

## From Sovereignty to Guardianship in Ecoregions

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**ABSTRACT** *Recent scientific studies suggest that the destabilisation of the earth's climate and biodiversity loss are not separate, but interdependent phenomena. In this context, some have proposed the creation of a 'Global Safety Net' of ecoregions that should be preserved to stop further biodiversity loss, preventing at the same time the growth of CO<sub>2</sub> emissions produced by deforestation and allowing natural carbon removal. In this article, I suggest that a first step to achieve this might be to replace permanent sovereignty over natural resources in these areas with permanent guardianship. I propose to take some inspiration from a model that has already been implemented over an entire continent with a fair degree of success. In 1959, the Antarctic Treaty froze the sovereign claims of seven countries over Antarctica. However, these countries plus 47 others today have been remarkably successful at jointly preserving the continent for peace, science, and the protection of the environment, especially since the signature of the Environmental Protocol in 1991. After outlining some principles that could give form to a Global Environmental Protocol for Ecoregions, I address a series of objections and offer some concluding remarks.*

### 1. Preliminaries

Realism of course there must be, for no nation can base its domestic or foreign policy on mere good will and flights of the imagination. But it is a curious realism that sticks to the empty shell of the past and ignores or refuses to understand the hard facts of the present, which are not only political and economic but also include the feelings and urges of vast numbers of people. Such realism is more imaginative and divorced from today's and tomorrow's problems than much of the so-called idealism of many people.

(Jawaharlal Nehru, *The Discovery of India*)<sup>1</sup>

When writing these lines, in 1946, the main concern of the first Prime Minister of India, Jawaharlal Nehru, was how the colonial world – and his country in particular – would transition to an international order of independent states, equal and free from social, economic, and political domination. In the sempiternal conflict between idealism and realism in politics, Nehru thought it strange that those who stuck to the old ways considered themselves to be more in touch with reality than those who demanded new responses to new problems.

If Nehru had been alive today, I like to think that he would have added *environmental* concerns alongside the political, economic, and social hard facts of the present. Whereas, in his time, economic growth and development enabled through states' permanent sovereignty over natural resources (PSNR) seemed like the best goal to strive toward, it is

evident that such goal is in need of revision due to at least two interconnected concerns: on the one hand, the overexploitation of resources like coal, oil, and gas, which should be left in the ground to stop the global increase in CO<sub>2</sub> emissions; and, on the other hand, the severe degradation or destruction of key ecoregions which, if preserved, would put a halt to biodiversity loss, prevent further CO<sub>2</sub> emissions from land conversion, and enhance natural carbon removal.<sup>2</sup> Those who stick to the doctrine of PSNR are thus much like the ‘curious realists’ that Nehru denounces: cognitively divorced from these problems, which are among the most momentous that humanity as a whole has ever faced.

In this article, I suggest that, to begin to address these challenges, permanent sovereignty over natural resources should be replaced with permanent guardianship of the non-human natural world (hereinafter, permanent guardianship) – in the key ecoregions mentioned above. Ultimately, I think there are weighty reasons to re-examine the whole framework of land and resource ownership and territorial sovereignty that has become default in the Western world and has spread rapidly beyond it, especially in terms of what it reveals about how we conceptualise our relationship towards the nonhuman natural world. In what follows, however, I limit myself to defending what I take to be the most urgent and uncontroversial case for such a transition.

Ecoregions are defined in very general terms as ‘sites of particular importance for biodiversity where additional conservation attention is needed, and other intact lands of high value for carbon storage and other ecosystem services’.<sup>3</sup> Dinerstein *et al.* use three targets to specify which sites these comprise. The first is great diversity and abundance (measured by species rarity, distinct species assemblages, rare phenomena, and intactness). Examples are the Madagascar humid forests, Borneo Lowland rainforests, and the Scandinavian and Russian taiga. The second regards the potential for carbon storage and drawdown, in sites like the Kazakh steppe (Kazakhstan and Russia) and the New England Acadian forests (United States and Canada). The third target refers to wildlife and climate corridors like ones currently in existence in the tundra and taiga and others in need of creation to connect some tropical forests and some temperate and tropical grasslands. In terms of geographic distribution, the states with the greatest potential to contribute to the preservation of ecoregions are Russia, Indonesia, Brazil, Canada, Australia, and the United States. Going further than the *30 × 30 Initiative* (aimed at protecting 30% of global land and ocean by 2030<sup>4</sup>), a plan for protecting ecoregions would cover nearly half of the world’s terrestrial areas, a third of which are inhabited by indigenous communities.<sup>5</sup> It has been estimated that ecoregions are home to one billion people in total.<sup>6</sup>

There are at least three reasons to defend the underlying assumption that drives this article, namely, that the preservation of ecoregions is a goal worth pursuing. First, as the biologist Edward O. Wilson explains, protecting these ecoregions need not be so much about altruism toward nonhuman beings as about self-interest in our own continuation. As a biological species that has evolved amongst others for thousands of years, Wilson points out that it is a big gamble to simply assume that life will continue to be liveable for us if we get rid of (most of) the others.<sup>7</sup> Some might reply that humans have always managed to adapt to new circumstances and that the situation today will be no exception to our successful adaptability: so why worry so much about further losses? The response is that the rate of exploitation and extinction has never in human history been as high as now, and that what humans are causing today is not just a *quantitative* change (in the number of existing species), but a *qualitative* one, where the very functioning of basic systems that

sustain our life on Earth is put at risk. In the face of such risk, the rational thing to do is to suspend business as usual.

Second, preserving ecoregions is preserving our potential for knowledge expansion. 'All men by nature desire to know', claimed Aristotle in the very first line of the *Metaphysics*.<sup>8</sup> And yet, today we are destroying at the highest speed ever in human history one of the main objects of that knowledge; namely, the planet's biodiversity. It has been estimated that, on top of the two million known species on earth, six million might still be unknown.<sup>9</sup> The wealth of information contained in them and in their interactions might be lost forever if we keep perpetuating the practices that are jointly responsible for what has been labelled 'the sixth extinction': habitat destruction (including that caused by climate change), pollution, overhunting and overfishing, introduction of invasive species, and population growth.<sup>10</sup> For the sake of knowledge, then, it seems imperative to preserve what took 550 million years to evolve. It is the very material of scientific inquiry that is at stake.

Third, for those of us who are dissatisfied with anthropocentric reasoning, it is obvious that preserving ecoregions is something we owe to other beings, and it is obvious that our way of relating to the nonhuman natural world more generally is in need of revision.<sup>11</sup> While I see this line of argument as being the strongest (and the one that would eventually justify an extended model of permanent guardianship of the whole earth), for the purposes of this article, it is enough to accept the first two.

