



Protecting commonplace biodiversity under international conservation law

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Abstract

A contemporary appraisal of the extent to which international conservation law provides for the protection of commonplace biodiversity. It is argued that in light of the current extinction crisis, biodiversity would be better served if the law focused more on protecting common species rather than just the rare and endangered. Particular attention is paid to the rationales behind conservation regulation and how different understandings of the value have influenced the law's development. Key conservation mechanisms, namely area-based management, species-focused mechanisms and the ecosystem approach, are analysed in relation to how they protect commonplace biodiversity, before a case study on the legal protection of plants is presented. What is suggested is that international conservation law has failed to keep pace with key developments in conservation science, resulting in a regulatory system that appears structurally incapable of halting biodiversity loss. Reforming the law so that it provides greater protection to commonplace biodiversity would be an important first step in responding to this.

Keywords Commonplace biodiversity · Conservation mechanisms · Ecocentrism · International law · Plants · Values

Introduction

In 1999, Professor Stuart Harrop, then of Kent University's Durrell Institute (UK), suggested in this journal that the priority of conservation regulation should be the protection of commonplace biodiversity rather than the rare and endangered. Reflecting on the sentiment in the 1983 World Charter for Nature that 'Every form of life is unique, warranting respect, regardless of its worth to mankind', he argued that it was inappropriate to limit legal protec-

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tion to arbitrarily defined species and habitats (Harrop 1999). 25 years later and fears that we are entering a sixth mass extinction event mean that questions over how the law should address critical rates of biodiversity loss are even more important than they were at the turn of the millennium.

This article updates and advances Harrop's analysis in two respects. First, the focus is on international regulatory frameworks rather than European Union and UK law. While there have been developments since 1999, the basic approaches underpinning conservation law in these jurisdictions remain essentially the same and Harrop's critiques of them are therefore still valid (e.g. Reid 2009; Romão 2015).¹ The international legal landscape, in contrast, has changed considerably. Although the only global conservation treaty to have been adopted in recent years is the 2023 UN Agreement on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction (the BBNJ Agreement), there has been a proliferation of soft law instruments, e.g. programmes of work and decisions of treaties' governing bodies. Further, the COVID-19 pandemic revealed how the exploitation of nature, even in a localised setting such as a wet market where various animal products and specimens are sold, is a matter of global concern.² International law therefore has a central role in shaping how states approach conservation at the national level (Smallwood, Orsini and Kok et al. 2022).

Second, the article complements Harrop's examples of birds, amphibians and reptiles with a case study on plants. This is particularly apposite to advocating for the protection of commonplace biodiversity. Flora, arguably more so than fauna, are the defining and essential building blocks of ecosystems, and so to deliver their protection would be of greater benefit for the ecological health of the planet. The discussion of plants also means that this work contributes to scholarship that addresses the relative lack of attention that has been paid to their legal protection (Amos 2020 4).

I begin by offering a contemporary appraisal of the rationales behind conserving commonplace biodiversity. Attention then turns to the values that underpin conservation regulation, as these are one explanation for why international instruments have been designed and implemented in the way that they have. Four positive interpretations of value are identified, which vary in terms of the priority they afford to commonplace biodiversity. Building on Mace's (2014) conservation paradigms, a critique is then provided of international law's main approaches to biodiversity conservation, i.e. area-based and species-focused conservation, and the more recent concept of the ecosystem approach. Finally, the case study on plants is presented, revealing the implications of the preceding discussions for the practical implementation of conservation law and its impacts on biodiversity.

¹ Although note should be made that commonplace biodiversity has received greater attention in other jurisdictions (e.g. Reese 2015; Schoukens and Van Hoorick 2021).

² It should be noted that the precise origins of COVID-19 are contested, but transmission to humans in a wildlife market remains the most likely explanation (WHO 2021).

Rationales for conserving the commonplace

In making his case for conserving commonplace biodiversity,³ a principal concern for Harrop was that the wholesale destruction of functioning ecosystems, e.g. through deforestation, causes systemic environmental degradation and the consequent loss of opportunity for nature-based innovation more so than the exploitation of any one species, and that preventing such destruction requires the protection of commonplace biodiversity (1999 680–681). This argument holds greater significance due to how ecological circumstances, and our understanding of those circumstances, have changed over the past 25 years. As I explore below, there is now greater focus in conservation law and practice on maintaining functioning ecosystems rather than specific elements of those systems (Mace 2014), and a species that is common within an ecosystem will typically be more important in that endeavour than one which has been reduced to a small number of individuals.

Harrop also highlights ecocentric arguments that justify the prioritisation of the commonplace (1999 681–683). Lovelock's Gaia hypothesis posits that the Earth represents a single living being demanding respect (1979), while both ecofeminists (although this is not a homogenous school of thought) and deep ecologists view, in different ways, humanity as being no more than equal members of ecological communities (Warren and Cheney 1991; Devall and Sessions 2007 67–69). To Harrop's original list we can add Wild Law, which grounds ideas of justice in the axiomatic ideals of Earth jurisprudence that grant equivalent moral worth to nature and humans (Cullinan 2011).

