

## Towards a Universal Declaration of the Rights of Wetlands

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**Abstract.** The rights of Nature, a concept recognised by several courts, legislatures and international governance institutions, is being promoted by some non-governmental organisations, scientists, attorneys, Indigenous peoples, local communities, and others. In this article we propose a Universal Declaration of the Rights of Wetlands, consistent with the 1982 World Charter for Nature. Recognition of these rights supports the provision of ecosystem services essential to human well-being and to other life on Earth. Further, such rights could reinforce efforts to reduce wetland loss and deterioration, thereby slowing climate destabilisation and biodiversity declines. Because world scientists have warned that biodiversity loss, ecosystem degradation and climate destabilisation, which intensify wetland loss, constitute global emergencies, new approaches are required to ensure that wetlands are protected and their benefits to people sustained. The proposed Universal Declaration of the Rights of Wetlands states that wetlands possess rights to: exist; their ecologically determined location in the landscape; natural, connected and sustainable hydrological regimes; ecologically sustainable climatic conditions; naturally occurring biodiversity; regeneration and restoration; integrity of structure, function and evolutionary processes; fulfil natural ecological roles in the Earth's processes; and be free from pollution and degradation. Recognition of these rights is seen as an essential step in efforts to stop wetland loss and deterioration.

**Keywords:** Earth justice, Ramsar Convention, rights of Nature, traditional knowledge, wetlands.

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### Introduction

Current and historical approaches to the conservation and management of the environment have proven inadequate to maintain ecosystems at various scales (Union of Concerned Scientists 1992; Koons 2012; Ripple *et al.* 2017; Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services 2019). This is especially the case for wetlands, which often have been treated by societies as 'wastelands' and have been degraded or destroyed with little understanding of their

ecological importance or significance for human well-being (Millennium Ecosystem Assessment 2005; Moomaw *et al.* 2018; Ramsar Convention on Wetlands 2018). The ongoing destabilisation of the global climate and rapid loss of biodiversity (Trisos *et al.* 2020) impress upon us the urgency for shifting the human–Nature relationship to one of greater reciprocity and respect for Nature.

To this end, we make a case for a new explicit global declaration of the recognition of legal rights for wetlands,

intending that such rights should be defended on behalf of these sites and systems in a manner analogous to the rights held by people. As wetland scientists, a climate scientist, and attorneys, we call for a fundamental reappraisal of our collective global efforts to curtail wetland destruction (Finlayson *et al.* 2019) and propose a Universal Declaration of the Rights of Wetlands (hereafter the Declaration), which centres on the rights of wetlands to exist through time and function naturally as part of the wider landscape, and thereby more effectively support a safe climate and naturally occurring biodiversity. In this article we provide the justification for the proposed universal Declaration and conclude with the Declaration itself. It is intended that this Declaration should be promoted worldwide for endorsement in multiple forums, including upcoming scientific conferences (e.g. Simpson *et al.* 2020) and future meetings of the Ramsar Convention on Wetlands.

The topic of rights of Nature has received fresh interest in recent decades. Efforts to recognise rights of Nature have involved non-governmental organisations (NGOs), Indigenous peoples, and local communities, and have occasionally been supported by courts, local and national legislatures, and international organisations (La Follette and Maser 2020). The temporal and spatial development of the rights of Nature is shown in the annotated timeline and Fig. S1 (available as Supplementary material to this article) to place this Declaration in context and acknowledge the many precedents for such a Declaration. The annotated timeline and Fig. S1 document some of the events in the evolution of the expansion of the circle of rights holders through history and references some of the many cultures that have recognised the rights of Nature; a world map illustrating the geographical and historical distribution of the evolving rights community and personhood of Nature is shown in Fig. S1. We encourage others to share further examples so that an increasingly complete overview can continue to be built in the future.

For the purposes of this article, ‘Nature’ refers to the physical world, all the abiotic and biotic elements or members of the physical world, including humans, and the relationships and processes that sustain Nature (UN General Assembly 1982). ‘Rights’, however, are largely a legal construct, one that is rooted in the ethical framework of a given society (Gwiazdon 2020). A legal right is a claim, ‘enforceable by state power, that others act in a certain manner in relation to the right holder’ (Singer 1982). Legal scholar Wesley Hohfeld (1913) long ago observed that legal rights are correlative with duty. A legal right exists only if there is another party who has a corresponding ‘duty’ to act or refrain from acting. Thus, according to Hohfeld, abstract rights are ‘nonsensical concepts’ (Jimenez 2016). Under this view, the existence of rights of Nature implies a duty on others (humans) to respect those rights.

The relationship between Nature and rights is complex. Rights may be derived from Nature, and the term ‘natural rights’ typically suggests rights for humans that come from Nature or God. Humans may also claim rights to or in Nature and its bounty. Such anthropocentric rights may be based on an individual person’s or society’s ‘right to the existence of individual creatures and organisms, species, ecosystems, or nature’ (Huffman 1992). In contrast, biocentric rights contemplate the rights of Nature, and these rights are based on an individual

creature, organism, species, ecosystem or Nature’s right to exist (Huffman 1992). Rights of Nature are inherent, rather than conferred or granted, yet corresponding duties on humans still attach. It is the rights of Nature, specifically those of wetlands, that are the focus in this article.