Luckily, an institutional model from where to take some inspiration for the establishment of permanent guardianship has already been implemented over a whole continent. In 1959, the Antarctic Treaty froze the sovereign claims of seven countries over Antarctica (plus the potential claims of two). Freezing their claims, however, did not leave Antarctica lawless: these nine countries (plus 45 others today, and the list is growing) have been remarkably successful in jointly managing the continent for the sake of peace, science, and the protection of the environment, especially after the signature of the Environmental Protocol in 1991. My claim is that we should pay attention to this legal framework if we want to start tackling the hard, environmental facts of the present.

Sovereignty and guardianship are loaded words, and a clarification of how I understand them is in order. When it comes to PSNR, what I have in mind is a mix of first- and second-order rights that the people of a state are said to hold over the natural resources within their territory. Following Chris Armstrong's typology of resource rights (based in turn on Elinor Ostrom's work), one can distinguish at least four first-order rights and four second-order rights – where first-order rights refer mainly to ownership, and second-order rights to jurisdiction. First-order rights are the right to access a resource, withdraw it, alienate it, and derive income from it. Second-order rights are the right to exclude others from accessing it, managing it, regulating its alienation, and regulating income derived from it.<sup>12</sup> When looking at the genealogy of the doctrine of PSNR, the main claim made by newly independent, developing states was that they would from then on secure for themselves (rather than for foreign firms) the benefits of resource exploitation. These would be used for the development of these countries and 'to further the expansion of the world economy'.<sup>13</sup> Even though, as years passed, different regional and global agreements have put a stronger emphasis on the duties associated to the principle and on the need to exercise it in an environmentally responsible way, states have been adamant that others may not impose specific obligations with regard to the management of their natural resources.<sup>14</sup>

I take the concept of guardianship, meanwhile, from private law and from some non-Western worldviews. Guardians in private law are persons who have the power and the

duty of taking care of someone and protecting the rights of those who are unable to do it for themselves.<sup>15</sup> From an anthropocentric perspective, the wards would be present and future generations of humans who benefit from the preservation of ecoregions. Alternatively (and more plausibly, in my view), the ward would be the nonhuman natural world as such. Alternatively (and more plausibly, in my view), the ward would be the nonhuman natural world as such. This aligns with non-Western worldviews like those of the Ojibwa and the Tarahumara, to mention two among many others, who see humans as kin with other species and develop an ethics (and politics) of coexistence with them.<sup>16</sup> It will be important to recall this notion of guardianship when assuaging worries that implementation of permanent guardianship could lead to yet a new wave of colonialism.

In what follows, I first motivate the idea that PSNR is inadequate. I then present the Antarctic case as a model of permanent guardianship and suggest which principles, taken from the Antarctic Treaty and especially from the Environmental Protocol, could be used to give shape to a Global Environmental Protocol for Ecoregions. Finally, I address a series of objections and offer some remarks on the need of extending permanent guardianship beyond ecoregions.

## 2. Why PSNR Is Inadequate

From an environmental point of view, the inadequacy of PSNR for ecoregions becomes clear when one looks at habitat destruction, the main cause of the accelerated loss of biodiversity.<sup>17</sup> Habitat destruction is directly related to our understanding of the nonhuman natural world as being ours to use and exploit. When rights to withdraw and alienate are emphasised, governments let natural areas turn into mining or industrial parks. Moreover, the polluting effluents of these activities, especially in rivers and freshwater ecosystems, figure as the third cause of biodiversity destruction.<sup>18</sup> To give a salient example: in May 2020, the Brazilian President, Jair Bolsonaro, transferred the regulation of public forests from the Ministry of the Environment to the Ministry of Agriculture, augmenting from 19.6 to 65 million the number of hectares of forest open for ‘development’, that is, industrial cattle-raising and monoculture plantations.<sup>19</sup> When consulted about the potential exploitation of the Amazon and its use for mining and development, Bolsonaro alluded to PSNR to justify his decision: ‘We understand the importance of the Amazon for the world—but the Amazon is ours ... We preserve more [rainforest] than anyone. No country in the world has the moral right to talk about the Amazon. You [Europeans] destroyed your own ecosystems’.<sup>20</sup> The tacit and worrying conclusion of Bolsonaro’s *tu quoque* argument is that Brazil may destroy its ‘own’ ecosystems (just like Europeans destroyed ‘theirs’).

To the above example, some might retort that PSNR does not necessarily lead to habitat destruction and point to states that successfully protect their ecoregions – like Costa Rica or, to some extent, Brazil before Bolsonaro. I see three problems with this objection. The first is that these appear much more like exceptions than the rule, especially considering the trend of ecologically harmful resource and land grabbing at a global scale, many times facilitated by national governments.<sup>21</sup> The second is that the reason for conserving ecoregions in these examples seems to be primarily economic: insofar as they attract tourists, it seems profitable to keep these sites protected. But this seems too precarious a defence for places that we should aim to keep in perpetuity. The third problem is that making the fate of ecoregions dependent upon the governments in office seems, again, inadequate for the

purpose: their long-term conservation (or not) should not be reliant upon short-sighted goals of local politicians.

From a moral point of view, a clear indicative that PSNR is inadequate for ecoregions is the fact that normative theories of territory have a hard time justifying it. For different reasons, this is the case both for connection-based theories (which justify territorial rights on the existence of some morally relevant link between a people and a place) and for function-based theories (which justify the territorial rights of states on their performance of key functions – mainly establishing justice and guaranteeing security and wellbeing).<sup>22</sup>

On the one hand, because they depend upon an actual, morally relevant connection existing between the territorial agent and the land and its resources, the plausibility of connection-based theories is directly proportional to the distance between the people and the *homeland* or *heartland*.<sup>23</sup> This means that, while connection-based arguments sound pretty commonsensical when justifying why Canberra belongs to Canberrans, their plausibility dilutes the further away one moves from the populated areas – i.e. they have trouble justifying why the Great Barrier Reef located 2500 km to the North should also partly belong to Canberrans (insofar as they are Australians). Acknowledging this, some theorists suggest that, *contra* PSNR, peripheral land and peripheral natural resources should not be treated as being owned by states, even though they might be treated as being owned by groups who have lived there for centuries. This is Margaret Moore's proposal for Canada in the Arctic: while the traditional arguments for full sovereignty of Canada over unoccupied Arctic land and resources is found wanting, Moore suggests that there might still be good grounds to keep the region under Canadian *stewardship*.<sup>24</sup> Cara Nine also advances this kind of argument when she claims that:

territorial rights can only be acquired where the establishment of legitimate institutions is possible... Implied is that territory cannot be established in areas where there are no persons (as "legitimate rule of law" implies provision of basic needs for persons), or where the establishment of territorial rights is excessively tangential to the establishment of jurisdictional authority.<sup>25</sup>

Nine mentions Antarctica as a clear-cut case for the application of this principle, but one could well extend its logic to many sparsely populated, state-occupied areas.