Ideas such as these are often dismissed as being too radical to be taken forward, but usually because they are incomprehensible to modern society, particularly in the Global North, rather than morally unacceptable (Cullinan 2011 57–58). From a conservation perspective, however, these theories are not (only) important because of their implications for how humanity relates to other species, but because the ways in which they would be given effect entails the holistic protection of all aspects of nature, including commonplace biodiversity (Harrop 1999 681–683). In each case, it is the integrity of ecological systems, the maintenance of which is dependent on protection being given to species that are sufficiently prevalent to contribute to that integrity, that is of paramount importance.

Further, in response to those who criticise ecological theories for their supposed outrageousness, I simply make the point that what may appear radical to Western audiences is already being implemented in regions where humanity's relationships with the natural world are grounded in different cultural traditions (Guayasamin, Vandergrift and Policha et al. 2021). The difficulty is that such understandings, and the values which they reflect, have limited space for meaningful expression in international conservation law.

³ It could be argued that commonplace biodiversity is simply synonymous with biodiversity. Biodiversity, in its fullest sense, also includes the rare and endangered, however, and so the label 'commonplace' is used to distinguish this important category of biodiversity from that which has typically been the focus of law and policy.

Defining nature's values

In legal scholarship, conservation discourse has advanced considerably in the last 25 years (Bowman 2016). We now have a greater understanding of not only how legal frameworks reinforce drivers of biodiversity loss (e.g. Amos 2023 conclusion), but also of how the law can support conservation strategies (Amos 2020 ch 9). The motivations behind conservation regulation are essentially unchanged, however. In short, the law seeks to conserve certain natural entities because humans consider them to hold value. The literature on the value of nature is extensive, ranging from philosophical discussions of the nature of value (e.g. Harrison et al. 1999) to different methodologies for quantifying nature's value, including through concepts such as ecosystem services (e.g. de Groot, Wilson and Boumans 2002). A detailed evaluation of this literature is beyond the scope of the present discussion. Instead, I offer an overview of four categories of nature's value and their corresponding relevance to commonplace biodiversity. It should be noted that one reason why effective, long-term conservation strategies are typically not developed at the international and national policy level is because there is a lack of consensus between stakeholders on how the values of nature should be defined (Angermeier 2000). There are myriad, often over-lapping, interpretations in the literature, with the nebulous nature of the concept of value being a core reason why consensus remains elusive (Ehrenfeld 1988 214). In presenting the following categories, I do not suggest that they are superior to how others define nature's values, or that other commentators' approaches are invalid. I do assert, however, that they represent a clear framework through which the consensus necessary for the adoption of long-term conservation policies might be found.

First is instrumental value, i.e. nature's commercial value and its value as resources that can be utilised by humanity (Murphy 1988; Norton 1988). As Harrop observed, in addition to delivering economic benefits through, e.g. biotechnology, functioning ecosystems also meet essential social needs, such as food production (1999 680–681). In principle, there is nothing wrong with justifying conservation efforts on nature's instrumental value. Indeed, this can be a powerful means of persuading policymakers, particularly in developing states, that conserving biodiversity is in their countries' long-term interests (Bowman et al. 2010 66). However, there are risks in conditioning the protection of nature on its economic or utilitarian value. Numerous species have minor direct instrumental value but perform vital ecological functions, plankton and microalgae being two examples. In relation to commonplace biodiversity, while species that are widespread and/or thriving may hold instrumental value, many will not. Instrumental value is therefore of limited relevance to conserving commonplace biodiversity.

Inherent value is also wholly anthropocentric, but unlike instrumental value this is not based on the direct exploitation of nature. Under the value framework applied in this work, inherent values are instead associated with non-extractive benefits, such as improvements to mental wellbeing by having access to nature, religious and spiritual connotations associated with natural entities and the joy and understanding that comes from observing nature (e.g. Talbot and Kaplan 1986; Haldar 2011; Williams 2017). Flagship species and charismatic megafauna are examples of species that enjoy significant inherent value, and are typically rare and endangered species rather than commonplace ones. Concerns have been raised that frequently portraying such species in the media can lead to the public holding false positive perceptions about their conservation status (Douglas and Winkel 2014), although research

also indicates that the judicious selection of a flagship species can benefit conservation efforts (McGowan, Beaumont and Smith et al. 2020).

The limitations of these anthropocentric interpretations of nature, in relation to commonplace biodiversity and conservation regulation generally (Amos 2020 17–20), mean that efforts continue to advance alternative rationales for its conservation. One response is the ecocentric theories that recognise nature's intrinsic value, including those highlighted in the preceding section. At their most radical, these call for the recognition of the rights of nature (e.g. Stone 2010), and such ideas are now being given effect. One example is New Zealand's determination that the Te awa tupra river (the Whanganui) holds legal personhood and corresponding legal rights through the 2016 Te Awa Tupua (Whanganui Rivers Claims Settlement) Act. While proving that nature can be given legal rights in a practicable manner, it is important not to overstate the significance of such developments. In the case of the Te awa tupra, a key reason for New Zealand's willingness to accept the independent legal status of the river was because it was a way of reconciling long-standing disputes between the Māori and the government over, inter alia, legal ownership of the river (Sanders 2018). It was not an unqualified endorsement of the proposition that nature has legal rights. More mainstream interpretations of intrinsic value, which do not challenge society's understanding of its relationships with the natural world in the same way as the rights of nature debate, rest on ideas of autopoiesism, i.e. an entity's capacity for self-renewal. Under this reading of intrinsic value, a species should be conserved because it has value in and of itself, regardless of any worth it has to society or another species (Bowman et al. 2010 63).