Gwiazdon (2020) discusses rights of Nature as a response to harms done by humans against Nature. In this context, the rights of Nature encompass restorative justice: they are a means of restoring and healing our relationship with Nature and with life on Earth, a means that integrates accountability for wrong-doing or harm as part of the human–Nature relationship. This concept of reciprocity and accountability in the human–Nature relationship is consistent with the worldview of many (but not all) Indigenous cultures.

Effective enforcement or defence of the rights of non-human entities may require that the non-human entity have legal personhood. Cadaru (2020) clarifies the difference between rights of Nature on the one hand and status as a living being and a legal person on the other, stating:

The concept of granting rights to Nature presupposes that Nature – and parts of Nature, such as mountains, trees, coral reefs and entire ecosystems – is a being and has personhood. Entities are granted rights in human legal systems because they are beings.

The recognition of various aspects of Nature and of Mother Earth as living beings is integral to many Indigenous cultures, and has a long history in Western culture (Yunkaporta 2019; Warne 2020).

### Character and importance of wetlands

‘Wetlands’ encompass a wide range of interconnected social, hydrological, and ecological settings (Finlayson and Horwitz 2015). According to the defining global intergovernmental treaty on wetlands (the Ramsar Convention on Wetlands), wetlands include:

... areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.

Wetlands are essential to many forms of life, comprising a wide range of ecosystems that support many species populations, as well as providing ecological, hydrological, physiographical, and cultural functions and services (Ramsar Convention on Wetlands 2018). These functions include a critical role in moderating climate, at all scales and time frames. Approximately 20–30% of the world’s soil carbon is stored in wetlands, and this is a crucial factor towards maintaining long-term climate stability (Nahlik and Fennessy 2016). Wetlands cool surrounding areas, store flood waters, store and provide water and buffer both coastal and inland storms, and hence are essential to shorter-term and more localised aspects of climate resilience (Millennium Ecosystem Assessment 2005; Moomaw *et al.* 2018; Ramsar Convention on Wetlands 2018).

Humans throughout history have depended on wetlands in many ways (Finlayson and Horwitz 2015), including as sources

of water, food, minerals, energy, flood storage, storm defence, pollution attenuation, transportation routes, defensive barriers, sanitation, recreation, and other material benefits (Millennium Ecosystem Assessment 2005; Ramsar Convention on Wetlands 2018). The most recent estimate of the economic value of all wetlands has been at least Int\$47.4 trillion annually (Davidson *et al.* 2019). Many non-material benefits provided by wetlands have likewise been recognised by humans throughout history, such as aesthetic inspiration, social attachment, cultural traditions, mental health, and spiritual significance (Millennium Ecosystem Assessment 2005; de Groot *et al.* 2006; Ramsar Convention on Wetlands 2018). The socioecological settings provided by wetlands have been identified as essential elements of human well-being, thereby maintaining healthy populations (Finlayson and Horwitz 2015). This recognition may occur in a variety of ways that may be communicated widely and may be general or particular, with this variety of response reflecting an important element of the world's cultural diversity.

### **Alarming declines in the extent and condition of the world's wetlands and ramifications for responding effectively to the climate crisis**

Human actions have both directly and indirectly negatively affected wetlands, including by drainage, in-filling, conversion, encroachment, fragmentation, pollution, overabstraction, damming of rivers, introduction of pathogens and invasive species, climate disruption and thawing of permafrost wetlands, loss or change in wetland habitats due to sea level rise, changes in hydrological regimes, causing submersion or drying of wetlands, biodiversity disruption due to warming temperatures and changing hydrological regimes and the overharvesting of flora and fauna (Davidson and Finlayson 2018, 2019; Moomaw *et al.* 2018; Ramsar Convention on Wetlands 2018; Davidson *et al.* 2020; Fluet-Chouinard *et al.* 2020). Costanza *et al.* (2014) reported that between 1997 and 2011, the loss of ecosystem services value from wetlands was over Int\$20 trillion. Successive published assessments (Davidson and Finlayson 2018, 2019; Moomaw *et al.* 2018; Ramsar Convention on Wetlands 2018; Darrah *et al.* 2019; Davidson *et al.* 2020; Fluet-Chouinard *et al.* 2020; McInnes *et al.* 2020) at a variety of spatial and temporal scales demonstrate large overall trends of loss and degradation resulting from these impacts, worse for wetlands than for any other type of ecosystem, with consequent reductions in associated human benefits.

Further, the world scientists' warning of a climate emergency (Ripple *et al.* 2020) emphasises the moral obligation that scientists bear for clearly warning 'humanity of any catastrophic threat' and declares the planet to be in a climate emergency. The warning's authors state:

We must protect and restore Earth's ecosystems. Phytoplankton, coral reefs, forests, savannas, grasslands, wetlands, peatlands, soils, mangroves, and sea grasses contribute greatly to sequestration of atmospheric CO<sub>2</sub>. Marine and terrestrial plants, animals, and microorganisms play significant roles in carbon and nutrient cycling and storage [Ripple *et al.* 2020].

Given the significance of the role of wetlands in regulating the global carbon cycle and in supporting climate resiliency, the

global decline in wetland extent and condition has a direct bearing on our ability to respond effectively to the climate crisis.

