, H., Spannring, R., Hawke, S., et al. (2021). Ecodemocracy in practice: Exploration of debates on limits and possibilities of addressing environmental challenges within democratic systems. *Visions for Sustainability* 15, 9–23.
- Ladwig, B. (2015). Animal rights – Politicised, but not humanised. An interest-based critique of citizenship for domesticated animals. *Historical Social Research* 40, 32–46.
- Legge, D., and Brooman, S. (2020). Reflecting on 25 years of teaching animal law: Is it time for an international crime of animal ecocide? *Liverpool Law Review* 41, 201–218.
- Lorimer, J., and Driessen, C. (2014). Wild experiments at the Oostvaardersplassen: Rethinking environmentalism in the Anthropocene. *Transactions of the Institute of British Geographers* 39, 169–181.
- Lovelock, J. E. (1990). Hands up for the Gaia hypothesis. *Nature* 344, 100–102.
- McCulloch, S. P. (2013). A critique of FAWC's five freedoms as a framework for the analysis of animal welfare. *Journal of Agricultural and Environmental Ethics* 26, 959–975.
- Mellor, D. (2016). Updating animal welfare thinking: Moving beyond the “five freedoms” towards “a life worth living.” *Animals* 6, 1–20.
- Nash, R. F. (1989). *The rights of nature: A history of environmental ethics*. Madison: University of Wisconsin.
- Niesen, P. (2019). Menschen und Tiere – ein politisches Verhältnis. In *Haben Tiere Rechte? Bundeszentrale für politische Bildung*. E. Diehl and J. Tuidler (Eds.), pp. 379–383. Bonn: Germany.
- Nussbaum, M. (2006). *Frontiers of justice: Disability, nationality, species membership*. Cambridge, MA: Harvard University Press.
- Ohl, F., and van der Staay, F. J. (2012). Animal welfare: At the interface between science and society. *The Veterinary Journal* 192, 13–19.

- OIE. (2002). Resolution No. XIV: Animal Welfare Mandate of the OIE. www.oie.int/app/uploads/2021/03/a-reso-2002.pdf.
- (2020a). OIE animal welfare standards. www.oie.int/en/what-we-do/standards/.
- (2020b). World Organization for Animal Health. www.oie.int.
- (2020c). Working Group on Wildlife. <https://bit.ly/33w5ahR>.
- One Welfare. (2020). www.onewelfareworld.org/ (accessed August 12, 2020).
- Pecharroman, L. C. (2018). Rights of nature: Rivers that can stand in court. *Resources* 7, 1–14.
- Pittsburgh Pennsylvania Code of Ordinances. (2013). Code of Ordinances City of Pittsburgh Pennsylvania. Codified through Ordinance No. 12–2013, April 19, 2013. Available from <https://bit.ly/3FqPeuz>.
- Razzaque, J., Visseren-Hamakers, I., Prasad Gautam, A., et al. (2019). Options for decision makers. In *Global assessment report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. E. Sonnewend Brondizio, J. Settele, S. Díaz and H. T. Ngo (eds.), pp. 875–1028. Bonn: IPBES Secretariat. <https://doi.org/10.5281/zenodo.3832107>
- Regan, T. (1983). *The case for animal rights*. Berkeley: University of California Press.
- Ryder, R. (1971). Experiments on animals. In *Animals, men and morals: An enquiry into the maltreatment of non-humans*. S. Godlovitch, R. Godlovitch and J. Harris (eds.). New York: Taplinger Publishing Company.
- Seubert, S. (2015). Politics of inclusion. Which conception of citizenship for animals? *Historical Social Research* 40, 63–69.
- Singer, P. (1975). *Animal liberation*. New York: HarperCollins.
- Sollund, R. (2020). Wildlife management, species injustice and ecocide in the Anthropocene. *Critical Criminology* 28, 351–369.
- Stein, T. (2015). Human rights and animal rights: Differences matter. *Historical Social Research* 40, 55–62.