Intrinsic value demands the protection of commonplace biodiversity; all species are considered to hold different but equal value and one can therefore not be prioritised over another. There are, however, difficulties with predicating conservation on intrinsic value. While this rejects the anthropocentricity that is at the heart of society's failure to halt biodiversity loss (Rolston III 1983, 136), legitimate ethical concerns regarding human wellbeing can still be raised. Harrop notes that it would mean valuing positively species that spread disease in human populations, such as the *Anopheles* mosquito (2010 122).

The final, and in many ways most significant way to define nature's value, is ecological value. This is not concerned with how functioning ecosystems benefit society (instrumental value) or the mere fact of an entity's existence (intrinsic value). Rather, ecological value reflects that all aspects of nature contribute to an ecosystem's integrity, and that contribution should be preserved regardless of any other value associated with its individual elements. A strength of ecosystemic valuations of nature, particularly regarding commonplace biodiversity, is that arbitrary determinations of what warrants protection based on human biases are largely removed from decisions about which aspects of nature to protect. Instead, a policy founded on nature's ecological value will take as its starting point that everything in nature plays a unique role in supporting Earth's life-support and life-supporting systems, even if we do not yet fully understand what that role is, and therefore everything should be protected at a level that enables it to continue this role (Weesie and van Andel 2008).

As desirable as pursuing policies on the basis of nature's ecological value may be theoretically, there are practical limitations. In particular, there are finite resources for conservation, with McCleery and colleagues arguing that conservation requires a COVID-style economic stimulus if the extinction crisis is to be addressed (McCleery, Fletcher and Kruger et al. 2020). Priorities therefore need to be set to ensure efficient use of available resources and questions have been asked over whether this is being achieved, particularly in develop-

ing states (Bruner et al. 2010). A related point is that while conservationists may recognise the importance of protecting ecosystems rather than individual species and habitats, that they are often reliant on public donations to fund their work means that they must tailor their conservation activities accordingly (Smith et al. 2010). This underscores that the value-types described here are not mutually-exclusive or operate in isolation from each other. In many respects, this is beneficial for conservation. A woodland may be an adventure playground for families (inherent value), a tourist attraction for public authorities (instrumental value) and a habitat for wildlife (ecological value). Different stakeholders value the woodland for their own reasons but are united in their desire to see it conserved.

To summarise, instrumental and inherent value are both anthropocentric interpretations of the value of nature, with the former focusing on the utilisation and commercial exploitation of nature, and the latter concerned with more intangible benefits. For the purposes of this work, intrinsic value, by far the most complex interpretation to define (Baird Callicott 1985), speaks to the value something has in and of itself regardless of its worth to any other entity (natural or societal). Finally, ecological value concerns the role or connections an entity has within its wider ecosystem, with its value linked how to it supports the integrity and functioning of that system without any anthropocentric consideration.

Tracing the development of conservation law and science

Also useful when analysing the strengths and limitations of international conservation law in relation to the protection of commonplace biodiversity is understanding how conservation as a discipline has developed. As Mace (2014) observes, conservation has undergone a series of paradigm shifts since the mid-20th century. The ‘nature for itself’ model that existed until the 1960s perpetuated colonial myths surrounding ‘the wilderness’ (Adams 2004 ch 4) and the consequent need to isolate what were thought to be pristine natural areas from human interference. The concern here was not protecting all nature, but rather to ensure space for scientifically interesting or ‘impressive’ habitats and species. ‘Nature for itself’ evolved into the ‘nature despite people’ model of the 1970s and 80s, which focused on protecting individual habitats and species perceived to be rare or endangered from specific threats presented by human activities.

In the 1990s, growing realisation of humanity’s dependence on functioning ecosystems led to a ‘nature for people’ approach to conservation, in which the focus on species and habitats gave way to ‘biodiversity’ and ‘ecosystems’ as policy constructs. For reasons that are discussed below, however, legal protection remained centred on those elements of biodiversity and ecosystems that are rare and endangered.