### **Global framework, policy and action response**

As of October 2020, some 171 governments, in ratifying the Ramsar Convention on Wetlands, have committed to promoting the conservation of designated Ramsar Wetlands of International Importance (known as Ramsar sites) and maintaining the ecological character, as per the 'wise use' guidance from the Convention (Finlayson *et al.* 2011; Davidson 2018), of all wetlands in their territory. The Ramsar Convention on Wetlands defines the wise use of wetlands as 'the maintenance of their ecological character, achieved through the implementation of ecosystem approaches, within the context of sustainable development' (Finlayson *et al.* 2011). Thus, 'wise use' can be seen as the conservation and sustainable use of wetlands and all the services they provide, for the benefit of people and nature (Finlayson *et al.* 2011).

The Parties to the Convention have adopted a range of other specific undertakings, guidelines and action programs designed to stem the progressive degradation, encroachment on, and loss of wetlands throughout the world as a contribution towards sustainable development in accordance with the Sustainable Development Goals (McInnes 2018). International cooperation frameworks on issues such as biodiversity, climate, heritage protection, transboundary watercourses, hydrological management, food security, and others reinforce this agenda. The success of all such frameworks, and the Ramsar Convention on Wetlands itself, depends on actions by a range of actors, including national and local governments, business, the scientific community, NGOs, local communities, and individual citizens.

Efforts by governments and NGOs at different scales have had positive results in some locations. However, as noted, the overall trend in the extent and condition of wetlands continues to be one of decline (Davidson and Finlayson 2018, 2019; Darrah *et al.* 2019). The loss more generally of biodiversity, including the imminent extinction of one million species and declining quality of other ecosystems (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services 2019), demonstrates that the efforts, investments, and existing environmental legal frameworks and policies are not yet sufficient to achieve agreed objectives, such as the Sustainable Development Goals (<https://www.un.org/sustainabledevelopment/>, accessed 30 September 2020) and the Aichi Biodiversity Targets (<https://www.cbd.int/sp/targets/>, accessed 30 September 2020). Further, the world scientists' warnings to humanity in 1992 (Union of Concerned Scientists 1992) and 2017 (Ripple *et al.* 2017) have been a clarion call for a 'great change in our stewardship of the Earth and the life on it' (Union of Concerned Scientists 1992) and for urgently needed alternatives to 'business as usual'. Finlayson *et al.* (2019) responded to the world scientists' second warning by identifying specific actions to stem wetland loss and degradation while responding to climate change, and further noted the importance of considering the input and knowledge of Indigenous peoples and local communities, who often have a particularly close relationship with local wetlands and other

ecosystems (Kimmerer 2013; Demos 2016; Hillebrecht and Berros 2017; Studley 2019; Studley and Bleisch 2018; Kahui and Cullinane 2019).

### Embracing a plurality of voices and worldviews

International environmental governance has long had significant built-in and problematic biases and imbalances in its regional, cultural, ethnic, gender, and linguistic perspectives (Meadows 1999; Koons 2012; Banks 2018; Pecharroman 2018; Studley and Bleisch 2018). Efforts to address this are increasing, including by recognising more diverse forms of governance (Studley 2019), but much remains to be done. In particular, drawing upon traditional and local knowledge, customary law, sacred sites, philosophies, religions, and cosmologies that put the human species in a more respectful relationship with non-human Nature can result in effective, sustainable, and ethical 'stewardship of the Earth and the life on it' (Cullinane 2011; Kimmerer 2013; Pope Francis 2015; Demos 2016; Hillebrecht and Berros 2017; Studley and Bleisch 2018; Kahui and Cullinane 2019; *Te Awa Tupua (Whanganui River Claims Settlement) Act 2017*, see <http://www.legislation.govt.nz/act/public/2017/0007/latest/whole.html>, accessed 5 October 2020). It is therefore imperative to continue expanding appropriate support for responsibility, engagement, enfranchisement, redress, and other environmentally related rights that incorporate Indigenous peoples, local communities, children, women, minorities, and displaced persons.

With the above in mind, the following broad principles from *Ens et al. (2012)* have been adapted to illustrate key elements for supporting the management of natural and cultural resources of wetlands by combining Indigenous and other knowledge:

- Recognise the validity of both Indigenous and other environmental knowledge and philosophies
- Create more opportunities for improved cross-cultural understanding, respect and collaborations
- Involve Indigenous people and their knowledge and interests at all stages of projects or research (including planning)
- Ensure that time and continuity of effort and resources are available (to undertake participatory processes and for trust building and innovation)
- Establish high-level political support through legal and policy frameworks to maintain continuity of government and societal commitment to the Indigenous management of wetlands.

At an international intergovernmental level, the Ramsar Convention has encouraged the integration of traditional and local knowledge and customs into the management of wetlands (Carbonell *et al.* 2001), but has not previously considered the specific measures raised in the above mentioned principles. Incorporating a greater emphasis on the rights of wetlands could provide the impetus and means for combining Indigenous and other knowledge to more effectively support the management of the natural and cultural resources of wetlands.

