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Rights of Nature: Perspectives for Global Ocean Stewardship

Harriet R. Harden- Davies
University of Wollongong, hhdavies@uow.edu.au

Fran Humphries

Michelle Maloney

Glen Wright

Kristina Gjerde

See next page for additional authors

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Abstract

© 2020 The development of a new international legally binding instrument for the conservation and sustainable use of marine biodiversity beyond national jurisdiction (BBNJ agreement) is in the final negotiation phase. Legal recognition of rights of nature is emerging worldwide as a fresh imperative to preserve ecological integrity, safeguard human wellbeing, broaden participation in decision-making, and give a voice to nature – but so far exclusively within national jurisdiction. In this paper, we consider how a Rights of Nature perspective might inform the BBNJ agreement. We examine Rights of Nature laws and identify four characteristics relating to: i) rights; ii) connectivity; iii) reciprocity; and iv) representation and implementation. We argue that a Rights of Nature perspective can reinforce existing ocean governance norms, inspire new measures to enhance the effectiveness and equitability of the BBNJ agreement and enable global ocean stewardship in ABNJ.

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Authors

Harriet R. Harden- Davies, Fran Humphries, Michelle Maloney, Glen Wright, Kristina Gjerde, and Marjo Vierros

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Harriet Harden-Davies [a,*], Fran Humphries [b], Michelle Maloney [c], Glen Wright [d], Kristina Gjerde [e], Marjo Vierros [f]

[a] Australian National Centre for Ocean Resources and Security, University of Wollongong, Squires Way, Wollongong, NSW, 2500, Australia
[b] Law Futures Centre, Griffith University, QLD, 4111, Australia
[c] Law Futures Centre, Griffith University and Australian Earth Laws Alliance, QLD, 4111, Australia
[d] IDDRI, Paris, 75006, France
[e] IUCN and the Middlebury Institute of International Studies at Monterey, Cambridge, MA, 02138, USA
[f] Coastal Policy and Humanities Research, Vancouver, BC V5Z 4K7, Canada

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ABSTRACT

The development of a new international legally binding instrument for the conservation and sustainable use of marine biodiversity beyond national jurisdiction (BBNJ agreement) is in the final negotiation phase. Legal recognition of rights of nature is emerging worldwide as a fresh imperative to preserve ecological integrity, safeguard human wellbeing, broaden participation in decision-making, and give a voice to nature – but so far exclusively within national jurisdiction. In this paper, we consider how a Rights of Nature perspective might inform the BBNJ agreement. We examine Rights of Nature laws and identify four characteristics relating to: i) rights; ii) connectivity; iii) reciprocity; and iv) representation and implementation. We argue that a Rights of Nature perspective can reinforce existing ocean governance norms, inspire new measures to enhance the effectiveness and equitability of the BBNJ agreement and enable global ocean stewardship in ABNJ.

1. Introduction

Marine areas beyond national jurisdiction (ABNJ)[1] cover nearly half of the Earth's surface and host a significant portion of its biodiversity [1]. These deep and distant waters were once beyond the reach of human activities, but technological advances and a growing demand for resources are driving increased exploration and exploitation. The impacts of human activities, such as pollution and overfishing, are now being compounded by climate change [2,3] and novel activities place further pressure on marine ecosystems [4–6].[2] There are significant gaps in the governance regime for ABNJ: international legal obligations to protect and preserve marine ecosystems have not been effectively discharged [7]; coordination and cooperation between relevant international and regional bodies is limited [8–10]; and there is no global oversight.

Cognisant of the need to strengthen the governance framework, the international community has convened an intergovernmental conference to develop an international legally binding instrument for the conservation and sustainable use of marine biodiversity beyond national jurisdiction (BBNJ agreement) [11], under the United Nations Convention on the Law of the Sea (UNCLOS) [12]. This instrument could bring coherence to a fragmented management framework and bring States together to "*act as stewards of the ocean in ABNJ on behalf of present and future generations*" [13].

The negotiations take place amidst unprecedented global concern regarding the loss of biodiversity and the economic, ecological, scientific and cultural value it provides [14], as well as increasingly vociferous calls from the scientific community and civil society for transformative change [15,16] and stronger stewardship [17,18]. These concerns are spurring the development of bold proposals and movements that seek to effect this change [19,20].

One such movement seeks to realign human governance systems

* Corresponding author.
E-mail address: hhdavies@uow.edu.au (H. Harden-Davies).

[1] According to UNCLOS [12], ABNJ comprise two distinct components: "the Area", i.e. the "seabed and ocean floor, and subsoil thereof, beyond the limits of national jurisdiction" (Article 1); and the "high seas", i.e. the water column beyond national jurisdiction. The Area and its mineral resources are the "common heritage of mankind" (Article 136), the high seas are governed by the principle of "freedom of the high seas" (Article 87).

[2] A range of novel activities may develop in the long-term, e.g. open ocean aquaculture, ocean clean-up efforts, rocket launches at sea, floating cities, recovery of shipwrecks, and ocean-based server farms.

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Table 1
Four key characteristics of Rights of Nature laws.