Today, the predominant conservation paradigm is ‘people and nature’, where the concern is less about ecosystems per se and more about ensuring that humanity’s interactions with nature support and restore ecosystem functions and connectivity (Mace 2014 1559). In some respects, this reflects the concept of ecosystem services, i.e. the benefits people enjoy from functioning ecosystems (UNEP 2003). What is interesting about how ecosystem services have been developed as a concept is that their delivery is often connected with supporting human *wellbeing*, which contrasts with the more common language of protecting the

interests of current and future generations (Brown Weiss 1992). Most notably, strengthening ‘long-term human wellbeing’ is part of the mandate of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). This was established in 2012 in response to concerns about how the lack of objective scientific information on the status of ecosystems and biodiversity was frustrating states’ implementation of their international conservation obligations (Vadrot 2014 ch 3). In theory, the idea of wellbeing is more conducive to accounting for individuals’ experiences and perceptions of nature and therefore its non-instrumental values (Amos 2023 98–99). However, research shows that in the past at least, the IPBES favoured knowledge grounded in Western epistemological hegemonies, and therefore Western perceptions of nature, which led to the exclusion and even denigration of alternative understandings of humanity’s connections with the natural world (Brandt and Vadrot 2013). Efforts are being made to address this in international fora, but only to the point of recognising the legitimacy of these views rather than a more meaningful interrogation of their implications for society’s exploitation of nature (Convention on Biological Diversity 2022a para 7b).

Theoretically, the shift towards ‘nature for people’ and then ‘people and nature’ paradigms created space for greater consideration to be given to commonplace biodiversity in conservation law and policy. What is revealed when we compare how nature’s values are reflected in Mace’s conservation paradigms and the international conservation treaties adopted during the corresponding periods, however, is that conservation law has failed to keep pace with conservation theory.

‘Conservation for itself’ primarily aligns with inherent understandings of nature. Remaining areas of ‘wilderness’ were considered pristine and in need of preservation rather than management (Adams 2004 ch 4). Certain legal instruments adopted during this time reflect inherent value as well, with the 1940 Western Hemisphere Convention being the principal example. Central to this treaty is the establishment of protected areas on criteria such as ‘superlative scenery, flora and fauna’ and ‘primitive conditions’ that are designed to exclude corresponding levels of incompatible human activity. Even during its early stages of development, however, the overwhelming focus of the law was on nature’s instrumental values. The 1900 Convention for the Preservation of Wild Animals, Birds and Fish in Africa, which never received enough ratifications to enter into force, categorised animals in terms of their ‘usefulness’ to society, with the hunting of animals such as vultures prohibited because they were deemed ‘useful’ (Schedule 1), but the killing of ‘pests’, including many large predator species, encouraged (Schedule 5). The 1902 Convention for the Protection of Birds Useful to Agriculture demonstrates a similar concern with protecting those species that were considered to benefit humans.

‘Nature despite people’ showed a greater deference to nature’s instrumental values. As Mace notes, concern during this period focused on how the exploitation of certain species had reached unsustainable levels, leading to discussions of management approaches based on ideas such as maximum sustainable yields (2014 1558). It is here that we see the greatest alignment between the values underpinning conservation thought and conservation law. The major global conservation treaties adopted during the 1970s and 80s are grounded in anthropocentric value. While the 1971 Convention on Wetlands of International Importance (Ramsar), for example, begins by noting wetlands’ ecological value in regulating hydrological processes, it is important to reflect on the instrument as a whole and it is notable that it goes onto recognise wetlands as ‘a resource of great economic, cultural, scientific and

recreational value’ and that waterfowl ‘should be regarded as an international resource’. In contrast, the 1972 World Heritage Convention (WHC) seeks to protect the inherent value of natural and cultural sites that are of ‘outstanding universal value’ (Article 2), but the priority is still nature’s anthropocentric values.

As noted, from the 1990s, conservation thinking then gradually evolves to adopt more holistic perspectives of nature and its interactions with society, beginning with ‘nature for people’ and a focus on ecosystems and now the greater emphasis on the importance of maintaining ecosystemic connections under ‘people and nature’. There is, in other words, greater acknowledgement of nature’s ecological values. In narrow ways, the CBD, the principal treaty adopted in this period, reflects this approach. Article 2 of that treaty, for example, defines biodiversity as:

...the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.

However, it is clear from a close reading of its operative text that under the CBD conservation is a means to the end of perpetuating sustainable use of biodiversity, i.e. it is concerned with nature’s instrumental values. This is evidenced, inter alia, by the repeated coupling of ‘conservation and sustainable use’ in the CBD’s provisions and an absence of an independent definition of ‘conservation’ in the treaty separate from that of ‘sustainable use’ (Amos 2020 25).

Similar observations can be made about 21st century conservation instruments. As I discuss further below, the concept of the ecosystem approach is growing in prevalence in international conservation law (De Lucia 2019) but to date has been most comprehensively addressed in the CBD’s non-binding guidance (Amos 2023, 20–26). One exception is the BBNJ Agreement, Article 7 of which calls for states to be guided by, inter alia, the ecosystem approach, an integrated approach to ocean management and:

An approach that builds ecosystem resilience, including to adverse effects of climate change and ocean acidification, and also maintains and restores ecosystem integrity, including the carbon cycling services that underpin the role of the ocean in climate;

Note, though, that the BBNJ Agreement describes these as approaches to guide states. They are not specific, clearly defined or binding obligations, and no further guidance is provided on what an ecosystem approach might comprise in the Agreement’s text. Further, similar observations regarding the purpose of conservation made in relation to the CBD, i.e. that conservation is only a means to perpetuating sustainable use, apply equally to the BBNJ Agreement, suggesting again that the priority is nature’s instrumental values.