On the other hand, function-based theories justify the existence of territorial rights and rights over natural resources insofar as this is necessary for the governing authority to fulfil its functions – crucially among them, guaranteeing the security and wellbeing of its citizens and establishing justice.<sup>26</sup> However, what function-based arguments share with connection-based ones is that they are ill-equipped to justify states' PSNR over large, resource-rich areas, especially when the population of those states is relatively small and not even geographically close to those resources. In other words, unless they appeal to unreasonable arguments about the state's future expansionist projects, or the need for *Lebensraum*, or the sheer arbitrariness of states' geographic borders, these theories would require a quite radical shrinking of some state's geographical areas to make their justification for land and territorial control match its purpose. Going back to the example of Canada, it is hard to make an argument that the state needs nearly 10 million km<sup>2</sup> to guarantee security, wellbeing, and the establishment of justice for 38 million inhabitants.

If PSNR seems at least to some extent morally inadequate for both connection and function-based theories of territory, then the proposal to transition from PSNR to permanent guardianship should at least be considered by these theories.

J.L. Austin inspires a third reason why PSNR seems inadequate.<sup>27</sup> We can do things with words, and one of the most important is to shape our understanding of the world and our place in it. A world where we consider ourselves as owners and sovereigns over the natural, nonhuman world is a world – as we have seen for centuries now – where the latter does not fare well. When one starts from ownership and sovereignty over nonhuman natural others as the default (even if we clarify at a later stage that these rights do not come in a monolithic pack, but rather in a ‘bundle’ that may be disaggregated), the burden of proof is on those who want to set limits to ownership and sovereignty to give reasons why this is necessary. Redescribing our relationship as one of guardianship instead requires those who wish to act as owners and sovereigns to give reasons for why they should be allowed to do so. I see the proposal that follows as a first step in this much-needed change of direction.

### 3. Looking to Antarctica

There is currently, a suggestion ... that there should be a conference of the nations taking part in the I.G.Y. activities on the continent. The prime object of this conference would be to work out a formula under which the continent would be banned as a possible theatre of war. Such a pact would remove one of the reasons for distrust between the major nations who profess to have an interest in the Antarctic. It might come about if there were goodwill amongst all the nations concerned, but that is where we stumble on the essential difference between a family of children and a family of nations. The children have an all-powerful Papa who can enforce a decision, but the family of nations has no Papa.<sup>28</sup>

The quote above is from Frank Debenham, founder and Director of the Scott Polar Research Institute in Cambridge, who wrote these lines at a time when the future of Antarctica was being discussed in secret by delegates of the 12 states that had taken part in the International Geophysical Year of 1957–1958 in the continent. While Debenham acknowledged that ‘the world is striving to replace nationalism with internationalism; it is hoping to settle quarrels by the argument of Reason instead of by the arbitrament of war’,<sup>29</sup> he was pessimistic about the results of the conference, alluding to the lack of a superior authority among nations. And yet, the conference succeeded in putting a Treaty in place, which not only banned the militarisation and nuclearisation of the whole continent, but established science – Debenham’s favourite pursuit – as the currency for international cooperation.<sup>30</sup> Contrary to Debenham’s fears, the signature of the Antarctic Treaty showed that, even without a *Papa*, states are able to cooperate and agree on certain common goals. Having strong-willed siblings made an important difference in the Antarctic case, but the point remains: it is not impossible for individual states to stand above their differences and work together for a common goal that benefits everyone.

Despite its colonial genealogy and the colonial hangover of some of its constitutive features, the Antarctic Treaty together with the Environmental Protocol made an *avant-garde* contribution to world politics and international law.<sup>31</sup> Even though it was designed more to save face among the original claimants than to contribute a new concept to international law, the freezing of sovereign rights by the Antarctic Treaty over the continent was an unprecedented outcome – one that it is high time to extend to other parts of the globe.

Moreover, even though the Environmental Protocol came out more as a last-minute decision rather than a carefully pondered one, it strengthened the Antarctic Treaty's explicit aim of being an international arrangement kept for the benefit of all humankind and for the benefit of Antarctica itself: the intrinsic value of Antarctica explicitly figures among the protocol's environmental principles.<sup>32</sup>

A voluminous bibliography suggests that the main reasons why states were interested in Antarctica from the late 18th century onwards were economic and strategic. Antarctica was a 'resource frontier': a fertile seal-hunting, whaling, and fishing ground, a depository of untapped mineral resources, a potential freshwater reserve, and, eventually, a new land to settle in.<sup>33</sup> Those who were interested in gaining control of the continent, therefore, were mostly after its exploitable and potentially exploitable resources.<sup>34</sup> Because none of their arguments for justifying territorial claims to full sovereignty were good enough to convince all others – let alone third parties not invited to the discussion – the Antarctic Treaty was founded upon the suspension of those claims.<sup>35</sup> What the Antarctic Treaty really froze was conflict among the interested states by freezing their individual rights to exercise jurisdiction and to establish ownership-type rights to withdraw, alienate, and derive income from Antarctic resources.<sup>36</sup> And yet, along its 60 years of existence, Antarctica has been well protected and has remained non-militarised and non-nuclearised and enjoys total prohibition against testing of nuclear weapons and nuclear waste disposals. The original signatories plus new acceding states have managed the continent, aligning their national legal frameworks to comply with the treaty's goals and regulations. In other words, together they have exercised joint, but limited, jurisdiction geared towards preservation rather than exploitation. The intention to administer the territory and care for it while abstaining from making claims over its natural riches gained new force after the signature of the Environmental Protocol in 1991. The Environmental Protocol banned the prospection and exploitation of mineral resources in the continent for 50 years subject to renewal, and human activity became highly regulated to minimise environmental impact.<sup>37</sup>

Although the original signatories avoided using a specific term, it is as guardians or custodians that they envisaged their role from the very Preamble of the Antarctic Treaty, recognising that to have the continent thus regulated was 'in the interest of all mankind'.<sup>38</sup> If one concedes that reserving a whole continent mostly for scientific research and cooperation, free from militarisation and nuclearisation, and protecting its environment has indeed been a benefit, then one can say that the Antarctic Treaty supplemented by the Environmental Protocol has so far fulfilled this goal.<sup>39</sup>