### Rights held by non-human entities

Many authors have described how humans are an integral part of Nature, are not separate from it, and exist in relationship with Nature as members of the Earth community. Many cultures have

acknowledged through time this interconnectedness with the wider biosphere by conferring status as a living being or beings, or personhood, or both on Nature or elements of Nature (Muir 1913; Leopold 1949; Nash 1989; Stone 2010; Cullinane 2011; Kimmerer 2013; Demos 2016; Hillebrecht and Berros 2017; Kahui and Cullinane 2019). In many cases, conferring 'personhood' and recognition of elements of Nature as living beings results from animistic worldviews that include spiritual governance and recognition of resident numina in enspirited Sacred Natural Sites (SNS) or elements of Nature, which then leads to more successful conservation of biodiversity (Studley 2018; Studley and Bleisch 2018). It follows that, in such a view of the world, the rights and entitlements that attach to being a 'person' or living being will be capable of attaching to non-human entities, including other living species and natural systems such as mountains, forests and wetlands (Demos 2016; Studley and Bleisch 2018; Wilson and Lee 2019; *Te Awa Tupua (Whanganui River Claims Settlement) Act 2017*; World People's Conference on Climate Change and the Rights of Mother Earth, see <https://pwccc.wordpress.com/programa/>, accessed 5 October 2020). This perspective is integral to the philosophy and values of many societies today, some of which exemplify knowledgeable and sustainable ways of relating to and being part of the natural environment (La Follette and Maser 2020).

More recently, we note that the term 'naturehood', rather than 'personhood', has been used at times to reference the granting of rights to non-human elements of the Earth community, although the term 'naturehood' has also referenced connecting with nature in one's local environment (i.e. one's natural neighbourhood). The authors of this article are less concerned with specific terminology than with the underlying concept of recognising the rights of wetlands and other aspects of Nature to exist through time while maintaining ecosystem integrity and functioning naturally as part of a larger landscape in a sustainable climate with naturally occurring biodiversity.

Increasingly, intrinsic 'rights of Nature' have become integrated into a wide range of laws and customs. Examples include provisions in Bangladesh, Brazil, Bolivia, Bhutan, Colombia, Ecuador, India, Mexico, New Zealand, Uganda and the US, as well as in the work of the United Nations (see annotated timeline and world map in Fig. S1; Demos 2016; Studley and Bleisch 2018; La Follette and Maser 2020). NGOs, such as the Earth Law Center, the Community Environmental Legal Defence Fund and the Global Alliance for the Rights of Nature, are working to support and further develop these efforts. Comparative analyses (O'Donnell and Talbot-Jones 2018; Pecharroman 2018) conclude from successful outcomes, such as New Zealand's *Te Awa Tupua Act 2017* (Whanganui River Claims Settlement Bill), that these approaches have increased applicability. Indications are that the trend towards granting rights to Nature will continue further, and successful examples can provide models for future efforts.

Even instances where court decisions have not supported rights of Nature can provide 'lessons learned', thereby contributing to the success of future initiatives. The Indian Supreme Court's current stay of the Uttarakhand High Court's decision granting legal and living personhood to the Ganges and Yamuna rivers highlights the need to resolve ambiguity concerning

accountability (O'Donnell 2018; Studley 2019). Elsewhere, the [United States District Court for the Northern District of Ohio Western Division \(2020\)](#) rejected a change to the City of Toledo's Charter to recognise the rights of Lake Erie as being beyond the municipality's authority. The Lake Erie Bill of Rights had been added to the City Charter after it received ~60% of the vote in a special election (see <https://www.toledoblade.com/local/politics/2019/02/26/Lake-Erie-Bill-of-Rights-gets-approval-from-Toledo-voters/stories/20190226159>), suggesting dissatisfaction with traditional environmental protection mechanisms, as well as popular support for the rights of Nature concept.

### Enlarging the paradigm: a Universal Declaration of the Rights of Wetlands

It has taken many decades since the Universal Declaration of Human Rights in 1948 to achieve acceptance of the rights of humans as a universal principle. The evolution towards analogous 'universal' formulations of rights for non-humans has taken longer still. However, there is now a pressing need for further development of the emerging paradigm by enlarging the community of entities/beings with rights given the urgent ecological and climate crises facing the world today (Meadows 1999; Koons 2012). This shift in thinking is deepening the repertoire of responses to the critically urgent ecological and climate crises as outlined in the world scientists' warning to humanity (Ripple *et al.* 2017; Finlayson *et al.* 2019).

In 1982, the United Nations General Assembly adopted the World Charter for Nature. It declared (in part) that:

Mankind is a part of nature and life depends on the uninterrupted functioning of natural systems which ensure the supply of energy and nutrients...

Convinced that:

Every form of life is unique, warranting respect regardless of its worth to man, and, to accord other organisms such recognition, man must be guided by a moral code of action...

Nature shall be respected and its essential processes shall not be impaired.

The Charter represents a remarkable global consensus to move towards a more respectful relationship with Nature, and the recognition of the inherent worth of all members of the Earth community, as well as the imperative for humans not to impair the essential processes of Nature (UN General Assembly 1982).

Between 2009 and 2018, countries around the world, through the nine Resolutions on Harmony with Nature (United Nations 2018), have continued to develop this ethos, beginning with proclaiming 22 April as International Mother Earth Day in 2009 and an acknowledgement that:

...the Earth and its ecosystems are our common home, and...it is necessary to promote Harmony with Nature in order to achieve a just balance among the economic, social and environmental needs of present and future generations ...Devising a new world will require a new relationship with the Earth and with humankind's own existence. Since 2009,

the aim of the General Assembly, in adopting its nine resolutions on Harmony with Nature, has been to define this newly found relationship based on a non-anthropocentric relationship with Nature [United Nations 2018].