Legal mechanisms for conserving Biodiversity

The law’s failure to keep pace with conservation theory has implications for how the conservation mechanisms contained in those instruments have been taken forward by states. The four major biodiversity treaties adopted in the 1970s and 80s may be grouped together by

their principal conservation mechanism. Ramsar and the WHC rely on area-based conservation measures, requiring that sites be designated either because they are an ‘internationally significant’ wetland (Ramsar Convention Article 2; Goodwin 2017) or because they host natural and/or cultural heritage considered to be of ‘outstanding universal value’ (WHC Articles 2 and 4; Carducci 2008).

The Convention on International Trade in Endangered Species of Fauna and Flora (CITES) and the Convention on Migratory Species (CMS), in contrast, operate through species-focused mechanisms. For CITES, a species that is considered at risk of extinction due to the impacts of international trade, or may become at risk unless international trade in it is regulated, should be listed in Appendix I or II, respectively (Article II; Amos 2020 153–162). CITES is therefore a response to species’ instrumental (commercial) value, but it is certain species’ economic value that is also leading to CITES’s listing decisions becoming politicised. Some states are increasingly resistant to the listing of species where international trade in those species is important to their domestic markets (Blue Sky 2010). Under the CMS, a migratory species, i.e. one where the majority of its global population ‘cyclically and predictably cross one or more national jurisdictional boundaries’ (Article I), are listed in Appendix I if they are endangered, which imposes certain management obligations on range states, and Appendix II if they have ‘an unfavourable conservation status’ and would benefit from being subject to an international agreement regarding their conservation (Articles III and IV, respectively; Bowman et al. 2010 ch 16). Only seven of these agreements have been adopted to date, however.⁴

These two approaches have defined conservation law since its emergence around the end of the 19th century (Adams 2004 44–45). While designating an area or species as protected provides a degree of legal certainty over the scope of conservation regulation, each has its disadvantages. Furthermore, as with the values that underpin them, while we can see a progressive development in conservation thought in that time, how they are presented through legal instruments continues to reflect the ‘nature despite people’ model in place when the treaties were adopted, and that this is grounded in nature’s instrumental values impacts the conservation mechanisms’ relevance to commonplace biodiversity.

Establishing a protected area is typically linked to the site in question either being important habitat for an endangered species, or itself representing a rare or endangered habitat. Ramsar and the WHC are both examples of this. The basic rationale behind them is sound: they provide space in which anthropogenic pressures on nature should be minimised. In practice, however, protected areas have faced challenges. Many represent nothing more than ‘paper parks’, i.e. they may exist on a map but receive little protection on the ground (Myers et al. 2000). A related problem is decision-makers’ willingness to adjust the boundaries of protected sites when they conflict with a socioeconomic interest (Adams 2003 76). Others have been protected to the extent that they exclude, or lead to the persecution of, local communities through ‘fortress conservation’ approaches, which raise their own management challenges (Adams 2004 111–115). From an ecological perspective, protected areas have been criticised on the basis of island theory. Rather than support biodiversity, protected areas merely create isolated refuges that limit species’ capacity for genetic exchange (MacArthur and Wilson 1967). Establishing green corridors to allow animals to travel between islands is one response to this, but as the European Union’s experience of Natura 2000 demonstrates,

⁴<https://www.cms.int/en/cms-instruments/agreements> (last accessed 03/01/2024). Memoranda of Understanding have also been adopted for certain species, but these lack the legal status of the formal agreements.

this is difficult to achieve in practice (Born et al. 2015 Part II), and are of little use to those species that either cannot move or require extensive home ranges rather than mere corridors (Santini, Boitani and Maiorano et al. 2016).

International conservation law's use of lists of species is even more problematic. Studies show how the lists that have been adopted are far from representative, in some cases comprising only a handful of species (Amos 2020 66–76), with insufficient mechanisms to allow for the systematic review and revision of those lists (Amos 2021 386–387). In other words, the law is not only failing to protect common species, but also to ensure the conservation of species that are supposedly its priority, i.e. the rare and endangered, as well.

There is evidence, however, suggesting that these traditional conservation mechanisms can be used to protect commonplace biodiversity if the frameworks underpinning them evolve to reflect nature's intrinsic values. Of particular interest here is the 1946 International Convention for the Regulation of Whaling (ICRW). In the past, this treaty operated primarily on the basis of whales' instrumental, specifically their commercial, value. As with the CBD, conservation under the ICRW was considered a means to the end of perpetuating exploitation, rather than a goal in and of itself. This is illustrated by the Blue Whale Unit, the first approach under the ICRW to regulate commercial whaling that lasted until 1972. In short, whale species covered by the ICRW were assigned a value according to how much oil they produce in comparison to a blue whale (*Balaenoptera musculus*). Each state was given a quota of a certain number of units and could catch any combination of whales that fulfilled that quota. To give a very simple example, if the quota was one unit, a state could take one blue whale or two fin whales (*Balaenoptera physalus*).