Characteristic	Reference	Example
Rights	Ecuador, 2008 [50]	Nature or Pachamama, from which life reproduces and unfolds on itself, has rights, including to integral respect for existence and maintenance and regeneration of its vital cycles, structures, functions and evolutionary processes (art. 71)
	Bolivia, 2010 [51]	Nature has rights to life, diversity, water, clear air, equilibrium, restoration, pollution free living (arts. 1, 7)
	Te Urewera Forest, 2014 [52]	Forest recognised as legal entity with "all the rights, powers, duties, and liabilities of a legal person" (section 11.1)
	Rio Atrato, 2016 [53]	River Atrato has legal rights.
	Te Awa Tupua, 2017 [54]	Whanganui River recognised as own legal personality (Te Awa Tupua)
	River Turag, 2017 [55]	River Turag living entity with legal rights (subsequently extended to all rivers)
	Nga Maunga, 2017 [56]	Arrangements intended to recognise Nga Maunga as a living being and declaration of legal personality (para 5.5)
	Colombian Amazon, 2018 [57]	Colombian Amazon recognised as an entity, subject of rights and beneficiary of protection, conservation, maintenance and restoration.
	*Uttarakhand, 2017 [58]	Ganga and Yamuna rivers recognised as having the legal status of living human entities.
	Uganda, 2019 [59]	Nature has the right to exist, persist, maintain and regenerate its vital cycles, structure, functions and its processes in evolution (art. 4)
Connectivity	Bolivia, 2010 [51]	Mother Earth recognised as a "dynamic living system comprising an indivisible community of all living systems and living organisms, interrelated, interdependent and complementary, which share a common destiny" (art. 3);
	Te Urewera Forest, 2014 [52]	Te Urewera Forest recognised as 'ancient and enduring fortress of nature', with spiritual value, prized as a place of outstanding national value and intrinsic worth, treasured for distinctive natural values and integrity of those values; ecological systems and biodiversity, historic and cultural heritage, scientific importance, outdoor recreation" (section 3).
	Te Awa Tupua, 2017 [54]	Te Awa Tupua (Whanganui River) recognised as "an indivisible and living whole, incorporating all its physical and meta-physical elements"
	Nga Maunga, 2017 [56]	Nga Maunga (Taranaki) recognised as a living, indivisible whole incorporating the peaks (para 3.4)
Reciprocity	Bolivia, 2010 [51]	State obligations and societal duties (arts. 8, 9, 10). Nature recognised as a collective public interest (art. 5)
	Uganda, 2019 [59]	Government to apply precaution and restriction measures in all activities that can lead to the extinction of species, the destruction of the ecosystems or the permanent alteration of the natural cycles (art. 3)
Representation and implementation	Bolivia, 2010 [51]	State responsibilities, including policy development, precaution and protection measures to 'prevent human activities causing extinction of living populations, alteration of cycles and processes that ensure life or destruct livelihoods, (art 8); Duties of natural persons and public or private legal entities to uphold and respect rights and report violations (art 9); Envisaged establishment of Office of Mother Earth "to ensure the validity, promotion, distribution and compliance of the rights (art. 10)
	Te Urewera Forest, 2014 [52]	Board established to exercise and performs the rights, powers, duties and liabilities of Te Urewera Forest, on its behalf and in its name.
	Te Awa Tupua, 2017 [54]	Legal framework adopted to support the river by establishing a 'human face of the river' consisting of two nominated representatives (one from government, one from indigenous community) responsible for the care and wellbeing of the river and maintaining relationships with all interested people; with statutory functions, powers and duties in relation to the river.
	River Turag, 2017 [55]	National River Conservation Committee appointed to uphold rights, can take a person to court for harming the river.
	Colombian Amazon, 2018 [57]	Government required to present, within four months, an action plan to reduce deforestation
	Uganda, 2019 [59]	Person has right to bring action before a competent court for infringement of rights of nature (art. 2).

Note: This table shows illustrative examples of Rights of Nature laws it does not intend to provide an exhaustive list of all Rights of Nature approaches in use at subnational levels, for further examples see https://www.arcgis.com/home/webmap/viewer.html?webmap=4065756467f34086855a9e3ff6bffdf0 (accessed April 03, 2020) and http://harmonywithnatureun.org/rightsOfNature/(accessed April 03, 2020).

with ecological reality by recognising inherent "Rights of Nature" to exist, thrive and evolve, based on a revitalised understanding of the value, role, and interconnectedness of all life on Earth [21–24]. Laws recognising rights of nature across entire jurisdictions have been passed in countries such as Ecuador [25], Bolivia, Uganda, and various states in the USA. The rights of specific ecosystems, such as rivers, forests and mountains, have also been recognised in New Zealand, India, Colombia, and Bangladesh, among others (Table 1) [26–28]. Such approaches reflect the same core premise - that nature is not merely human property [22,29] and that humans have a common responsibility to respect and safeguard natural systems [24,30]. A range of innovative mechanisms are emerging to deliver on those responsibilities.

The aim of this paper is to provide some initial reflections on the governance of BBNJ from a Rights of Nature perspective. This exploratory exercise is not intended to generate detailed proposals for the

provisions of a future treaty, nor is it intended to provide a comprehensive review of Rights of Nature, but rather to consider how a Rights of Nature perspective could help reframe and overcome some intractable challenges facing BBNJ.

In Section 2 we present a concise overview of Rights of Nature approaches, identifying four key characteristics as a framework for analysis and highlighting alignment with established ocean governance norms. In Section 3 we outline key challenges in the BBNJ negotiations. In Section 4 we suggest four ways that Rights of Nature approaches could inspire novel solutions, such as a 'Council of Ocean Custodians' to give a voice to the ocean. In Section 5 we conclude that a Rights of Nature perspective can inform ambitious development and implementation of the future BBNJ agreement.

2. Rights of Nature

Whenn imposing only limited restrictions on human activities, conventional environmental laws can legalise, rather than prevent, environmental harm [23,31]. Such laws have contributed to the precipitous decline of biodiversity [15] and have proven inadequate to meet basic conservation and sustainable use objectives, much less protect the health of the living world, restore ecosystems or enhance their resilience.

The "precautionary principle" requires decision-makers to err on the side of caution where information is limited,[3] but has proven difficult to implement in practice [32]. The extensive literature on environmental impact assessment suggests that, despite decades of practice, assessments rarely result in any significant change to development plans [33–35]. Concepts such as "sustainable development", "blue economy", and the human right to a healthy environment [36] ostensibly promote a more rational balance between environmental, economic, and social factors, but have done little to shift the status quo in the absence of transformative change.

By contrast, Rights of Nature approaches aim to develop governance systems that preserve ecological integrity and prevent ecosystem disruption. From a Rights of Nature perspective, legal systems should recognise nature as a rights-bearing *subject*, rather than an *object* owned and controlled by humans [36]. While the motivation, scope and modalities of Rights of Nature laws and approaches vary considerably [37], all share a core premise: nature has inherent rights to exist, evolve and fulfil ecological functions [23,38].

A Rights of Nature approach therefore provides an alternative philosophical starting point [20,39,40], basing governance on an assumption that the rights of the living world must be respected, and that human activities must be managed so as to prevent destruction of nature.

Rights of nature have been recognised in legal provisions at both national and sub-national levels (Fig. 1; Table 1). Such laws are diverse, often reflect local cultural traditions, and vary in scope. Most recognise humans as being an inseparable part of nature with a common responsibility to respect and safeguard natural systems. They have included a range of innovative implementation mechanisms that seek to give nature a voice and enable participation of communities in decision-making in order to honour cultural connection, support societal well-being and safeguard ecological integrity [27,28,37] (Section 2.1 and 2.4).