On Earth Day (22 April) in 2010, the World People's Conference on Climate Change and the Rights of Mother Earth issued the Universal Declaration of Rights of Mother Earth in Cochabamba, Bolivia, a document that goes further and recognises the inter-related and interdependent community of life and the inherent rights and responsibilities of all beings, organic and inorganic, including the recognition of Mother Earth as a living being: 'Mother Earth is a unique, indivisible, self-regulating community of inter-related beings that sustains, contains and reproduces all beings' (World People's Conference on Climate Change and the Rights of Mother Earth, see <https://therightsofnature.org/universal-declaration/>, Article 1. Mother Earth, point 2).

Gwiazdon (2020) refers to the Declaration of the Rights of Mother Earth as 'the guiding document to the world's largest network that advances rights of Nature, the Global Alliance for the Rights of Nature', a document, 'that outline[s] its understanding of Mother Earth, the inherent rights of Mother Earth, the obligations of humans', and notes that 'The idea of Earth as a living entity, and humanity as part of the whole, is a core component of indigenous cultures and has been accepted widely in Western society'.

This and other declarations of rights of Nature emerge from millennia of human thought and culture (Nash 1989; Cullinan 2011; Demos 2016; Studley and Bleisch 2018), as documented in the annotated timeline and world map included in the Supplementary material.

To date, there has been no explicit and formal widespread recognition of wetlands having intrinsic rights to exist and to function, although some wetlands are included within some of the existing acknowledgements of Nature's rights, such as the Universal Declaration of the Rights of Rivers (Earth Law Center 2017). Because of the central role of wetlands in supporting life on Earth (Millennium Ecosystem Assessment 2005; Ramsar Convention on Wetlands 2018) and for combatting the ongoing destabilisation of the earth's climate (Moomaw *et al.* 2018; Ripple *et al.* 2020), support for the Universal Declaration of the Rights of Wetlands will provide a timely basis for a step-change in effective and morally robust re-visioning of the human relationship with wetlands and Nature to include people as members of the Earth community, bearing responsibilities and duties, as well as rights, rather than being primarily resource extractors or managers of natural resources who currently so often are identified as the sole possessors of personhood and rights.

With this rationale in mind, we propose a Universal Declaration of the Rights of Wetlands (Box 1) and ask the wetland science community and others to embrace it, share it with the wider world community, and undertake research and practice to ensure these rights are understood, respected, and upheld.

We strongly urge all governments, from local to national, as well as international organisations to support this Declaration and provide mechanisms and funding for implementation and enactment. We specifically encourage the Contracting Parties (countries) to the Ramsar Convention on Wetlands to seek ways

**Box 1. Proposed Universal Declaration of the Rights of Wetlands**

**Acknowledging** that wetlands are essential to the healthy functioning of Earth processes and provision of essential ecosystem services, including climate regulation at all scales, water supply and water purification, flood storage, drought mitigation and storm damage prevention;

**Acknowledging** that wetlands have significance for the spiritual or sacred inspirations and belief systems of many people worldwide, but particularly for Indigenous peoples and local communities living in close relationship to wetlands, and that wetlands provide opportunities to learn from and about Nature, which supports scientific understanding and innovation, cultural expression and artistic creativity;

**Further acknowledging** that humans and the natural world with all of its biodiversity depend upon the healthy functioning of wetlands and the benefits that they provide, and that wetlands play a significant role in global climate regulation;

**Alarmed** that existing wetland conservation and management approaches have failed to stem the loss and degradation of wetlands of all types around the globe;

**Further alarmed** that global climate destabilisation and biodiversity losses are accelerating and that efforts to reverse these trends are failing;

**Acknowledging** that peoples around the world of many cultures and faiths have recognised for millennia that Nature, or elements of Nature, are sentient living beings with inherent value and rights independent of their value to humans, and that Indigenous peoples, local communities and non-governmental organisations have been contributing to a global movement to recognise the rights of Nature;

**Aware** that continued degradation and loss of wetlands threaten the very fabric of the planetary Web of Life upon which depend the livelihoods, well-being, community life and spirituality of many people, particularly Indigenous peoples and local communities who live in close relationship with wetlands;

**Guided by** recent legal recognition of the inherent rights of Nature, including recognition of the entire Colombian Amazon as an 'entity subject to rights' by the Colombian Supreme Court; recognition of the rights and legal and living personhood of the Whanganui River through the *Te Awa Tupua Act* (Whanganui River Claims Settlement Bill) agreed upon by the Māori iwi and the New Zealand Parliament; and Ecuador's first-in-the-world recognition of the rights of Nature in their Constitution;

**Convinced** that recognising the enduring rights and the legal and living personhood of all wetlands around the world will enable a paradigm shift in the human–Nature relationship towards greater understanding, reciprocity and respect leading to a more sustainable, harmonious and healthy global environment that supports the well-being of both human and non-human Nature;

**Further convinced** that recognising the rights and legal and living personhood of all wetlands and the paradigm shift that this represents will lead to increased capacity to manage wetlands in a manner that contributes to reversing the destabilisation of the global climate and biodiversity loss;