It is beyond the scope of this article to offer a detailed critique of the ICRW (see Bowman et al. 2010 ch 6). The flaws of the Blue Whale Unit are, however, self-evident. Its consequent failure to ensure that whales were caught at a sustainable rate led first to the New Management Procedure, which was based on the idea of populations' maximum sustainable yield and proved equally ineffective due, inter alia, to inadequate data and under-reporting by states, and then to the 1982 moratorium on commercial whaling that began in 1985/86 and remains in place to this day.

Since the moratorium was introduced, the populations of many of those whale species listed in the ICRW's Schedule have at least stabilised (Harrop 2003 91), although other threats remain (Simmonds and Brake 2011). Its adoption has been contentious, however. Pro-whaling states, which are now a minority in the ICRW's governing body, the International Whaling Commission (IWC), point to the treaty's preamble, which identifies its objective as 'the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry'. They argue that many species have now recovered to a level that can sustain commercial whaling and to maintain the moratorium is therefore a violation of the treaty (Kobayashi 2006).

The moratorium's durability is due to shifts in how the value of whales is perceived in the IWC, driven in a large part by public opinion in the United States, Australia and New Zealand. Harrop tracks how the ICRW has evolved from a regime that was initially concerned with supporting the whaling industry, to one that was focused on conservation and is now increasingly adopting a compassionate approach to regulating society's interactions with whales (Harrop 2003 88 et seq). The resulting tensions between anti- and pro-whaling states culminated in the *Whaling in the Antarctic (Australia v Japan; New Zealand intervening)* case (ICJ 2014), in which the International Court of Justice concluded that Japan's JARPA-

II scientific programme, which was viewed by others as a front for commercial whaling due to the scientifically-unjustifiable use of lethal research methods, was unlawful (Caddell 2014). Japan subsequently withdrew from the ICRW and in July 2019 announced that it would recommence commercial whaling,⁵ suggesting that the allegations against JARPA-II had some merit.

What the ICRW illustrates is how intrinsic understandings of nature's value can be translated to protection for commonplace biodiversity in international legal instruments. The ICRW does not protect all species, or even all whales, but the protection that it does offer to species within its remit is no longer based on them being endangered. It also reinforces the pragmatic interpretation of the ecocentric theories described above, in which the focus is on their practical implications for ecosystem protection rather than their more challenging reconfiguration of nature/human relationships.

There is little evidence to suggest that other conservation treaties are undergoing the same paradigm shift as the ICRW. With the exception of non-binding preambular references such as that in the CBD's, intrinsic value is not reflected in international legal treaties. As noted, the CBD and other major global agreements predominately reflect Western views of nature's anthropocentric values. Stronger statements in support of nature's intrinsic value can be found in non-binding policy documents and reports from major international bodies, including the CBD's recently adopted Kunming Global Biodiversity Framework:

Nature embodies different concepts for different people, including biodiversity, ecosystems, Mother Earth, and systems of life... The Framework recognises and considers these diverse value systems and concepts, including, for those countries that recognise them, rights of nature and rights of Mother Earth, as being an integral part of its successful implementation (Convention on Biological Diversity 2022a para 7.b).

Commenting on a similar statement in the outcome document to the 2012 Rio+20 Conference (UN 2012 para 39), Morrow notes that this at least legitimises discussions about alternative understandings of nature's value, and how society should therefore interact with it, in international fora (Morrow 2012 296). Recognising such understandings of nature's value and taking meaningful steps to reflect these throughout law and policy are two different things, however, particularly when similar statements are not contained in the principal legally binding texts, i.e. treaties. Notwithstanding this, the idea of self-renewal being a point of contact between law and understandings of nature's intrinsic value is being explored in other environmental contexts. It is especially relevant to discussions of nature-based solutions, for example, which represents a potential template not only for conservation, but broader societal reform (Seddon, Chausson and Berry et al. 2020).

Instead, what we have seen over recent decades is the emergence of the ecosystem approach to conservation regulation. Simply defined, an ecosystem approach involves adopting holistic strategies for the conservation of species and habitats, with more advanced forms including consideration of socioeconomic factors across governance levels (De Lucia 2015 92–93). In international law, the ecosystem approach takes various forms, with the most sophisticated being the 12 principles developed by the CBD (Convention on Biological Diversity 2000 Part B; Amos 2023 23–26). These address, inter alia, the importance of engaging different stakeholders in the design and implementation of conservation measures

⁵<https://iwc.int/management-and-conservation/whaling/commercial> (last accessed 03/01/2024).

(Principles 1 and 11); holistic approaches to the design of conservation strategies, recognising that trade-offs between different objectives often must be made (Principle 12); and the need to base these strategies on ecologically-appropriate timescales (Principles 7 and 8).

In theory, the CBD's ecosystem approach is better placed to protect commonplace biodiversity than the narrower legal mechanisms of protected areas and species lists. In accordance with Mace's 'people and nature' paradigm and various ecocentric theories, it emphasises the importance of protecting relationships within ecosystems, of which common species will be an essential part, rather than individual aspects of nature. Of particular note is Principle 5:

Ecosystem functioning and resilience depends on a dynamic relationship within species, among species and between species and their abiotic environment... The conservation and, where appropriate, restoration of these interactions and processes is of greater significance for the long-term maintenance of biological diversity than simply [the] protection of species.