Rights of nature have also been discussed at regional and global levels. Following a 2009 UN General Assembly (UNGA) Resolution, annual reports on 'Harmony with Nature' have documented rapid growth of Rights of Nature laws and related initiatives [41]. Rights of Nature has also been noted in other UNGA resolutions, including in conjunction with climate justice and biodiversity protection, access to knowledge, and economic, social and technological progress in harmony with nature [42,43].

A draft Universal Declaration on the Rights of Nature was created by hundreds of civil society organisations in 2010, aiming to reinforce human responsibilities to nature and provide a shared vision for collective action on global challenges such as climate change [44]. Spurred by this initiative, the International Union for the Conservation of Nature (IUCN) acknowledged Rights of Nature as a decision-making principle and planning framework, suggesting that it could provide the "foundations of a new civilising pact" [38]. Rights of Nature approaches are also emerging on the ocean governance agenda [45], e.g. a feasibility study for the recognition of Rights of the Pacific Ocean is underway [46].

Rights of Nature developments are not without controversy. Some court decisions recognising the rights of nature have been subsequently challenged and overturned, including in India and the USA [47]. Some commentators question the efficacy of rights-based approaches in the absence of wider societal transformations [48] higlighting a need to define implementation measures and designate institutional responsibilities to ensure that rights of nature are recognised not only on paper, but in practice [25,27,28,49].

Based on an analysis of existing Rights of Nature laws (Fig. 1), we identify four defining characteristics of Rights of Nature approaches (Table 1):

(i) **Rights**: Nature is a rights-bearing entity (section 2.1);
(ii) **Connectivity and the primacy of life**: All elements of nature, including humans, are interconnected; ensuring the ongoing health of life supporting ecosystems is a societal goal (section 2.2);
(iii) **Reciprocity**: Human use of nature entails a concomitant responsibility to respect, restore and regenerate nature by maintaining, for example, environmental quality, ecosystem structure and function, and natural levels of biodiversity (section 2.3);
(iv) **Representation and Implementation**: Implementation measures are needed to execute human responsibilities; States should not be the only entity to speak for nature (section 2.4).

We discuss these characteristics below and highlight precedents in existing ocean governance norms.

2.1. Rights

Rights of Nature laws are based on the view that nature and/or specific natural entities possess inherent rights (Table 1). The development of rights is often described as an ever-widening circle, expanding over time to recognise and respect the rights of more people, groups and entities as societal values and norms evolve [21,31,60,61]. The extension of rights to women and the application of legal personhood to corporations are examples of this gradual expansion [62]. Two slightly different legal approaches to recognising rights of nature are emerging (Table 2): 1. Recognition of the rights of all of the natural world within a particular jurisdiction; and 2. Recognition of the rights of specific ecosystems or living entities through legislation or court cases [63]. Limitations and advantages of both approaches have been discussed in the literature [31,40,61].

While Rights of Nature could be considered a "radical rethink" [60], the underlying principles are closely aligned with many Indigenous philosophies and governance systems that emphasise the interconnectedness of humans and nature [60,64,65] and treat nature as a partner and relative, rather than as property and a resource [66]. Rights of Nature has been suggested as a way to bridge conventional approaches

[3] For example, Principle 15 of the Rio Declaration on Environment and Development, (adopted by the United Nations Conference on Environment and Development in Rio de Janeiro, Brazil, 1992) states that "*In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.*"

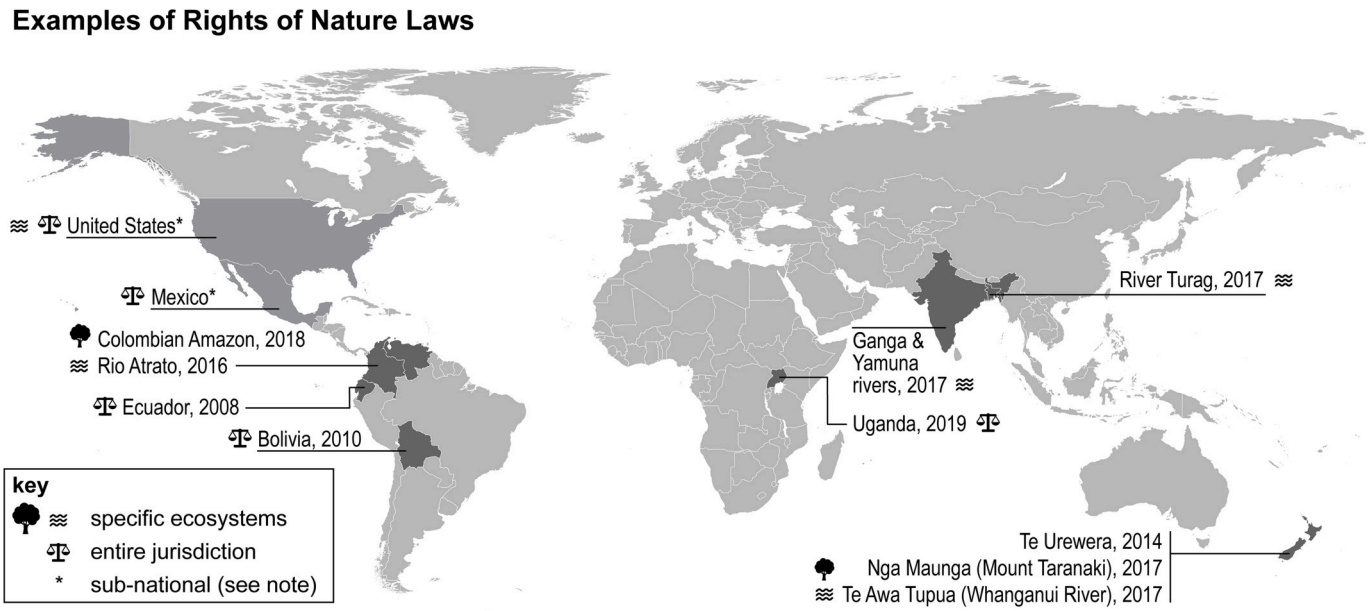

Fig. 1. Rights of Nature laws are emerging worldwide. Note: See Table 1 for details and references. This Figure is not intended to provide an exhaustive list of all Rights of Nature approaches and it does not detail those at sub-national levels, for further examples see https://www.arcgis.com/home/webmap/viewer.html?webmap=4065756467f34086855a9e3ff6bffdf0 (accessed April 03, 2020) and http://harmonywithnatureun.org/rightsOfNature/(accessed April 03, 2020).