**Declares** that all wetlands are entities entitled to inherent and enduring rights, which derive from their existence as members of the Earth community and should possess legal standing in courts of law. These inherent rights include the following:

1. The right to exist
2. The right to their ecologically determined location in the landscape
3. The right to natural, connected and sustainable hydrological regimes
4. The right to ecologically sustainable climatic conditions
5. The right to have naturally occurring biodiversity, free of introduced or invasive species that disrupt their ecological integrity
6. The right to integrity of structure, function, evolutionary processes and the ability to fulfil natural ecological roles in the Earth's processes
7. The right to be free from pollution and degradation
8. The right to regeneration and restoration.

to embrace the Declaration and to incorporate the rights of wetlands into their national procedures and operational processes.

### Conflicts of interest

Nick Davidson and Max Finlayson are editors for *Marine and Freshwater Research* but did not at any stage have access to this manuscript while in peer review, as is the standard practice when handling manuscripts submitted by an editor to this journal. *Marine and Freshwater Research* encourages its editors to publish in the journal, and they are kept totally separate from the decision-making processes for their manuscripts.

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### References

- Banks, M. (2018). Aboriginal title or legal personhood for land? The Canadian Society for Study of Practical Ethics/Société Canadienne Pour L'étude De L'éthique Appliquée. CSSPE/SCEAA Vol. 2: Practical ethics: issues and perspectives. Available at <https://scholar.uwindsor.ca/cgi/viewcontent.cgi?article=1011&context=cspse> [Verified 5 October 2020].
- Cadaru, E. (2020). Rights of Nature: myth, films, laws and the future. In 'Sustainability and the Rights of Nature in Practice'. (Eds C. La Follette and C. Maser.) pp. 13–38. (CRC Press: Boca Raton, FL, USA.)
- Carbonell, M., Nathai-Gyan, N., and Finlayson, C. M. (Eds) (2001). 'Science and Local Communities: Strengthening Partnerships for Effective Wetland Management.' (Ducks Unlimited Inc.: Memphis, TN, USA.)
- Costanza, R., de Groot, R., Sutton, P., van der Ploeg, S., Anderson, S., Kubiszewski, I., Farber, S., and Turner, K. R. (2014). Changes in the global value of ecosystem services. *Global Environmental Change* **26**, 152–158. doi:10.1016/J.GLOENVCHA.2014.04.002