#### **4. Towards a Global Environmental Protocol for Ecoregions**

Inspired by Antarctica's drifting pavilion in the 14th Venice Biennale of Architecture, the political theorist John Keane claims that, 'considered in descriptive terms, as a functioning set of governing institutions, Antarctica is a trend-setter, a new type of "cosmopolitan" law-bound polity defined by a mixture of overlapping power-sharing jurisdictions that are connected with the rest of the world and (arguably) have important implications for how it will in future be governed'.<sup>40</sup> Keane notes that 'the principle of unconstrained ("sovereign") power... is arbitrary, dangerous and illegitimate', and points to the Antarctic model insofar as it transcends this principle.<sup>41</sup> Keane does not explore, however, what the

implications of transcending it might be. In this section, my aim is to do just that, by presenting the core principles from both the Antarctic Treaty and the Environmental Protocol that could be taken as starting points to develop permanent guardianship. To be clear, because there are important disanalogies between Antarctica and ecoregions in the rest of the world (more of this in the next section), I do not propose a simple transposition. The peculiarities of ecoregions should determine the specific mode of jurisdiction that should apply to them.

When it comes to the Antarctic Treaty, the cornerstone of the whole edifice is – as has been mentioned – the suspension of actual and potential sovereign claims by states. The normative situation for individual states under permanent guardianship, similarly, would be the following: instead of holding first- and second-order rights over ecoregions that happen to fall within their territories, they would have their ownership-type rights over them frozen and would have their jurisdiction-type rights limited and jointly shared with others – among them, local communities, other states, and supranational governmental and civil entities. While in the Antarctic Treaty system, it is exclusively states that make decisions, permanent guardianship could be inspired by polycentric modes of governance à la Ostrom.<sup>42</sup> As the *Dasgupta Review* suggests, because the information required to successfully manage complex ecosystems is distributed among many different actors, effective institutional structures must ‘pool knowledge and perspectives among and across different levels – global, regional, national and local—and from different organisations, communities and individuals’.<sup>43</sup> Here the place of local communities and, among these, of indigenous communities should be underlined, especially considering that there is a high correlation between biodiverse-rich areas and areas inhabited by indigenous groups.<sup>44</sup> As opposed to what happens today, where these are at best consulted and at worst ignored when it comes to making crucial decisions about the future of these areas, under permanent guardianship they would have a much more prominent jurisdictional role. Against the worry that permanent guardianship would become a new version of ‘fortress conservation’,<sup>45</sup> local communities should moreover retain their right to inhabit ecoregions and use their resources as most of them have been doing for centuries, in non-destructive ways that allow for renewal.

The Environmental Protocol designates Antarctica as ‘a natural reserve, devoted to peace and science’ and declares the protection of the Antarctic environment as a fundamental consideration when deciding what kinds of activities may be undertaken there, and in what manner.<sup>46</sup> Ecoregions should be devoted to similar ends, and their access and use should be subordinated to these ends. Here the role of an advisory board akin to the Committee for Environmental Protection in the Antarctic Treaty Meetings should be considered to serve this protective function,<sup>47</sup> as well as the establishment of periodic inspections by external observers, which would ensure that the regulations agreed upon are complied with. In terms of the protection of the flora and fauna, enforcing sanctions against illegal trade, hunting, and poaching should be prioritised (and should target both the supply and the demand).

A key factor in explaining the role of humans in climate change and biodiversity loss is what Simon Caney calls ‘harmful short-termism’, presentist thinking and policymaking that ‘results in governments violating their responsibilities to current and future generations to create just and ecologically sustainable societies’.<sup>48</sup> Agreeing on a Global Environmental Protocol for Ecoregions would represent a move away from that kind of thinking and toward an institutional design that is viable not just for those of us living today, but also for our descendants and maybe also for present and future ‘earth others’.<sup>49</sup>



## 5. Objections

Some might object that the case of Antarctica is too unique to be used as a model to be applied elsewhere. As the political scientist and polar expert Finn Sollie put it in the 1970s: 'a wholesale transfer of the Antarctic model—may be neither desirable nor practical'.<sup>50</sup> There are at least three important differences between freezing sovereignty in Antarctica and freezing it in the sites I am proposing, which may be seen as impediments against the implementation of permanent guardianship: the status of sovereign claims, feasibility conditions, and the question of population. After presenting them, I briefly refer to some alternative models and explain why I still think that the one proposed here is to be favoured.

First, while sovereign claims in Antarctica have never been recognised by the international community, the sovereignty of individual states over their territories is one of the cornerstones of the current political world structure. In Antarctica, sovereign claims were frozen before they were effectively realised; under the scheme that I am suggesting, on the contrary, states must take a step back and give up claims over already occupied areas. My proposal would thus be problematic in that it takes away rights already in exercise.

My response to this objection is that what might have been a just arrangement at  $t_1$  may stop being so at  $t_2$ , due to deeply changed circumstances.<sup>51</sup> Among these are a clearer understanding of how basic earth systems work and how distant ecosystems influence each other; global population growth; and a rocketing use of the natural world for human purposes. If, seven decades ago, PSNR was thought to be the best path to regulate affairs between states in a peaceful manner, as well as enabling each of them to improve the well-being of their inhabitants, it is high time to reconsider this function. International law is a dynamic field, and it will continue to evolve as we get a better grasp of the fact that the political division of the world into discrete territorial units with extensive sovereign rights is environmentally and morally inadequate.

Still, some may worry that my proposal is unfair in a way that the Antarctic Treaty was not. Because of the disputed status of territorial claims in Antarctica, the idea of prohibiting anyone from benefitting from its resources was the fairest attainable output.<sup>52</sup> Here, on the contrary, the rules of the game would be changed so that what used to be a legitimate source of income for states would no longer be so. This would be especially objectionable for developing countries, which rely on resource extraction to lift their populations above the poverty threshold.