Table 2
Two emerging "branches" of rights of nature laws.

Approach	Features	Examples
Rights of nature laws across a jurisdiction	• Acknowledges the rights of nature across an entire jurisdiction; • Typically created via legislation; • Foundational articulation of rights, e.g.: that all of nature has the right to exist, to continue to regenerate and pursue its evolutionary journey uninterrupted by human activities, and the right to restoration; • Typically include provisions for the community/any person to enforce and protect the rights of nature.	Uganda, 2019 Bolivia, 2010 Ecuador, 2008
Ecosystem specific	• Granting or acknowledging legal rights to a specific ecosystem. e.g. a river or forest; • Created under statutory, common, customary or case law; • Narrower framing of rights, e.g. an ecosystem might be recognised as having 'legal personhood' rights, as a legal entity; • Typically designate, or provide for the establishment of, guardians or custodians to uphold the rights of the ecosystem.	Te Awa Tupua, 2017 Rio Atrato, 2016 Colombian Amazon, 2018

with more holistic worldviews [60]. Questions remain, however, for example the meaning of "nature" varies widely according to the philosophical and cultural context [39]. Furthermore, there is no obvious way that nature or natural entities could discharge the obligations that usually bind subjects in rights-based legal systems [39]; though this could be remedied by explicitly recognising that nature's rights do not attract responsibilities, framing them instead as a means for operationalising the collective human responsibility to nature [30]. Changing the legal status of nature, where nature has rights to exist, evolve and thrive, creates an opportunity to reframe relationships with nature. This shift in perspective offers some daring ideas for management of ocean ABNJ for the common good.

2.2. Connectivity

The interconnectedness of all life on Earth has been understood, accepted and expressed as a universal truth throughout history: from ancient Aboriginal cultures [60], to the Greek deity Gaia who personified Earth, to the development of the scientific study of Earth Systems in the 21st century. Rights of Nature approaches seek to build human governance systems that both reflect and respect this connectivity, underscoring the view of the inherent value of nature [67] and prioritising the maintenance of ecological integrity. This can support cultural change by placing the onus on humans to respect nature (Section 2.3).

Explicit recognition of connections between humans and nature can help shift the foundations and purpose of law. For example, one objective of the "Rights of Nature and Future Generations Bill" introduced into the Western Australian Parliament in 2019, is to recognise the rights of nature and to "promote the protection and care of nature as a primary goal for human societies" [68]. Even without recognising rights of nature, explicit recognition of connectivity can promote environmental protection (for example, the Yarra River in Australia has been recognised as 'living and integrated' alongside the establishment of a strategic planning, policy framework [69]).

The idea of connectivity is consistent with (and gaining strength in) a range of international instruments and policy agendas:

- The preamble to UNCLOS recognises that "… the problems of ocean space are interrelated and need to be considered as a whole …";
- The United Nations Fish Stocks Agreement (UNFSA) [70] obliges States Parties to maintain the integrity of marine ecosystems and recognises the importance of management approaches that emphasise connectivity and ecosystem dynamics [71];
- The Convention on Biological Diversity (CBD) [72] defines the ecosystem approach as its primary framework for action, noting that "… humans, with their cultural diversity, are an integral component of many ecosystems …" [73]; the preamble recognises the intrinsic value of biological diversity and ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic values;
- The current BBNJ Draft Text [13] incudes ecosystem-based management as a guiding principle.

2.3. Reciprocity

Rights of Nature approaches emphasise that humans are in a reciprocal relationship with nature: human use or activities are not precluded, but are conditional upon the responsibility to ensure they stay within ecological limits [31]. This is again reflected in many First Nations laws and cultures, many of which are built on this notion of reciprocity and the law of obligations [60].

The notion of living in harmony with nature is an established vision internationally [42]. In the law of the sea context, the balance of rights and responsibilities has a long history [74] and the freedoms of the high seas provided for by UNCLOS are conditional on responsibilities that include protection and preservation of the marine environment [75,76]. The patchy performance in fulfilling those responsibilities is a key reason for the development of the BBNJ agreement.

2.4. Giving nature a voice: mechanisms for representation and implementation

Implementation and representation mechanisms in existing Rights of Nature laws vary in form, function and resources (Table 1). A range of innovative implementation mechanisms have been developed in Rights of Nature legislation and cases. Such approaches have enabled a broad range of actors, including Indigenous communities and civil society, to speak for nature and participate in decision-making processes [27] or custodianship arrangements.

2.4.1. Voice and representation

Rights of Nature laws broaden conventional notions of who can speak for, and protect, nature. While some environmental laws have accorded standing to third parties [77,78], the conventional premise that States own the natural resources within their jurisdiction generally means that it alone has the power to grant access and implement or enforce environmental laws. Conversely, Rights of Nature approaches assume that all humans have an obligation to protect the environment and a right to protect nature from harm. Such a perspective presents a direct challenge to the legitimacy of state control of the environment and are particularly thought-provoking when considering ocean ABNJ.

There are a range of ways to enable nature's voice to be heard in legal systems. The Constitution of Ecuador grants all humans the right to speak on behalf of nature and more than 20 cases have been taken to court in Ecuador asserting the rights of nature, illustrating that Courts can play an important part in implementing rights of nature laws [79]. When laws are passed granting legal rights to specific ecosystems (Table 2), they increasingly include novel guardianship and custodianship arrangements.

2.4.2. Institutions and implementation

Novel institutional arrangements have been made to implement rights of nature laws, including:

- A Council or committee mandated to implement specific measures [55];
- Custodians or guardians charged with upholding and performing the rights and duties of the natural entity [54]; and
- Obligations and requirements for planning, strategy development and reporting [57].

For example, the law recognising the rights of the Whanganui River in New Zealand included institutional arrangements for custodianship of the river, allowing for representatives from the Whanganui iwi/people and the government, to work together as custodians (Te Awa Tupua, 2017) [54]. The Bolivian law recognising rights of nature provided for detailed administrative arrangements including an Ombudsman [49, 51]. Though such implementation measures are not always implemented as envisaged [25,49] and do not exist for all laws, these examples illustrate the range of institutional measures that are possible with political will.