- Stone, C. D. (1972). Should trees have standing? Towards legal rights for natural objects. *Southern California Law Review* 45, 450–501.
- Tamaqua Borough Sewage Sludge Ordinance. (2006). Tamaqua Borough, Schuylkill County, Pennsylvania Ordinance No. 612, 2006. Available from <http://files.harmonywithnatureun.org/uploads/upload666.pdf>.
- UK Animal Welfare Act. (2006). Available from www.legislation.gov.uk/ukpga/2006/45/contents.
- United Nations (UN). (1982). A/RES/37/7. World Charter for Nature. Available from <https://bit.ly/3rfqKzb>.
- (1992). Rio Declaration on Environment and Development. Available from <https://bit.ly/3Hodjnx>.
- (2012). The future we want: Outcome document of the United Nations Conference on Sustainable Development. Available from <https://bit.ly/3od4bdB>.
- (2020). Harmony with Nature. www.harmonywithnatureun.org/.
- Universal Declaration of the Rights of Mother Earth (UDRME). (2010). World People’s Conference on Climate Change and the Rights of Mother Earth. Cochabamba, Bolivia. Available from <https://bit.ly/3ghsJy4>.
- Valeix, S. (2014). *Toward One Health? Evolution of international collaboration networks on Nipah virus research from 1999–2011*. STEPS Working Paper 74. Brighton: STEPS Centre.
- Villalba, U. (2013). *Buen Vivir* vs development: A paradigm shift in the Andes? *Third World Quarterly* 34, 1427–1442.
- Visseren-Hamakers, I. J. (2015). Integrative environmental governance: Enhancing governance in the era of synergies. *Current Opinion in Environmental Sustainability* 14, 1–16.
- (2018a). A framework for analyzing and practicing integrative governance: The case of global animal and conservation governance. *Environment and Planning C: Politics and Space* 36(8), 1391–1414.
- (2018b). Integrative governance: The relationships between governance instruments taking center stage. *Environment and Planning C: Politics and Space* 36, 1341–1354.
- (2020). The 18th sustainable development goal. *Earth System Governance* 3, 100047.
- Wallach, A., Bekoff, M., Batavia, C., Nelson, M., and Ramp, D. (2018). Summoning compassion to address the challenges of conservation. *Conservation Biology* 32, 1255–1265.

- Weary, D. M., and Robbins, J. A. (2019). Understanding the multiple conceptions of animal welfare. *Animal Welfare* 28, 33–40.
- Weaver, J. (Ed.). (1996). *Defending Mother Earth: Native American perspectives on environmental justice*. Maryknoll NY: Orbis Books.
- Webster, J. (1994). *Animal welfare: A cool eye towards Eden*. Oxford: Blackwell Publishing.
- Wemelsfelder, F., and Lawrence, A. B. (2001). Qualitative assessment of animal behaviour as an on-farm welfare-monitoring tool. *Acta Agriculturae Scandinavica*, 51, 21–25.
- Wise, S. (2016). *Animal Rights*. Available from www.britannica.com/topic/animal-rights.
- Wood, H. W. (1984). The United Nations World Charter for Nature: The developing nations' initiative to establish protections for the environment. *Ecology Law Quarterly* 12, 977–996.
- World Animal Protection. (2020). <https://api.worldanimalprotection.org>.
- World Federation for Animals (WFA). (2021). About us. <https://wfa.org/about-us/>.
- Zinsstag, J., Schelling, E., Waltner-Toews, D., and Tanner, M. (2011). From “one medicine” to “one health” and systemic approaches to health and well-being. *Preventive Veterinary Medicine* 101, 148–156. DOI: 10.1016/j.prevetmed.2010.07.003.
- Zinsstag, J., Schelling, E., Wyss, K., and Mahamat, M. B. (2006). Potential of cooperation between human and animal health to strengthen health systems. *The Lancet* 9503, 2142–2145.