I think that this objection only holds if one grants that the current model of economic growth is worth keeping, which is far from self-evident.<sup>53</sup> In fact, demands for a different economic model and for a different relationship with the environment have been as strong in developing countries as in developed ones. This suggests that the picture of neocolonial powers imposing their conservation obsessions upon their neocolonies – by impeding the development path they themselves pursued – is deceiving and overly simplistic. Furthermore, in permanent guardianship administrative responsibilities and economic costs would be shared. To the extent that we acknowledge that individual states are not exclusive owners of their land and resources, we should also acknowledge that the responsibilities of preserving them do not fall exclusively upon individual states (or worse, upon local communities). It would be unfair, indeed, to charge biodiversity-rich states like Brazil and Indonesia with the full economic, administrative, social, and political bill for a job that benefits everyone and where everyone has a stake. Theorists writing on conservation ethics have proposed basic principles for how to do the sharing in a fair way, and I will

not dwell on them here, except by noting that natural capital has to be given its full value in these calculations.<sup>54</sup> To go back to the *Dasgupta Review*, for centuries we have used and abused the various goods and services provided by nature at no monetary cost to ourselves. This is not just a market failure, but also a political failure that needs to be corrected by a deep reform in the way our institutions currently work, with governments giving incentives to exploit rather than protect, subsidising environmentally damaging industries, and failing as a whole to protect global public goods.<sup>55</sup>

If conservation is considered a burden, in short, it is only because unfettered development makes it seem like one.<sup>56</sup> What we should be questioning today are the purported virtues of development rather than the potential challenges that conservation poses.

A second objection against my proposal is that it seemingly ignores what political theorists call ‘feasibility constraints’; namely, considerations of how realisable the execution of an idea should be for it to be taken seriously.<sup>57</sup> So, does it make sense to propose a model that the main actors presumably will not be motivated in following? I think the answer to this question depends on how feasibility constraints are defined. Following Pablo Gilibert, I propose to understand ‘soft’ feasibility constraints (those that have to do with psychological, social, political, and economic causes, rather than laws of logic or physics, which are ‘hard’) as malleable through our political imagination and our commitment to change current circumstances. Principles that seem impossible to fulfil today may thus become possible to achieve in the future – through the performance of what Gilibert calls ‘dynamic duties’.<sup>58</sup> On this reading of feasibility, from the fact that states are not motivated today to give up part of the package of rights they acquired at  $t_1$ , it does not follow that they will not give them up at  $t_2$ . Rather, if there are strong, substantiated reasons that show that the current arrangement is untenable, then it is up to the different political agents – from individual citizens, to NGOs, to national and international institutions – to take a transitional standpoint and strive to move in the direction of an alternative, more desirable arrangement.<sup>59</sup> This is already happening both among citizens of states where ecoregions lie and of states which continue to profit from oil extraction.<sup>60</sup> The mere proposal of an alternative model like permanent guardianship might help to see the inadequacy of PSNR more clearly and help the needed changes to gain momentum.

Furthermore, even hard-core realists must admit that the sovereign package of states’ rights regarding the use of land and resources has been constantly shrinking during the relatively short lifetime of states. If territory, with people on it, could be sold a hundred years ago, this is not the case anymore; if states used to think of the atmosphere as an endless sink where to dump their waste, a majority of them have committed themselves to restricting their use of it.<sup>61</sup> Aligned with the goal of protecting nature, moreover, the G7 have recently committed to the protection and conservation of at least 30% of global land and 30% of global oceans by 2030. Leading by example, these states (which include the United States and Canada, two of the most relevant for the future of ecoregions) have pledged to protect at least 30% of their own territories by that year.<sup>62</sup> Giving up ownership rights and being willing to share jurisdictional rights would still be a major step ahead. But here one should also bear in mind that social and political transitions are not linear, but subject to tipping points. This suggests that scenarios that may look impossible to achieve might be just around the corner, depending on the changes we make today.<sup>63</sup>

A third objection against applying the Antarctic model to ecoregions is that, while there are no human Antarcians, there are one billion people living in the areas where I am

proposing to freeze sovereignty (around 25 million in the Brazilian Amazon only). For them, losing rights over the place they inhabit might be seen as a new colonial wave.

But I have already explained why permanent guardianship is not to be confused with fortress conservation. Furthermore, while the idea of PSNR was demanded and celebrated above all by the central elites of newly independent states, the relationship between them and indigenous groups and groups in the ‘peripheries’ (where most ecoregions lie) has never been an easy one. That many peoples within states do not feel part of them, and oppose the imposition of legal structures of ownership and sovereignty forced onto them, strengthens rather than weakens the guardianship proposal.<sup>64</sup> Protecting the planet is often presented as something that will affect people largely negatively, but this is only because it is assumed that environmental protection will be done through the usual channels, without the participation of those who are long due an active role.<sup>65</sup> As for inhabitants of ecoregions who reject permanent guardianship and invoke their right to ‘develop’, one might first question the legitimacy of such a right. Moreover, just like states may expropriate individual owners for the common good, so should guardianship arrangements be able to restrict the uses of land by local inhabitants and offer the possibility of relocation or some form of compensation.

Finally, some might be wondering why not select other already existing models of governance that might seem even better suited to these regions than the Antarctic one, among them UNESCO’s World Heritage Program, the Svalbard Treaty, and public-private partnerships for conservation purposes. But an obvious feature of these alternatives is that they all take for granted PSNR (and the consequent allocation of ownership rights to individual states) and thus remain inadequate. Article VI of the World Heritage Convention (1972) clearly underlines that all measures will be taken ‘*fully respecting the sovereignty of the States on whose territory the cultural and natural heritage mentioned ... is situated, and without prejudice to property right provided by national legislation*’.<sup>66</sup> In the case of the Svalbard Treaty, the driving principle is equal access to, and ownership of, resources (including mineral rights); that is, the focus is on exploitation rather than preservation, however ‘sustainable’ that exploitation might be.<sup>67</sup> As for private enterprises administering ecoregions, if there is any fear of colonialism or neocolonialism re-emerging for the purposes of conservation, this is where it should arise: with states giving up their management rights to entities the main aim of which is to make business profitable for their shareholders, and with local inhabitants becoming part of the landscape.<sup>68</sup>

## 6. Concluding Remarks

Getting close to the end of the article, some might be wondering whether this is merely a blue-sky proposal that has no chance of being implemented. I have responded to these worries by appealing to a notion of feasibility that underlines the political imagination and responsibility of individual citizens and bottom-up, transnational institutions and movements in triggering change, as well as the possibility of social and political tipping points that transform our perspectives on what is achievable (or not).

While there is no way to foresee whether this will be the path taken, I have motivated the idea that no less than a switch from sovereignty to guardianship is needed, if we aim at protecting key global ecoregions – and eventually, the whole world. Although I have suggested that it should be enough to care for the protection of ecoregions on purely

self-interested grounds, I think this should ultimately result from a much more encompassing transformative process. In this process, ethics, politics, and law would move from narrow anthropocentrism to an outlook that incorporates the nonhuman natural world not merely as a ‘functioning system’, ‘resource’, or ‘burden’, but as worthy of consideration in itself (I leave open the question of who or what should be morally considerable; at this stage, I think that just posing the question would signify a huge advance). Human activities that are currently taken for granted would be re-evaluated under this light, crucially among them industrial animal agriculture with its heavy toll on climate and biodiversity.<sup>69</sup> A next obvious step could thus be the restoration of degraded lands used as cropland for animal feed and for grazing. A new deal with nature must include a new deal with food.