3. The BBNJ negotiations

The BBNJ negotiations are based on a "Package Deal", set out in 2011,[4] that aims to address the conservation and sustainable use of BBNJ "together and as a whole". The package comprises:

- Marine genetic resources (MGRs), including questions on the sharing of benefits;
- Measures such as area-based management tools (ABMTs), including marine protected areas (MPAs);
- Environmental impact assessments (EIA); and
- Capacity-building and the transfer of marine technology (CBTT).

In this section, we explore the challenges being addressed by the BBNJ agreement. In Section 4, we discuss how a Rights of Nature perspective could inspire novel solutions to these challenges.

3.1. Marine genetic resources

Genetic diversity enables resilience in ocean ecosystems and inspires science and innovation. Science and technology utilising genetic research has led to the development of new applications for conservation (e.g. detecting illegal wildlife trade), resource management (e.g. fisheries) and commercialisation (e.g. pharmaceuticals) [82]. Such potential utilization of the genetic properties of marine organisms has sparked interest what are commonly referred to as 'marine genetic resources' (MGRs).

There are no specific provisions in UNCLOS concerning the use of MGRs. In the absence of clarity regarding their legal status, there has been a longstanding ideological divide as to whether MGRs should be viewed as the Common Heritage of Mankind or high seas freedoms, leading to questions on the sharing of benefits arising from the use of MGRs [80,81].[1] This dichotomy is reflected in the BBNJ Draft Text, which focusses on the practical modalities for access and benefit sharing (ABS) and proposes a range of options.

Existing examples of ABS systems relate to contexts within national jurisdiction where a user seeks to utilise genetic resources under the jurisdiction of another State (the "provider").[5] MGRs are treated as a form of property, thus a potential user negotiates with the provider, offering payment (monetary or non-monetary) in return for access. In ABNJ, no State can exercise sovereignty, so there is no "provider" that can directly regulate access or manage the sharing of benefits. Nevertheless, the BBNJ Draft Text relies almost exclusively on the ABS concept as a tool for management of MGRs, thereby focusing on the redistribution of materials, information and wealth, rather than on the inherent value of genetic diversity or its role in ecosystem resilience. This issue is one of the major obstacles on the path to a new treaty and there is currently little consensus on how the conventional ABS model can be operationalized for ABNJ.

[4] Letter dated 30 June 2011 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly, Document A/66/119, §I.1(a) and (b), http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N11/397/64/PDF/N1139764.pdf.

[5] For example: CBD; Nagoya *Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity*, opened for signature 29 October 2010, [2012] ATNIF 3 (entered into force 12 October 2014*); International Treaty on Plant Genetic Resources for Food and Agriculture* [2006] ATS 10; World Health Organisation, Pandemic Influenza Preparedness: Sharing of Influenza Viruses and Access to Vaccines and Other Benefits (2011) WHA64/8, Attachment 2.

3.2. Capacity building and transfer of marine technology

Capacity building and technology transfer (CBTT) are key to ensuring inclusive and effective participation in the sustainable use and management of BBNJ. Existing CBTT obligations in UNCLOS and other agreements provide an overarching framework for enabling equity of access to ocean resources,[6] but they have not been fully implemented [83,84]. This is particularly true in relation to the transfer of technology, which is held by a variety of actors, including research institutions, governments and the private sector, and is often subject to intellectual property constraints [85]. While a number of entities worldwide undertake capacity building relevant to BBNJ [86], these efforts are generally sector-specific and sporadic, lacking strong coordination and intersectoral collaboration.

While States agree on the general goal of enhancing CBTT through the BBNJ Agreement, there is little consensus on concrete technology transfer provisions and the primary mechanism for implementation is an inchoate "clearinghouse" mechanism. It is therefore unclear whether the treaty will contain strong obligations or merely vague aspirations. At a minimum, multi-stakeholder partnerships and a dedicated funding stream are likely to be needed to deliver these obligations [85,87].

3.3. Area-based management tools (ABMTs) including marine protected areas

Despite existing obligations for the protection and preservation of the marine environment in UNCLOS (e.g. Article 192) and other international agreements, the mechanisms to adopt ABMTs are fragmented, uncoordinated, and incomplete [7–9]. For example, there is currently no mechanism to designate comprehensively protected MPAs in ABNJ, in line with scientific recommendations and political commitments [88]. Nor is there any process for coordinating conservation measures to ensure that MPA networks are complemented by a range of sectoral and other types of ABMTs to protect biodiversity from sector-specific threats or address broader planning needs. The BBNJ agreement aims to fill this gap and the Draft Text recognises the role of ABMTs in enabling the management of sectors or activities to achieve particular conservation and sustainable use objectives.[7]

3.4. Environmental impacts assessments (EIAs)

UNCLOS obliges States to minimize pollution and control their activities so as to prevent damage to other States or to the marine environment in ABNJ. UNCLOS contains basic obligations requiring assessment of certain environmental impacts (e.g. UNCLOS Articles 192, 204–206), but there has been limited implementation of these provisions to date and environmental assessment processes lag behind accepted good practice. For example, UNCLOS does not contain any obligations or modalities for the conduct of strategic environmental assessments (SEAs) or guidance on how to account for cumulative impacts from multiple activities and stressors [89,90]. As a result, practice varies considerably between sectoral and regional bodies and there is no way to assess cumulative impacts or make informed decisions regarding new and emerging activities. The BBNJ agreement is intended to strengthen these obligations and provide further guidance to States on how to conduct EIAs in ABNJ.

4. A fresh perspective for the BBNJ agreement

In this section, we explore the following question: Can a Rights of Nature perspective inspire novel solutions to enhance stewardship of BBNJ? Using the four identified defining characteristics of Rights of Nature laws as a framework – rights, connectivity, reciprocity, representation and implementation (Section 2) – we introduce ideas, ranging from incremental developments to transformative change (Table 3).

