



# Climate Justice and Territorial Rights

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**CSSJ Working Papers Series, SJ023  
April 2014**

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### I.

When we engage in activities that cause greenhouse gases to be emitted, we thereby consume some of the capacity of the world's 'carbon sinks' – and their capacity, we now understand, is limited.<sup>2</sup> The sequestering capacities of these sinks function as a 'collective' good: one which individuals cannot be practically excluded from consuming, but also one where each act of consumption leaves less for others now and in the future. Political theorists have, accordingly, devoted considerable attention to the question of just how permissions to use up sink capacity should be distributed.

One very well-known answer to that question is the equal per capita principle, which would simply divide extant sink capacity into equal slices, setting for each person an identical emissions budget (on many proposals, unused emissions space might then be traded with others). The normative appeal of that principle is often thought to be self-evident. Surely, the thought goes, our entitlements to make use of carbon sinks must be symmetrical? After all, none of us put those sinks there and no-one, therefore, appears to have any special claim over them. In his discussion of rights over atmospheric sinks, Peter Singer has suggested that 'If we begin by asking "Why should anyone have a greater claim to part of the global atmospheric sink than any other?" then the first, and simplest response is: "No reason at all."<sup>3</sup> If it were adopted by a global agreement on climate mitigation, that principle would have radical effects. At present inhabitants of industrialized countries consume a share of the capacity of the world's carbon sinks far in excess of what would be sustainable if others acted in the same way. The principle would ask them to severely contract their emissions, and allow inhabitants of developing countries to eventually 'converge' upwards on the per capita emissions benchmark.

But on closer inspection the principle of equal per capita emissions (hereafter EPC) loses much of its appeal. People consume a wide range of goods, and most theories of distributive justice express concern with holdings in a fairly broad set of them. Why then insist on equal shares of *one* good in particular? To be sure reasons can sometimes be provided for insisting on equal shares of particular goods, and for seeing shares of different goods accordingly as at least partly incommensurable. The principle of 'one person, one vote'

is thought, by those committed to democracy, not to bend in light of facts about wealth or educational access. We do not simply give the poor or the educationally-deprived more votes – at least not if we are committed to seeing ourselves as equal citizens. But such reasons do not appear to apply in the case of the world’s greenhouse gas-sequestering capacity.<sup>4</sup> Given that they do not, insisting on equal emissions rights would be myopic even from an egalitarian point of view. Even if we restrict our attention to climate justice – rather than justice more broadly - egalitarians should prefer an account which considers a range of ecological ‘credits’ and ‘debts,’ and calls for equality across this broad bundle of benefits and burdens. Some countries, to give an example, may produce massive quantities of harmful pollutants whereas others may go to great lengths to avoid doing so. Some countries – but not others - may spend large sums of money subsidising the spread of green technologies in the developing world. Some countries, moreover, might already be better off in other dimensions relevant to justice. All of these facts should matter when we come to allocate emissions rights. From that perspective whilst EPC might still be a big improvement on the status quo, it begins to look far from ideal.

There may, though, be a second reason for doubting the appeal of EPC, and it will be my focus in this chapter. As I just suggested the argument for EPC usually leans on an assumption that no-one has created, or is responsible for the existence of, the earth’s GHG-sequestering capacity.<sup>5</sup> But perhaps this is too quick. It may well be true, as Singer suggests, that no-one created the *atmosphere’s* sequestering capacity. We might say the same about the oceans. But it is less certain that we can say the same thing for *all* carbon sinks. Perhaps agents are (at least sometimes) responsible for the sequestering capacity of sinks currently under their territorial control, for instance. ‘Terrestrial’ carbon sinks include, most famously, tropical rainforests – the so-called ‘lungs of the world’ - but also the soil, lakes, and other vegetation contained in particular geographical areas. These terrestrial sinks, significantly, are located within the borders of states which might be thought to have territorial rights over them, and it *might* be thought that citizens of those states have special claims over their sequestering capacity.