That the Antarctic Treaty and its Environmental Protocol may serve as a framework for permanent guardianship might sound strange, especially for those who tend to see bare power play behind all state action. My claim, however, has been that, regardless of the geopolitical ends they served, these legal documents contain some basic principles from where a full model of guardianship could be fleshed out: the promotion of peace and science, non-militarisation and non-nuclearisation, a ban on extractive industries, joint jurisdiction by the relevant parties, and strict protections to flora and fauna. As mentioned before, this model should be complemented according to the specific realities of ecoregions. It is here where I see a crucial role for local communities who, in many cases, have already been managing these sites successfully for centuries, and for whom the notion of guardianship will sound familiar – much more familiar than sovereignty.

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### **NOTES**

1 Jawaharlal Nehru, *The Discovery of India*, Sunil Khilnani (ed.) (New Delhi: Penguin Books, 2010 [1946]), pp. 600–601.

- 2 A complete account of the origin and evolution of the doctrine of PSNR can be found in Nico Schrijver, *Sovereignty over Natural Resources: Balancing Rights and Duties* (Cambridge: Cambridge University Press, 1997). Notice that sometimes, but not always, the resources that should be left on the ground (especially coal, oil, and gas) lie precisely under these ecoregions.
- 3 E. Dinerstein, A.R. Joshi, C. Vynne, A.T.L. Lee, F. Pharend-Deschênes *et al.* 'A "Global Safety Net" to reverse biodiversity loss and stabilize earth's climate', *Science Advances* 6,36 (2020): eabb2824.
- 4 Campaign for Nature, "G7 Leaders Agree to Historic 'Nature Compact' Set comprehensive biodiversity targets, commit to protecting at least 30% of lands and seas" (13 June 2021). Online at: <https://www.campaign-for-nature.org/g7-nations-agree-to-historic-nature-compact>. Accessed 21 October 2021.
- 5 Dinerstein *et al.* op. cit., p. 7.
- 6 Judith Schleicher, Julie.G. Zaehring, Constance Fastré, Bhaskar Vira, Piero Visconti *et al.*, 'Protecting half of the planet could directly affect over one billion people', *Nature Sustainability* 2,12 (2019): 1094–1096.
- 7 Edward O. Wilson, *Half-Earth: Our Planet's Fight for Life* (New York & London: W.W. Norton & Company, 2016).
- 8 Aristotle, *Metaphysics*, in *The Complete Works of Aristotle*, Volume 2, Jonathan Barnes (ed.) (Princeton, NJ: Princeton University Press, 1984), p. 1552.
- 9 Wilson op. cit., p. 21.
- 10 Wilson op. cit., pp. 57–58.
- 11 I cannot do justice here to the wealth of philosophical and legal literature pointing in this direction. Some prominent examples are Val Plumwood, *Environmental Culture: The Ecological Crisis of Reason* (New York: Routledge, 2002); J. Baird Callicott, *Thinking like a Planet: The Land Ethic and the Earth Ethic* (New York: Oxford University Press, 2013); Holmes Rolston III, *A New Environmental Ethics: The Next Millennium for Life on Earth*, 2<sup>nd</sup> edn. (New York: Routledge, 2020); Jan G. Laitos, *The Right of Nonuse* (New York: Oxford University Press, 2012); Christopher D. Stone, *Should Trees Have Standing? Law, Morality, and the Environment* (Oxford: Oxford University Press, 2010), and David R. Boyd, *The Rights of Nature: A Legal Revolution That Could Save the World* (Toronto: ECW Press, 2017).
- 12 Chris Armstrong, *Justice and Natural Resources: An Egalitarian Theory* (Oxford: Oxford University Press, 2017), pp. 22–23.
- 13 Schrijver op. cit., p. 20. See also Petra Gumplová, who justifies PSNR as 'a response to the historical injustice of colonial appropriation of natural resources based on violence, domination, and dispossession of natural resources by foreign powers': Petra Gumplová, 'Sovereignty over natural resources – A normative reinterpretation', *Global Constitutionalism* 9,1 (2020): 7–37, at p. 10.
- 14 Some agreements emphasising states' duties are the Stockholm Declaration of 1970, the World Heritage Convention from 1972, and the Rio Declaration of 1992. For states' reaction, see Schrijver op. cit., p. 127.
- 15 "guardianships", *West's Encyclopedia of American Law*, 2<sup>nd</sup> edn, 2008. The Gale Group. Online at: <https://legal-dictionary.thefreedictionary.com/guardianships>. Accessed 21 October 2021.
- 16 J. Baird Callicott, *Earth's Insights* (Berkeley, CA: University of California Press, 1994), pp. 126–130; Enrique Salmón, 'Kincentric ecology: Indigenous perceptions of the human-nature relationship', *Ecological Applications* 10,5 (2000): 1327–1332.
- 17 Wilson op. cit., p. 57.
- 18 Wilson op. cit., p. 58.
- 19 Dannielle Brant & Ricardo Della Coletta, 'Bolsonaro Dá Ao Ministério Da Agricultura Poder de Conceder Florestas Públicas', *Folha de S.Paulo* (14 May 2020). Online at: <https://www1.folha.uol.com.br/ambiente/2020/05/bolsonaro-da-ao-ministerio-da-agricultura-poder-de-conceder-florestas-publicas.shtml>. Accessed 21 October 2021.
- 20 Dom Phillips, 'Bolsonaro declares "The Amazon Is Ours" and calls deforestation data "Lies"', *The Guardian Online* (2019). Online at: <https://www.theguardian.com/world/2019/jul/19/jair-bolsonaro-brazil-amazon-rainforest-deforestation>. Accessed 21 October 2021.
- 21 See, for example, Fred Pearce, *The Land Grabbers: The New Fight over Who Owns the Earth* (Boston, MA: Beacon Press, 2012).
- 22 For a systematic account of why justifying PSNR is morally problematic from a cosmopolitan perspective, see Chris Armstrong, 'Against "Permanent Sovereignty" over natural resources', *Politics, Philosophy & Economics* 14,2 (2015): 129–151.
- 23 See respectively, David Miller, 'Territorial rights: Concept and justification', *Political Studies* 60,2 (2012): 252–268, at p. 261; and Margaret Moore, *A Political Theory of Territory* (New York: Oxford University Press, 2015), pp. 188–122.