4.1. Re-imagining rights and responsibilities

Recognising rights of the global ocean to exist and maintain its natural cycles would transform the relationship between humans and the global ocean by treating BBNJ as a rights-bearing entity, rather than just as a resource to be exploited. Perhaps this could provide a common vision for the international community to collaborate as stewards for the conservation and sustainable use of BBNJ. Contemplating such recognition raises several questions, ranging from fundamental (e.g. can frameworks developed in a different time be adapted to recognise and protect Rights of Nature?) to specific and procedural questions (e.g. what would be the rights-bearing entity and how would the rights be defined and upheld?). Would tougher measures be required to protect migratory species while transiting areas within and beyond national jurisdiction?

These questions provide food for thought, rather than insurmountable hurdles, and two points are worth noting. Firstly, there is no clearly defined pathway for the adoption or implementation of Rights of Nature approaches: they can provide a framework for creative interpretation and incremental development, or a means for transformative change. Secondly, the radical shift in underlying principles that a Rights of Nature approach implies means that the answers to many of these questions may only become apparent from within a fundamentally transformed governance system.

Recognising the rights of BBNJ could: encourage progressive interpretations of existing principles [20] (as well as the development of new principles); underpin strict standards for EIAs; encourage the adoption of ambitious management measures; provide a new framework for MGRs; foster a more holistic and collaborative approach to CBTT; and allow for stronger participation of non-State actors in conservation and sustainable use.

The following discussion explores some possible pathways for how recognition of rights of nature could influence the elements of the BBNJ agreement. Even without such recognition, a Rights of Nature perspective could inspire the BBNJ agreement, as discussed in sections 4.2, 4.3 and 4.4.

Table 3
Rights of Nature perspectives for the BBNJ agreement.

Characteristic	Perspective for the BBNJ agreement
Rights	• Recognising ocean ABNJ and its components as rights bearing entities, subjects of the law, with their own rights to exist and evolve, and voice; • EIA: strong application of precaution and ecosystem-based approaches to maintain ecosystem integrity and avoid more than minor or transitory impacts, reverse burden of proof; • ABMT/MPA: clear obligations for use to preserve and protect ocean functions, health and welfare of species; • CB/TT: reframed as responsibility to enable ocean stewardship; • MGR: ownership vested in ocean ABNJ with concomitant obligations to contribute to stewardship.
Connectivity	• Respect for ecological connectivity ensured, including through a holistic approach to EIAs, strategic environmental assessments, networks of MPAs and other ABMTs, CB/TT and MGR; • Intrinsic value of nature, including MGRs, recognised; • Interdependence recognised, inspiring new human-ocean partnerships approach in CB/TT and rethinking required skills.
Reciprocity	• Reinforced reciprocal responsibility to preserve ecological integrity and to give and receive capacity to enable stewardship; • Defined share of benefits contribute to conserving BBNJ.
Representation	• Establishment of a Council of Ocean Custodians representing the interests of the ocean in decision-making regarding BBNJ; • Measures to provide the right to bring legal action on behalf of BBNJ.

[6] For example: UNCLOS Part XIV, Articles 202, 242, 244; CBD Articles 16–18.
[7] Draft BBNJ Text, Article 1(3).

4.1.1. Key principles

Longstanding principles of environmental law have often been weakly implemented. The precautionary principle states that a lack of scientific certainty should not preclude action, yet policymakers have instead been cautious to protect ecosystems unless there is overwhelming scientific evidence to justify the decision. There is a risk that the BBNJ negotiations reproduce this paradigm, with the need to use the "best available science" at times being advanced alongside arguments that measures should be taken only where there is clear scientific evidence to justify them, and that such measures should address specific threats for a limited period.

Taking a rights of nature perspective, such principles would be revitalised and strengthened so that ocean health is considered a prerequisite of use, and precautionary and ecosystem approaches would be operationalized fully. This could also challenge the status quo by reversing the onus of proof in a strict application of the precautionary approach. For example, in Ecuador's first Rights of Nature case, the Vilcabamba River Case in 2011, the judge declared that nature's rights are primary and reversed the onus of proof so that the defendants were required to prove that their actions were not harming the Rights of Nature.[8] Cognisant of the connectivity of the ocean and between humans and nature, explicit recognition of rights of nature would reinforce the responsibility of humans to serve as stewards of BBNJ and require some mechanism for representation to ensure a voice for the ocean (such as a Council of Ocean Custodians, discussed below).

4.1.2. Area-based management tools

A piecemeal approach to the management and conservation of marine spaces has resulted in an incoherent patchwork of measures, rather than the coherent network of MPAs needed to halt biodiversity loss and rebuild ocean ecosystems [9]. The resulting damage and fragmentation of marine ecosystems threatens their existence. This would be a violation of its most basic rights, if these rights were legally recognised, and the international community would be obliged to adopt ABMTs/MPAs that ensure ecosystem integrity and build resilience. In short, strong science-based conservation and management measures would be the rule, not the exception.

4.1.3. Capacity building and technology transfer

If the international community were to see itself as "custodians" or "guardians" of the ocean, capacity building could be reframed as a collective effort to strengthen shared capabilities, rather than a unilateral transfer from one State to another. The distinction between developed/developed would diminish in relevance if all were in 'the same boat'. Rather than being driven by the primary concern of economic development and promotion of national interests, CBTT could be conceptualised as a sound investment in shared custodianship of a common life-support system. Maximising these connections, capacity and technology for protecting and managing coastal areas would benefit ABNJ and vice-versa, advancing goals for sustainable development and equity. Maintaining ocean health would support human health, completing the partnership circle.

4.1.4. Environmental impact assessment

The current BBNJ Draft Text represents a narrow conception of EIA as a primarily technical process concerned with understanding the impacts of specific activities. This lags behind the current state-of-the-art [91], where practitioners have increasingly focussed on cumulative impacts, strategic assessments [89,92] and broad consultation in decision-making. Recognising rights of nature would not preclude human activities in ABNJ, but would shift the focus of governance toward responsibility and respecting ecological limits. Building on this type of approach that reverses the onus of proof could mean that EIA proponents would have to prove that a proposed project or action would not harm the rights of the ocean and would thereby strengthen environmental protection.