However, the CBD's ecosystem approach, like that of many international conservation instruments, is non-binding, meaning that its influence on state practice takes the form of persuasion rather than compulsion. In terms of binding obligations, international conservation law remains anchored to mechanisms and approaches that focus on rare and endangered species. The implications of this for the protection of commonplace biodiversity are highlighted when we consider how the law protects plants.

The conservation of plants in international law

Plants are fundamental to all life on Earth. Many animal species that are common and thriving do so because the plants on which they depend, for food, shelter or because it supports their prey species, are also prevalent throughout the relevant ecosystem. Despite their critical importance to both nature and society, however, plants are typically treated as a secondary concern by law and policymakers (Amos 2020 4). A comparison of the CITES Appendices, which are the treaty's central mechanism, illustrates this. Species listed in Appendix I are subject to strict protections and may only be traded if that trade is not for commercial purposes and otherwise not detrimental to the survival of the species (Article III). Appendix II species are those that are not yet threatened with extinction but may become so unless trade in them is regulated. Trade in Appendix II species is also not permitted if it would be detrimental to their survival, but is allowed for commercial purposes with the oversight of the relevant national authorities (Article IV). Appendix II also includes 'like species', i.e. species that are so similar to an at-risk species that they are regulated to prevent traders from illegally trading an endangered species as a more common one. Due to the inclusion of 'like species', CITES can be said to protect commonplace biodiversity, even though it only does so to further protect species threatened by international trade.

At the time of writing, only around 300 plant species were listed in Appendix I, less than half the number of animals. In comparison, there are approximately 30,000 plant species, six times the number of animals, in Appendix II.⁶ This may simply reflect the lack of empiri-

⁶ The Appendices are available at: <https://cites.org/eng/app/appendices.php> (last accessed 03/01/2024).

cal evidence indicating that international trade is a principal cause of extinction, as opposed to decline, of plants (Huxley 2000). However, it is difficult to reconcile the relatively small number of plants in Appendix I with concerns that trade poses a bigger threat to plants than animals (Burns 1990–204) and evidence suggesting that around 45% of known flowering plant species face extinction (Kew 2023: 68).

CITES is only concerned with the effects of international trade on plants. It has no role in regulating wildlife trade that occurs within a state's borders. Other global instruments play a broader role in international conservation efforts. There are two global treaties exclusively focused on plants: the 1997 International Plant Protection Convention (IPPC) and 2001 UN Food and Agricultural Organisation's Plant Genetic Resources Treaty (PGRT). Both are of limited value in conserving commonplace and rare/endangered plants.

Taking the IPPC first, this is concerned with preventing the spread of plant pests. Appropriately broad definitions of 'plants' and 'plant products' are contained in Article 2, covering virtually all plants and plant material. However, the protection afforded by the IPPC to plants is severely limited because Contracting Parties may only adopt phytosanitary measures for pests that will or may have an *economic* impact (Article 6). In other words, the IPPC is only concerned with protecting nature's instrumental values. This prevents states from imposing measures against pests that may target non-economically important plant species that nevertheless warrants protection, for example because they provide habitat for an endangered animal (Amos 2020, 175–179). As such, while the IPPC is not expressly limited to the protection of rare and endangered flora, neither can it be said to provide universal protection for commonplace biodiversity.

The PGRT does not share the definitional weaknesses of the IPPC. This calls for the conservation and sustainable use of plant genetic resources, which are defined by Article 2 as 'any genetic material of plant origin of actual or potential value for food and agriculture'. In this regard, the PGRT may be considered a dynamic instrument; as more plant genomes are mapped, more genes will be discovered that will or may be of value to agriculture and more species will therefore fall within the convention's remit. It still cannot be said to protect commonplace plant diversity, however, as it imposes a specific, anthropocentric criterion that is again based on instrumental value, in this case agricultural utility. Both the PGRT and the IPPC are consequently further examples of how international law failed to evolve along the lines of the 'nature for people' and 'people and nature' conservation paradigms of the 1990s and post-millennium era. Rather than embrace meaningfully the holistic ideas of biodiversity and ecosystems, the focus of both treaties remain on a narrow subset of plant species defined, in different ways, by their instrumental values.

Article 5(1) is the main conservation provision of the PGRT:

Each Contracting Party shall, subject to national legislation, and in cooperation with other Contracting Parties where appropriate, promote an integrated approach to the exploration, conservation and sustainable use of plant genetic resources for food and agriculture....

This is followed by a list of activities that states are encouraged to take, including creating an inventory of plant genetic resources, supporting farmer and community efforts to conserve plant genetic resources that are important for agriculture, and adopting in and ex situ conservation measures. It should be noted that the obligations in Article 5 are qualified

by phrases such as ‘where appropriate’, which is a judgement for the Contracting Parties themselves to make and thus undermines the enforceability of the treaty. This is partially mitigated by the specific and unqualified obligation in Article 4 requiring Contracting Parties to ensure that all national regulations are compatible with their PGRT obligations, but this is arguably of limited value given the broader difficulties associated with the enforcement of international environmental obligations (Treves, Tanzi and Pineschi et al. 2009).