If the argument holds one possible implication is that the capacity of such sinks ought to be considered, within any treaty on climate justice, as a ‘credit’ on the part of the states within which they are located. Perhaps the greenhouse gases absorbed by a state’s rainforests ought to be deducted from its notional emissions total (or, to put it the other way, added to its

emissions quota). If good arguments can be made to that effect, then it looks as though a serious engagement with questions about territorial rights is necessary and that it looks likely to complicate what we must say about climate justice. Theorists of climate justice could then not avoid taking a stance on thorny questions about just who should enjoy territorial rights over which parts of the earth. But does the argument hold? This chapter critically examines the arguments that might be made in favour of treating sink capacity as a ‘credit’ on the part of states with terrestrial sinks within their borders, and in fact suggests that they do not deliver on the conclusion that states with terrestrial sinks should be granted extra emissions entitlements. The final section, though, considers a quite different argument which suggests that we may nevertheless have duties to make transfers to states with important carbon sinks. Even if we reject the idea that terrestrial sink capacity belongs to the states in which it resides, we can nevertheless have duties of justice to offset the costs involved in protecting that capacity. We can embrace payments for sink protection, then, even at the same time as rejecting local sink ownership.

## II.

A young hardwood tree stands in a tropical forest surrounded by millions of others like it. As it grows, it absorbs carbon dioxide from the air (whilst also drawing water from the earth, and fixing energy from the sun within its leaves). When it dies much of the carbon dioxide it contains will be released back into the atmosphere, with the remainder entering the soil. But in the meantime, it represents a tiny carbon sink. So just who, if anyone, is the rightful owner of its sink capacity? All of humankind? Members of the indigenous community who eke out a living in the forest nearby? Or the population of the state in which the forest lies, granted ‘permanent sovereignty’ over their natural resources under international law?

In an important recent piece Megan Blomfield has examined some of the arguments which might be introduced to justify claims on the part of local communities. While she does not argue for *state ownership* of sink capacity (since she remains agnostic both on the claims of states as opposed to other communities, and on whether ownership of sink capacity is the best response to sound claims), her argument presents a useful opportunity to assess the basis and strength of any local claims. One objection to equal per capita emissions, she notes, is precisely that it ignores the fact that greenhouse gases are absorbed, inter alia, by terrestrial

sinks over which individual states are often thought to have rights.<sup>6</sup> Although the atmosphere may rightly be regarded as a global commons, perhaps terrestrial sinks should not. Respect for territorial rights may therefore produce at least a partial answer to the rhetorical question posed by Singer. If my state contains major *terrestrial* sinks, the answer might go, then perhaps I *should* be allowed to consume more of the earth's sequestering capacity.

But what is the basis of local claims over terrestrial sinks? And how robust are those claims? That will depend on the robustness of the general case that can be made for states' control over natural resources. It seems to me that three arguments might be invoked in defence of communal resource claims,<sup>7</sup> and Blomfield advances versions of all three in order to render plausible the view that local communities may have claims over the sequestering capacity of sinks contained within their territories. But are the three arguments likely to deliver on the conclusion that locals have a claim over the capacity of terrestrial sinks?

#### *Attachment*

Consider, first, the argument from attachment. Here the thought is that the communities which currently control terrestrial sinks (such as rainforests) might be strongly attached to them, and indeed their very identities might be bound up in their control over or access to them.<sup>8</sup> If a community is strongly attached to a sink in this way – such that control over it or access to it is essential to that community's sense of self – then perhaps this gives us a reason to treat the sequestering capacity of that sink as something that properly belongs to the community in question.<sup>9</sup> I have suggested elsewhere that theorists of justice both can and should take such attachments seriously. If we have reasons for caring about life-plans which play a central part in people's lives – and surely a wide range of theories of justice can marshal such reasons – then we derive reasons for caring about people's secure access to the supports for those plans, which in some cases will include specific natural resource tokens. Even if a concern for such life-plans does not establish that people with significant attachments to resources are entitled to *more* than others, it can establish a *pro tanto* reason for permitting such people to retain access to the *particular* resources they happen to be attached to.<sup>10</sup>