4.1.5. Marine genetic resources

Rights of nature could reframe the intractable debate concerning MGR control, rights and responsibilities. By treating the ocean as the "provider" of MGRs with rights in its own resources, there may be more certainty for biodiversity governance in ABNJ's unique geopolitical conditions. In return for using and sharing ocean resources including genetic resources and associated information, users and countries would have better defined reciprocal responsibilities including protection and restoration of biodiversity and ecosystems. This could allow for the emergence of a pragmatic blend of existing principles: collection of MGRs would require a collective governance system, in line with the spirit of the common heritage of mankind; but nor would it eclipse freedom of the high seas, as exploitation could still be 'open' and even facilitated, but subject to concomitant responsibilities and strategies to ensure the regeneration, long-term health and enforcement of the right of BBNJ to exist and thrive. In this sense, a Rights of Nature perspective would not overhaul the delicate balance of rights and responsibilities in UNCLOS, but recalibrate it to ensure that long-neglected responsibilities are duly implemented and strengthened. Such an approach could be inspired by biocultural protocols that bridge the divide between scientific and traditional knowledge systems, reinterpreting the ABS concept as one based on harmony, reciprocity and connectivity - more in line with traditional knowledge systems and customary law [90].

4.2. Connectivity: recognition and respect

The innumerable ecological, socio-economic and cultural connections between coastal areas and ABNJ are critical to the maintenance and restoration of ocean health and to human livelihoods [93–95]. However, this connectivity is not well reflected in the current BBNJ Draft Text. Despite being mandated to address the package deal issues "together and as a whole", the BBNJ negotiations have largely treated each of the four elements as distinct and unrelated issues, rather than as a holistic package that requires an integrated governance response. The BBNJ agreement seeks to place obligations on States to conserve and sustainably use BBNJ, but negotiations have largely focused on enhancing existing cooperation obligations. The BBNJ agreement could draw inspiration from a Rights of Nature perspective as follows.

Firstly, a Rights of Nature perspective reinforces respect for ecological connectivity. Rights of Nature laws in New Zealand and Bolivia, for example, conceptualise nature as 'a dynamic, living, indivisible system' (Table 1). Effectively recognising and respecting connectivity in the global ocean context would require much of the international community to develop new ways of conceptualising and interacting with ocean ecosystems and species, and the imposition of much stronger obligations, not only to cooperate, but to proactively pursue integrated ecosystem-based management, develop strategic assessments, prevent harm through a strict application of the precautionary approach, and deploy a suite of ABMTs and strictly and highly protected MPAs to protect BBNJ [88]. The trigger for EIAs for activities that might affect BBNJ, for example, would be whether an activity may have more than minor or transitory impacts, accompanied by an obligation to manage such activities to avoid more than a minor or transitory impact, or not allow the activity to proceed.

Such measures would need to act as an integrated whole within and beyond national jurisdictions so as to avoid cumulative impacts on species and ecosystems throughout their range and safeguard ecosystem integrity (i.e. maintaining structure and life giving properties, not causing more than minor or transitory impacts) rather than minimize the impact of a specific activity on one small part of the ecosystem. An

[8] See 2 page case note in English - https://www.earthlaws.org.au/wp-content/uploads/2016/07/RON_Vilcabamba-Ecuador-Case-complete.pdf accessed 7 April 2020.

ambitious BBNJ Agreement could provide a planning platform for the adoption of cross-sectoral ABMTs at the global or ocean-basin level and enable a wider marine assessment and planning across boundaries to ensure that activities outside do not undermine ocean health or integrity within MPAs. This would not necessarily preclude activities, but rather reinforce requirements to: protect and preserve the environment (Section 3.2.3); assist States in need to comply through capacity building, technology transfer and financial assistance; and provide mechanisms for representation and implementation (Section 3.2.4).

Second, a Rights of Nature perspective supports recognition of the inherent importance of nature (Table 1). Recognising the inherent value of BBNJ would help prevent a narrow focus on the economic value of biodiversity, including its genetic resources, and underpin a more comprehensive approach that reflects the ecological, social and cultural importance of ocean and biodiversity. There is precedent for such an approach in the CBD (Section 2.2). This could support stricter standards for environmental assessments under the BBNJ agreement, a clear process for assessing cumulative impacts and also require social impacts to be considered in pursuit of equitable outcomes from human-ocean connections. Recognising human-ocean connections could inspire thinking for a new 'common heritage of nature', broadening existing concepts to reflect the interconnectivity and intrinsic value of nature.

Third, a Rights of Nature perspective highlights that the components of nature are interconnected and the interdependence between humans and nature (Table 1). This could inspire new institutional mechanisms for the international community including decision-makers to act collectively as custodians or stewards in the long-term interests of ocean health and of humankind as a whole (Section 4.4.). This connectivity perspective could also inspire a shift in the values, foundations and long-term objectives of capacity building and technology transfer, requiring a re-think of the most useful skills and technologies required for interconnected and effective ocean stewardship. While advanced scientific and technical capacities will be needed for effective management of the oceans, out-dated assumptions of one-way flows of capacity and technology from 'developed' to 'developing' countries would give way to a new, or expanded, set of values and approaches fostering indigenous, local and traditional knowledge.

4.3. Reciprocity: reinforcing responsibility

The responsibility to impose limits on the use of natural resources in order to maintain ecosystem integrity and support current and future generations is at the core of Rights of Nature laws, seeking to equalise the balance between rights to use and responsibilities to preserve [49,60,96]. That may, in practice, require States to: impose strict performance standards on activities and actors under their jurisdiction or control; adopt decision-making rules for managers to apply precaution when faced with risks and uncertainties in order to prevent the degradation of ecosystems (Table 1); and develop institutional mechanisms to give nature a voice and provide for custodians (Section 4.4). Rights of Nature perspectives provide inspiration for the effective discharge of responsibilities in ABNJ as well a new conceptualisation of collective responsibility of States as custodians of the ocean.

First, a Rights of Nature perspective reinforces responsibility of the international community to "act as stewards of the ocean in ABNJ on behalf of present and future generations". Whereas the current approach to ocean governance allows largely free access to BBNJ, a Rights of Nature perspective could guide a stricter interpretation to existing UNCLOS obligations to protect and preserve the environment, prevent over-exploitation and enhance ecosystem resilience, and enable others to do the same. For example, States sponsoring activities (such as commercial fishing, shipping, seabed mining or the collection of MGRs), as well as the actors themselves, would have a reciprocal responsibility to: only take what they need; support and deliver management approaches that ensure the health and regeneration of relevant species; and share the materials, information and know-how with others to increase the stock of biodiversity knowledge essential for conservation and sustainable use.