- Cullinan, C. (2011). 'Wild Law: A Manifesto for Earth Justice', 2nd edn. (Green Books: White River Junction, VT, USA.)
- Darrah, S. E., Shennan-Farþón, Y., Loh, J., Davidson, N. C., Finlayson, C. M., Gardner, R. C., and Walpole, M. J. (2019). Improvements to the Wetland Extent Trends (WET) index as a tool for monitoring natural and human-made wetlands. *Ecological Indicators* **99**, 294–298. doi:10.1016/J.ECOLIND.2018.12.032
- Davidson, N. C. (2018). Ramsar Convention on Wetlands: scope and implementation. In 'The Wetland Book I: Structure and Function, Management and Methods'. (Eds C. M. Finlayson, M. Everard, K. Irvine, R. J. McInnes, B. A. Middleton, A. A. van Dam, and N. C. Davidson.) pp. 451–458. (Springer: Dordrecht, Netherlands.)
- Davidson, N. C., and Finlayson, C. M. (2018). Extent, regional distribution and changes in area of different classes of wetland. *Marine and Freshwater Research* **69**, 1525–1533. doi:10.1071/MF17377
- Davidson, N. C., and Finlayson, C. M. (2019). Updating global coastal wetland areas presented in Davidson and Finlayson (2018). *Marine and Freshwater Research* **70**, 1195–1200. doi:10.1071/MF19010
- Davidson, N. C., van Dam, A. A., Finlayson, C. M., and McInnes, R. J. (2019). Worth of wetlands: revised global monetary values of coastal and inland wetland ecosystem services. *Marine and Freshwater Research* **70**, 1189–1194. doi:10.1071/MF18391
- Davidson, N. C., Dinesen, L., Fennessy, S., Finlayson, C. M., Grillas, P., Grobicki, A., McInnes, R. J., and Stroud, D. A. (2020). Trends in the ecological character of the world's wetlands. *Marine and Freshwater Research* **71**, 127–138. doi:10.1071/MF18329
- de Groot, R. S., Stuij, M. A. M., Finlayson, C. M., and Davidson, N. (2006). Valuing wetlands: guidance for valuing the benefits derived from wetland ecosystem services. Ramsar technical report number 3/CBD technical series number 27, Ramsar Convention Secretariat & Secretariat of the Convention on Biological Diversity, Gland, Switzerland, and Montreal, Canada.
- Demos, T. J. (2016). Rights of Nature: the art and politics of Earth jurisprudence. In 'Elemental: An Arts and Ecology Reader'. (Ed. J. Brady.) pp. 133–151. (Gaia Project Press: London, UK.)
- Earth Law Center (2017). Universal declaration of river rights. Available at <https://www.earthlawcenter.org/river-rights> [Verified 19 August 2020].
- Ens, E. J., Finlayson, M. C., Preuss, K., Jackson, S., and Holcombe, S. (2012). Australian approaches for managing 'country' using Indigenous and non-Indigenous knowledge. *Ecological Management & Restoration* **13**, 100–107. doi:10.1111/J.1442-8903.2011.00634.X
- Finlayson, C. M., and Horwitz, P. (2015). Wetlands as settings for human health – the benefits and the paradox. In 'Wetlands and Human Health'. (Eds C. M. Finlayson, P. Horwitz, and P. Weinstein.) pp. 1–13. (Springer: Dordrecht, Netherlands.)
- Finlayson, C. M., Davidson, N., Pritchard, D., Milton, G. R., and MacKay, H. (2011). The Ramsar Convention and ecosystem-based approaches to the wise use and sustainable development of wetlands. *Journal of International Wildlife Law and Policy* **14**, 176–198.
- Finlayson, C. M., Davies, G. T., Moomaw, W. R., Chmura, G. L., Natali, S. M., Perry, J. E., Roulet, N., and Sutton-Grier, A. E. (2019). The second warning to humanity – providing a context for wetland management and policy. *Wetlands* **39**, 1–5. doi:10.1007/S13157-018-1064-Z
- Fluet-Chouinard, E., Stewart-Koster, B., Davidson, N., Finlayson, C. M., and McIntyre, P. B. (2020). Reciprocal insights from global aquatic stressor maps and local reporting across the Ramsar wetland network. *Ecological Indicators* **109**, 105772. doi:10.1016/J.ECOLIND.2019.105772
- Gwiżdżon, K. A. (2020). Defending the Tree of Life: the ethical justification for the rights of Nature in a theory of justice. In 'Sustainability and the Rights of Nature in Practice'. (Eds C. La Follette and C. Maser.) pp. 13–38. (CRC Press: Boca Raton, FL, USA.)
- Hillebrecht, A. L. T., and Berros, M. V. (Eds) (2017). Can Nature have rights? Legal and political insights. RCC perspectives: transformations in environment and society. (Rachel Carson Center for Environment and Society: Munich, Germany.) Available at <http://www.environmentandsociety.org/perspectives/2017/6/can-nature-have-rights-legal-and-political-insights> [Verified 5 October 2020].
- Hohfeld, W. N. (1913). Some fundamental legal conceptions as applied in judicial reasoning. *The Yale Law Journal* **23**, 16–59. doi:10.2307/785533
- Huffman, J. L. (1992). Do species and nature have rights? *Public Land and Resources Law Review* **13**, 51–76.
- Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (2019). The global assessment report on biodiversity and ecosystem services. Summary for policymakers. (IPBES Secretariat: Bonn, Germany.) Available at [https://ipbes.net/sites/default/files/2020-02/ipbes\\_global\\_assessment\\_report\\_summary\\_for\\_policymakers\\_en.pdf](https://ipbes.net/sites/default/files/2020-02/ipbes_global_assessment_report_summary_for_policymakers_en.pdf) [Verified 5 October 2020].
- Jimenez, M. (2016). Distributive justice and contract law: a Hohfeldian analysis. *Florida State University Law Review. Florida State University. College of Law* **43**, 1265–1317.
- Kahui, V., and Cullinane, A. (2019). The ecosystem commons. *New Zealand Journal of Ecology* **43**, 1–5. doi:10.20417/NZJECOL.43.28
- Kimmerer, R. W. (2013). 'Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants.' (Milkweed Editions: Minneapolis, MN, USA.)
- Koons, J. E. (2012). At the tipping point: defining an Earth jurisprudence for social and ecological justice. *Loyola Law Review* **58**, 349–390.
- La Follette, C., and Maser, C. (Eds) (2020). 'Sustainability and the Rights of Nature in Practice.' (CRC Press: Boca Raton, FL, USA.)
- Leopold, A. (1949). 'A Sand County Almanac.' (Oxford University Press: Oxford, UK.)
- McInnes, R. M. (2018). Sustainable Development Goals. In 'The Wetland Book I: Structure and Function, Management and Methods'. (Eds C. M. Finlayson, M. Everard, K. Irvine, R. J. McInnes, B. A. Middleton, A. A. van Dam, and N. C. Davidson.) pp. 631–636. (Springer Publishers: Dordrecht, Netherlands.)
- McInnes, R. M., Davidson, N. C., Rostron, C., Simpson, M., and Finlayson, C. M. (2020). A citizen-science state of the world's wetlands survey. *Wetlands* **40**, 1577–1593. doi:10.1007/S13157-020-01267-8
- Meadows, D. (1999). Leverage points: places to intervene in a system. (Sustainability Institute: Hartland, VT, USA.) Available at <http://donelameadows.org/archives/leverage-points-places-to-intervene-in-a-system/> [Verified 5 October 2020]
- Millennium Ecosystem Assessment (2005). 'Ecosystems and Human Well-being: Wetlands and Water Synthesis.' (World Resources Institute: Washington, DC, USA.)
- Moomaw, W. R., Chmura, G. L., Davies, G. T., Finlayson, C. M., Middleton, B. A., Natali, S. M., Perry, J. E., Roulet, N., and Sutton-Grier, A. E. (2018). Wetlands in a changing climate: science, policy and management. *Wetlands* **38**, 183–205. doi:10.1007/S13157-018-1023-8
- Muir, J. (1913). 'The Story of my Boyhood and Youth.' (Houghton Mifflin: Boston, MA, USA.)
- Nahlik, A. M., and Fennessy, M. S. (2016). Carbon storage in US wetlands. *Nature Communications* **7**, 13835. doi:10.1038/NCOMMS13835
- Nash, R. F. (1989). 'The Rights of Nature, a History of Environmental Ethics.' (The University of Wisconsin Press: Madison, WI, USA.)
- O'Donnell, E. L. (2018). At the intersection of the sacred and the legal: rights for Nature in Uttarakhand, India. *Journal of Environmental Law* **30**, 135–144. doi:10.1093/JEL/EQX026
- O'Donnell, E. L., and Talbot-Jones, J. (2018). Creating legal rights for rivers: lessons from Australia, New Zealand, and India. *Ecology and Society* **23**, art7. doi:10.5751/ES-09854-230107
- Pecharroman, L. C. (2018). Rights of Nature: rivers that can stand in court. *Resources* **7**, 13. doi:10.3390/RESOURCES7010013
- Pope Francis (2015). Encyclical letter *Laudato Si'* of the Holy Father Francis on care for our common home. Available at [http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_encyclica-laudato-si.html](http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_encyclica-laudato-si.html) [Verified 5 October 2020].