- 24 The stewardship justification, Moore clarifies, 'does not support the usual understanding of resource rights, which permits resource use and resource-extraction activities, though stewardship clearly does involve control over natural resources': Margaret Moore, 'Is Canada entitled to the Arctic?', *Canadian Journal of Philosophy* 50,1 (2020): 98–113, at p. 99. Moore thus seems to think that the Canadian state should continue to hold jurisdiction but not necessarily ownership rights over these areas.
- 25 Cara Nine, *Global Justice and Territory* (Oxford: Oxford University Press, 2012), p. 42.
- 26 See, for example, Allen Buchanan, *Justice, Legitimacy and Self-Determination: Moral Foundations for International Law* (Oxford: Oxford University Press, 2004); and Anna Stilz, *Territorial Sovereignty: A Philosophical Exploration* (Oxford: Oxford University Press, 2019).
- 27 J.L. Austin, *How to Do Things with Words*, J.O. Urmson & M. Sbisà (eds), 2<sup>nd</sup> edn. (Cambridge, MA: Harvard University Press, 1975).
- 28 Frank Debenham, *Antarctica: The Story of a Continent* (New York: The Macmillan Company, 1961), p. 239. The I.G.Y. refers to the Third International Geophysical Year, which took place in 1958–1959, and brought scientists from 12 countries to Antarctica, conducting research on 44 stations, on disciplines as diverse as biogeography, geology, glaciology, and climate science. See D. Walton (ed.) *Antarctic Science* (Cambridge: Cambridge University Press, 1987).
- 29 Debenham op. cit., p. 238.
- 30 The Antarctic Treaty was signed in Washington on 1 December 1959, by the seven claimants (Argentina, Australia, Chile, France, New Zealand, Norway, and the United Kingdom); the two 'potential claimants' (the Soviet Union and the United States), and the three other countries that had participated in the I.G.Y. in Antarctica (Belgium, Japan, and South Africa). *The Antarctic Treaty* (Washington, DC: 1959). Online at: [http://www.ats.aq/documents/ats/treaty\\_original.pdf](http://www.ats.aq/documents/ats/treaty_original.pdf).
- 31 For a critique of some of their problematic aspects, see Alejandra Mancilla, 'The moral limits of territorial claims in Antarctica', *Ethics & International Affairs* 32,3 (2018): 339–360, and Alejandra Mancilla, 'Decolonising Antarctica' in A. Hemmings & D. Bunikowski (eds) *Philosophies of Polar Law* (London and New York: Routledge, 2020), pp. 49–61.
- 32 "Protocol on environmental protection to the Antarctic Treaty", 1991, Article 3. Online at: [https://documents.ats.aq/recatt/Att006\\_e.pdf](https://documents.ats.aq/recatt/Att006_e.pdf). Accessed 21 October 2021.
- 33 See, among others, Klaus Dodds & Mark Nuttall, *The Scramble for the Poles: The Geopolitics of the Antarctic and Arctic* (Cambridge: Polity Press, 2016); Adrian Howkins, *The Polar Regions. An Environmental History* (London: Polity, 2016); and Ben Maddison, *Class and Colonialism in Antarctic Exploration, 1750–1920* (London: Pickering & Chatto, 2014).
- 34 As the Australian explorer, Douglas Mawson, put it: 'from an economic aspect, the frozen South may not attract immediate attention. But who can say what a train of enterprise the future may bring?' Quoted in Maddison op. cit., p. 155.
- 35 For third-party complaints, see India's suggestion that the future of Antarctica should be discussed within the framework of the United Nations (1956–1958): Klaus J. Dodds, 'Post-colonial Antarctica: An emerging engagement', *Polar Record* 42,1 (2006): 59–70; and Sanjay Chaturvedi, 'Rise and decline of Antarctica in Nehru's geopolitical vision: Challenges and opportunities of the 1950s', *The Polar Journal* 3,2 (2013): 301–315. Article IV of the Antarctic Treaty deals with the question of sovereignty: see Antarctic Treaty 1959 op. cit.
- 36 Note that this is the case for land resources. Under the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR), fishing is allowed in the waters of the Southern Ocean, subject to an 'ecosystem-based approach'. Online at: <https://www.ccamlr.org/en/organisation/home-page>. Accessed 21 October 2021.
- 37 This upshot was surprising, considering that the parties had spent the 1980s negotiating a Convention on the Regulation of Antarctic Mineral Resource Activities (CRAMRA). And yet, there is a lot of room for improvement. The parties should strengthen their role as guardians when it comes to tourism; bioprospecting still lies in a legal vacuum and is actively practiced free of charge by multinationals; and scientific research and other activities are subjected to EIAs in the country where the interested party is affiliated, creating doubts as to whether the decision-making procedure is impartial enough.
- 38 Antarctic Treaty 1959 op. cit., Preamble.
- 39 I do not touch here upon a thorny point that deserves to be developed in a separate article, namely, that while the Antarctic Treaty parties have constrained their actions to protect the environment in Antarctica, what they do beyond the continent is wreaking havoc in it. There is some cognitive dissonance in the fact that eight of the top 10 world producers of CO<sub>2</sub> (the accumulation of which is driving climate change in the continent), have