For a more comprehensive approach to conservation, we need to turn to the CBD. The weaknesses of the CBD’s conservation provisions have been comprehensively addressed elsewhere (e.g. Guruswamy 1998) and so only an overview is provided here. Of particular note is the qualified nature of the Convention’s obligations. States are, for example, only required to establish a network of protected areas ‘as far as possible and as appropriate’ (Article 8(a)). Such phrases are included in nearly all the Convention’s substantive provisions and, as with the PGRT, render them difficult to enforce. The CBD also lacks an equivalent provision to Article 4 of the PGRT, although its Contracting Parties are still subject to the peremptory norm of *pacta sunt servanda*, i.e. that states must comply in good faith with any treaty to which they are a party.

The CBD is a framework convention; it sets out the broad principles and basic approaches of the regime with the expectation that subsequent protocols will provide more detailed obligations relating to specific matters. Over three decades since it was agreed, however, only two legally binding protocols have been adopted: the 2000 Cartagena Protocol on Biosafety and the 2010 Nagoya Protocol on Access to Genetic Resources and Benefit Sharing.⁷ Given their politically-sensitive subject matter, that these two protocols were adopted is a positive achievement of international negotiation. However, they hardly reflect the most pressing concerns when it comes to reducing the loss of biodiversity. Initially, there were hopes that a forests protocol would be adopted, making the CBD the principal forests instrument in international law and addressing a significant gap (Tarasofsky 1996 673–675). Such an agreement would clearly be of significant value to plants and potentially to commonplace biodiversity, especially if it incorporated the CBD’s relatively strong conceptualisation of the ecosystem approach. No such protocol was forthcoming, however. Instead, the global regulation of forests has been left to a patchwork of non-binding statements of principles primarily concerned with protecting their instrumental values (Couzens et al. 2017).

In the absence of legally binding protocols, parties to the CBD have adopted non-binding thematic programmes and cross-cutting issues. These relate to key biomes, the ecosystem approach and other conservation methodologies, and major threats to biodiversity, such as climate change and invasive/alien species. Prior to 2020, the most important of these for flora was the Global Strategy for Plant Conservation (GSPC) (Convention on Biological Diversity 2010). This comprised five objectives and related sub-targets addressing, inter alia, assessing the status of plant species and taking in situ and ex situ conservation measures. The GSPC expired in 2020 and any success it achieved was minimal (Secretariat to the Convention on Biological Diversity 2020 124–130). However, given the relative dearth of plant-specific measures in international conservation law, that states have yet to adopt a new framework to guide plant conservation measures means that there is a critical gap in the CBD regime.

If and when a new plant strategy is agreed, it appears that it will adopt the same non-binding approach as the GSPC (Convention on Biological Diversity 2022b para 15). This is

⁷ A Supplementary Protocol on Liability and Redress has also been adopted under the Cartagena Protocol.

not the only option, however, and arguably plant conservation, and therefore commonplace biodiversity, would be better served if a legally binding protocol to the CBD was adopted. In addition to providing a stronger legal basis for broader implementation support, a protocol would also be a binding framework through which states could be required to adopt plant-specific conservation measures. Many conservation instruments, including the CBD, do not explicitly differentiate between conservation measures for animals and conservation measures for plants, despite flora and fauna obviously having different needs. Space is a good example and while the challenges of creating sufficiently large protected areas to support migratory and predatory animals will only increase in the face of climate change (Deb, Phinn and Butt et al. 2019), creating networks of protected micro-reserves in place of traditional protected areas has been recommended as a means of protecting plant populations across their distribution (Mendoza-Fernández, Pérez-García and Martínez-Fernández et al. 2014). It would be important to maintain the wider ecological connections of these micro-reserves and ensure that they in close proximity to allow for genetic exchange across species (Ashton 1988 269), but this is one example of how a more targeted strategy for plant conservation could be developed so that the law overall better protects commonplace biodiversity.

Conclusion

To conclude, I offer some brief thoughts on how the issues identified above might be addressed. First, how the law values nature must be grounded firmly in understandings of ecological value, as these are most compatible with arguments in favour of protecting commonplace biodiversity. This does not mean that other value-types should be disregarded, as noted they can contribute to arguments in favour of conservation, but they should be considered secondary to ecological value. The ecosystem approach has emerged as a potential vehicle through which this can be accomplished, but that it is typically non-binding limits the immediate impact that it can have.

Second, the black letter of international conservation law must be brought into line with contemporary thinking in conservation science. Reforming the treaties *per se* is notoriously difficult and reopening them for negotiation is just as likely, if not more so, to result in a reduction in protection rather than improvements. If progress is to be made, it will probably be through non-binding guidance and initiatives, but this will be problematic given their noted limitations.

Ultimately, what is suggested by this article, and other research cited herein, is that international conservation law appears so structurally flawed that it may be incapable of halting biodiversity loss. This is a sobering thought, but one that must be confronted if the impending extinction crisis is to at least be mitigated. Reforming the law so that it better protects commonplace biodiversity would be an important first step.

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