Second, a Rights of Nature perspective could inspire benefits from BBNJ to flow to the conservation and sustainable use of biodiversity. With respect to MGR, the current BBNJ Draft Text merely encourages benefits from the exploitation of MGRs to be used to contribute to conservation and sustainable use (draft Article 11 (4)) but does not include specific objectives, obligations or modalities. Such a perspective framed around reciprocity could strengthen the basis for a defined share of benefits, including but not limited to monetary benefits, from marine genetic resources of ABNJ to directly contribute to conserving biodiversity in ABNJ.

Third, a Rights of Nature perspective could inspire a re-framing of the notion of knowledge sharing under the BBNJ agreement. States as well as individual decision-makers, ocean users and other actors could be considered to have both a right and a duty to access and use all forms of knowledge that will help them maintain and restore ocean health. This would support approaches to make data and information vital for conservation and sustainable use of BBNJ openly and easily accessible through, for example, a Clearinghouse Mechanism. This would include traditional knowledge as well as scientific data and technical information [97], as already suggested by some delegates, paving the way for a more inclusive and holistic approach incorporating different knowledge systems. The wisdom and practices of Indigenous peoples around the world [60,96], offer a source of inspiration for understanding reciprocity; living in harmony with nature and respecting relationships between all natural entities is a central tenet of many Indigenous peoples' world view and legal systems [26,60]. In these ways, a Rights of Nature perspective could shift thinking about knowledge as a property that can be exclusively owned to knowledge serving as a "partnership" between humans and the ocean.

4.4. Representation and implementation: a council of Ocean Custodians?

The international ocean governance framework for ABNJ is a patchwork of regional and sectoral organisations [7,8]. The BBNJ agreement provides a unique opportunity to develop ambitious and innovative institutional structures that can support States in discharging their obligations in ABNJ. The establishment of an institutional framework that provides secretariat functions, that delivers scientific and technical advice, and that enables global and regional participation and implementation are all envisaged in the BBNJ Draft Text. A Rights of Nature perspective could inspire novel implementation measures: to enable States to collaborate in discharging their obligations and to enable a wider range of people to speak for the ocean.

First, the way in which guardianship and custodianship models have been formed to give effect to Rights of Nature laws (Table 1; Section 2.4.2) could inspire the establishment of a new body, such as a 'Council of Ocean Custodians', to provide a voice for the ocean ABNJ. Such a body could help to foster greater collective responsibility and long-term management. The body could be charged with representing the interests of the ocean in ABNJ, including to: enable civil society to participate in decision-making, on par with States; serve as a "guardian" to manage or supervise MPAs and review the effectiveness of other ABMTs [45]; participate in the review of environmental impact assessments; and guide CB/TT and implementation of benefit-sharing measures of MGR. Proposals to establish guardians of the global commons [21] and trustees and stewards for BBNJ have already been canvassed in the literature [17,98]. The Conference of States Parties will likely have the power to establish bodies and could ultimately form a 'Council of Ocean Custodians' after the adoption of the BBNJ agreement.

Second, the expansion of legal standing and legal rights for individuals, civil society organisations (Section 2.4), and others to speak on behalf of and defend rights of nature could inspire new approaches under the BBNJ agreement. Several questions require exploration, such as: could a mechanism for legal and judicial review be established for

dispute resolutions? Who would have standing – could a non-governmental organisation sue on behalf of nature (if so - how and where)? These questions are beyond the scope of our paper, but represent fertile ground for future research.

5. Conclusion

Legal recognition of the Rights of Nature is occurring around the world, due to a rising tide of societal concern about environmental degradation, growing awareness about the co-dependence of environmental health and human wellbeing, and revitalised recognition of Indigenous culture and knowledge. While there is no clearly defined pathway for the adoption of Rights of Nature perspectives for ocean ABNJ, we argue that they can provide a framework for creative interpretation and incremental development of provisions, or perhaps a means for transformative change for ocean stewardship. This article draws three conclusions.

First, Rights of Nature laws are fledgling, but developing fast, and there is precedent in existing ocean governance norms for incorporating some of the concepts underlying Rights of Nature and associated stewardship approaches. While a range of approaches have been taken, all broadly aim to recognise and support: (i) nature as a legal subject; (ii) the inextricable connections in Nature and between humans and the natural world; (iii) the responsibility of humans to respect ecosystem integrity; and (iv) the importance of institutional mechanisms to operationalise protection measures, give voice to nature and enable wider participation in decision-making. Precedent for some of these characteristics can be found in ocean governance norms, including ecosystem-based management, conditional freedom of the high seas, precaution, transparency, participation in decision-making, and responsibility of States as stewards.

Second, a Rights of Nature perspective could offer fresh insights for addressing challenges for ocean governance arising from the unique characteristics of BBNJ. Rights of Nature could inspire new measures to enhance the effectiveness and equitability of the BBNJ agreement and assist in the achievement of a key goal of the BBNJ agreement, by enabling the global community to act as stewards of the ocean in ABNJ on behalf of present and future generations. This could include requirements and safeguards for respecting nature, obligations to protect ecosystem integrity through measures such as area-based management tools, including highly protected MPAs, environmental impact assessments and strategic environmental assessment, accompanied by the adoption of proactive measures for preventing harmful disruption and reversing the onus of proof. It could further reframe knowledge-sharing to consider the ocean as a partner, reconceive capacity building and technology transfer as a global cooperative effort to ensure ocean health, and treat the ocean as the "provider" of MGR.

Third, even if Rights of Nature are not legally recognised for BBNJ, a Rights of Nature perspective can still provide a source of inspiration in developing and implementing innovative solutions for global ocean stewardship. Establishing a Council of Ocean Custodians could provide a platform to enable participation in decision-making and provide a voice for the ocean in governance processes.

These initial reflections about how a Rights of Nature perspective could inspire the conservation and sustainable use of biodiversity in ABNJ undoubtedly produce more questions than answers. However, new laws and initiatives are emerging rapidly, the practical implications are in many respects consistent with ocean governance norms, and the particular nature of BBNJ provides a unique opportunity to reconsider the relationship of States to the global ocean and its resources. Acknowledging that many States are adopting Rights of Nature laws, and learning from how those laws are being implemented – it is time to bring a Rights of Nature perspective to global ocean stewardship.

Author statement

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