- signed the Environmental Protocol. Should they not change their behaviour at home if they really aim to protect Antarctica?
- 40 John Keane, 'Antarctica: Notes on the fate of sovereignty', *The Conversation* (2014). Online at: <https://theconversation.com/antarctica-notes-on-the-fate-of-sovereignty-28292>.
  - 41 John Keane, 'Antarctica: Notes on the fate of Sovereignty', *John Keane Blog* (24 June 2014). Online at: <https://www.johnkeane.net/antarctica-notes-on-the-fate-of-sovereignty/>. Accessed 21 October 2021.
  - 42 Elinor Ostrom, 'Polycentric systems for coping with collective action and global environmental change', *Global Environmental Change* 20,4 (2010): 550–557.
  - 43 The *Dasgupta Review* is an independent global review on the economics of biodiversity, commissioned by the British government: Partha Dasgupta, *The Economics of Biodiversity: The Dasgupta Review. Headline Messages* (London: Open Government Licence, 2021), p. 4. Online at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/957629/Dasgupta\\_Review\\_-\\_Headline\\_Messages.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/957629/Dasgupta_Review_-_Headline_Messages.pdf). Accessed 21 October 2021.
  - 44 On the role of indigenous peoples in protecting these ecosystems, see Claudia Sobrevila, *The Role of Indigenous Peoples in Biodiversity Conservation: The Natural but often Forgotten Partners* (Washington, DC: World Bank Group, 2008). Sobrevila claims that the ancestral lands of indigenous peoples contain 80% of the remaining healthy ecosystems and global diversity priority areas, including rainforests.
  - 45 For examples of injustice perpetrated in the name of ecosystem integrity, see Rosaleen Duffy, *Nature Crime: How We Are Getting Conservation Wrong* (New Haven, CT & London: Yale University Press, 2010).
  - 46 The Antarctic Treaty op. cit. 1959.
  - 47 Another source of inspiration could be the *Te Urewera Act*, whereby New Zealand recognised the legal personhood of the protected area and ex-national park, Te Urewera, and established a board of trustees to act 'on behalf of, and in the name of, Te Urewera': *Te Urewera Act* 2014, New Zealand Public Act No. 51.
  - 48 Simon Caney, 'Democratic reform, intergenerational justice and the challenges of the long-term', Centre for the Understanding of Sustainable Prosperity (CUSP), Essay 11, 2019. p. 3. Online at: <https://cusp.ac.uk/essay/m1-11>. Accessed 21 October 2021.
  - 49 I take this term from Val Plumwood, *Feminism and the Mastery of Nature* (London: Routledge, 1993).
  - 50 F. Sollie, 'The political experiment in Antarctica' in R.S. Lewis & P.M. Smith (eds) *Frozen Future* (New York: Quadrangle Books, 1973), pp. 46–63, at p. 49.
  - 51 This is the inverse of supersession of injustice, where what might have been unjust at  $t_1$  becomes just at  $t_2$  given profoundly changed circumstances. See Jeremy Waldron, 'Superseding historic injustice', *Ethics* 103,1 (1992): 4–28.
  - 52 In what was called the Question of Antarctica in the United Nations, during the 1980s, some developing countries – prominently Malaysia – pushed for a regime of shared benefits in the case that mineral extraction became allowed. For a detailed discussion, see Peter J. Beck, 'Twenty years on: The UN and the "question of Antarctica," 1983–2003', *Polar Record* 40,3 (2004): 205–212. When that option was removed by virtue of the Environmental Protocol, however, the protest of developing countries subsided.
  - 53 For alternative models, see J. Blewett & R. Cunningham (eds) *The Post-Growth Project: How the End of Economic Growth Could Bring a Fairer and Happier Society* (London: Green House, 2014); Giorgos Kallis, Vasilis Kostakis, Steffen Lange, Barbara Muraca, Susan Paulson *et al.*, 'Research on degrowth', *Annual Review of Environment and Resources* 43,1 (2018): 291–316; and Arturo Escobar, 'Degrowth, postdevelopment, and transitions: A preliminary conversation', *Sustainability Science* 10,3 (2015): 451–462.
  - 54 Chris Armstrong proposes three main principles: contribution to the problem (namely, to the destruction of biodiversity); benefits derived from preserving the place; and ability to pay. Chris Armstrong, 'Sharing conservation burdens fairly', *Conservation Biology* 33,3 (2019): 554–560. On natural capital and how to measure its value, see Edward Barbier, 'The concept of natural capital', *Oxford Review of Economic Policy* 35,1 (2019): 14–36; and Robert Costanza, Ralph D'Arge, Rudolf De Groot, Stephen Farber, Monica Grasso *et al.*, 'The value of the world's ecosystem services and natural capital', *Nature* 387,6630 (1997): 253–260.
  - 55 Dasgupta op. cit., p. 2.
  - 56 Note the title of Armstrong's article: 'Sharing conservation burdens fairly.'
  - 57 The literature on feasibility has burgeoned in the last decade. For an overview, see Nicholas Southwood, 'The feasibility issue', *Philosophy Compass* 13,8 (2018): e12509. <https://doi.org/10.1111/phc3.12509>
  - 58 P. Gilabert, 'Justice and feasibility: A dynamic approach' in K. Vallier & M. Weber (eds) *Political Utopias: Contemporary Debates* (Oxford: Oxford University Press, 2017), pp. 95–126, at p. 95.

- 59 Gilbert *op. cit.*, p. 113 and ff. See also what Elizabeth Cripps calls ‘promotional duties’, that is, those ‘to attempt to bring about the necessary collective action’: Elizabeth Cripps, *Climate Change and the Moral Agent: Individual Duties in an Interdependent World* (Oxford: Oxford University Press, 2013), p. 140.
- 60 See, for example, *Coalizão Brasil*, “Ações para a Queda Rápida do Desmatamento”, (15 September 2020). Online at: <http://www.coalizaobr.com.br/home/index.php/component/k2/itemlist/search?searchword=queda+rapida&categories=>. Accessed 21 October 2021; and “Future in Our hands”. Online at: <https://www.framtiden.no/201001172135/om-oss/in-english/future-in-our-hands.html>. Accessed 21 October 2021.
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- 62 ‘G7 Leaders agree to historic “Nature Compact” set comprehensive biodiversity targets, commit to protecting at least 30% of lands and seas’, “Campaign for Nature”, *op. cit.* Online at: <https://www.campaignfornature.org/g7-nations-agree-to-historic-nature-compact>.
- 63 Concrete proposals for how to activate these tipping points are found in Ilona M. Otto, Jonathan F Donges, Roger Cremades, Avit Bhowmik, Richard J. Hewitt *et al.*, ‘Social tipping dynamics for stabilizing earth’s climate by 2050’, *Proceedings of the National Academy of Sciences* 117,5 (2020): 2354–2365. <https://doi.org/10.1073/pnas.1900577117>.
- 64 See Arturo Escobar, *Territories of Difference: Place, Movement, Life, Redes* (Durham, NC & London: Duke University Press 2008).
- 65 See the title of Schleicher *et al.*’s article: ‘Protecting Half of the Planet Could Directly Affect over One Billion People’ (2019).
- 66 World Heritage Convention (1972), my emphases.
- 67 ‘Svalbard Treaty’ (1920). Online at: [http://library.arcticportal.org/1909/1/The\\_Svalbard\\_Treaty\\_9ssFy.pdf](http://library.arcticportal.org/1909/1/The_Svalbard_Treaty_9ssFy.pdf). Accessed 21 October 2021.
- 68 On how this model of privately managed national parks has been growing in Africa, see ‘Elephants’ Graveyard No More’, *The Economist* (24 October 2020), pp. 31–32.
- 69 See Oliver Lazarus, Sonali McDermid & Jennifer Jacquet, ‘The climate responsibilities of industrial meat and dairy producers’, *Climatic Change* 165,1 (2021): 1–21.