- Ramsar Convention on Wetlands (2018). 'Global Wetland Outlook: State of the World's Wetlands and Their Services to People.' (Ramsar Convention Secretariat: Gland, Switzerland.)
- Ripple, W. J., Wolf, C., Newsome, T. M., Galetti, M., Alamgir, M., Crist, E., Mahmoud, M. I., and Laurance, W. F. (2017). World scientists' warning to humanity: a second notice. *Bioscience* **67**, 1026–1028. doi:10.1093/BIOSCI/BIX125
- Ripple, W. J., Wolf, C., Newsome, T. M., Barnard, P., and Moomaw, W. R. (2020). World scientists' warning of a climate emergency. *Bioscience* **70**, 8–12. doi:10.1093/BIOSCI/BIZ088
- Simpson, M., Davidson, N., Davies, G., Finlayson, M., Moomaw, W. R., Pritchard, D. E., Fennessy, M. S., and Whitacre, J. (2020). Upcoming symposium: a Universal Declaration on the Rights of Wetlands – shifting the paradigm to restore the human–wetland relationship in support of wetland restoration, conservation and wise use. *Bulletin – Society of Wetland Scientists* **37**, 82–84.
- Singer, J. W. (1982). The legal rights debate in analytical jurisprudence from Bentham to Hohfeld. *Wisconsin Law Review* **1982**, 975–1059.
- Stone, C. D. (2010). 'Should Trees Have Standing? Law, Morality, and the Environment.' (Oxford University Press: Oxford, UK.)
- Studley, J. (2018). The ritual protection of sacred natural sites on the Tibetan Plateau and the optimization of lay participation. *Journal for the Study of Religion, Nature and Culture* **12**(4), 354–383. doi:10.1558/JSRNC.35614
- Studley, J. (2019). 'Indigenous Sacred Natural Sites and Spiritual Governance: the Legal Case for Juristic Personhood.' (Routledge: London, UK.)
- Studley, J., and Bleisch, W. V. (2018). Juristic personhood for sacred natural sites: a potential means for protecting nature. *Parks* **24**(1), 81–96. doi:10.2305/IUCN.CH.2018.PARKS-24-IJS.EN
- Trisos, C. H., Merow, C., and Pigot, A. L. (2020). The projected timing of abrupt ecological disruption from climate change. *Nature* **580**, 496–501. doi:10.1038/S41586-020-2189-9
- UN General Assembly (1982). World charter for nature. Available at <https://digitallibrary.un.org/record/39295?ln=en> [Verified 5 October 2020].
- Union of Concerned Scientists (1992). Union of Concerned Scientists world scientists' warning to humanity. Available at <https://www.ucsusa.org/sites/default/files/attach/2017/11/World%20Scientists%27%20Warning%20to%20Humanity%201992.pdf> [Verified 5 October 2020].
- United Nations (2018). Resolution adopted by the General Assembly on 20 December 2018. 73/235. Harmony with Nature Program. Available at <http://www.harmonywithnatureun.org/unDocs/> [Verified 5 October 2020].
- United States District Court for the Northern District of Ohio Western Division (2020). Order Invalidating Lake Erie Bill of Rights. Available at <https://www.bloomberglaw.com/public/desktop/document/Drewes-FarmsPartnershipvCityofToledoOhioDocketNo319cv00434NDOhioFe/1?1599421342> [Verified 5 October 2020].
- Warne, K. (2020). Place as person, landscape as identity: ancestral connection and modern legislation. *New Zealand Geographer* **76**, 72–79. doi:10.1111/NZG.12250
- Wilson, G., and Lee, D. M. (2019). Rights of rivers enter the mainstream. *The Ecological Citizen* **2**, 183–187.
- Yunkaporta, T. (2019). Friday essay: lessons from stone – Indigenous thinking and the law. *The Conversation*, 6 September 2019. Available at <https://theconversation.com/friday-essay-lessons-from-stone-indigenous-thinking-and-the-law-122617> [Verified 5 October 2020].

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