But when we invoke arguments from attachment we need to carefully specify not only which resources are crucial to important life-plans, but also which rights over those resources

those life-plans are genuinely dependent on. Most importantly, we should not assume that wherever attachment over an external object is at stake nothing other than full rights of ‘liberal ownership’ are capable of supporting the relevant plans. Very often they will turn out to demand something considerably more limited than that. In many cases, attachment appears to require that the agent so attached should have the right to securely access a resource, and this requires that we prevent others from degrading or destroying it or placing it beyond their reach. It is far from obvious, though, that respecting attachment requires that we grant the attached party ownership over any and all benefits flowing from the resource in question. For instance, imagine that I am attached to a river near my home. One of my most central life-plans is to continue to fish from it, bathe in it, and drink from it. Protecting this ability requires continued access and, in this case, some rights to withdraw fish and water (which rights might also, plausibly, be held by many others). It does not appear to require that when others obtain benefits from that river they pay me for doing so. Their plans and mine are entirely compatible without any such side-payments. Respecting my attachment to the river does not justify granting me a monopoly over its benefits or a full set of resource rights.

Let us return to the case of rainforests with this caution in mind. We can again readily perceive that attachment to a rainforest – or the on-going and central project of being a forest-dweller, say - is going to be thwarted when we bar people from a forest, or when we destroy it. But of course no-one in debates about climate justice is suggesting that we should exclude locals from the rainforests, or that we should tear them down. Quite the opposite: outsiders would prefer rainforests to continue to exist, to the extent that there is a live debate about whether locals should actually be *paid* not to tear down their forests (see section III). But that is entirely distinct from the question of who has the right to benefit from their sink capacity. Here it is simply not clear that attachment-based claims over geographical sites like rainforests are thwarted when we treat their capacity as shared assets rather than private ones. We can respect the rights of forest-dweller to dwell in forests, or of forest peoples to *see* themselves as, and to engage in the customary practices of, forest peoples, without granting forest-dwellers ownership over the sink capacity of the forests they dwell in when we come to draw up a global agreement on climate justice. Their life-plans do not appear to depend upon whether the greenhouse gases absorbed by the forest are French, Chinese or Tunisian in origin.<sup>11</sup> Respecting the attachment-based special claims of forest-dwelling peoples appears compatible, then, with a wide range of views on how we should allocate sink capacity.

*Self-determination*

Consider, second, the argument from self-determination. This argument will attempt to show that, since control over natural resources is an important component of the self-determination of a political community, to deny that the sequestering capacity of a rainforest belongs to the country in which it is contained is to deny that country its right of self-determination. Accordingly, the (steep) challenge faced by self-determination-based arguments is to show how control over any *particular* resource or set of resources is indeed indispensable for self-determination. Any view which stipulates that full control over all of the resources which happen to fall within a state's territory is essential for its self-determination will, it seems to me, stretch credulity, and moreover will be unappealing as a conception of self-determination to anyone concerned with global distributive injustices. After all, some countries possess resources greatly in excess of anything they might feasibly use themselves, whereas other countries – which presumably have just the same right to be self-determining – struggle to make ends meet through no fault of their own. If we believe that self-determination is universally valuable, we might instead prefer *on that basis* a regime under which states with 'excess' resources remitted some of them to states with very little.

Not all defences of self-determination, though, appear to demand such untrammelled resource rights. In fact the best recent defences of self-determination – particularly functionalist or 'legitimacy-based' accounts – appear compatible with considerably less. On the most prominent functionalist view, states are only legitimate insofar as they meet their citizens' basic rights, and they ought to be able to avail themselves of the resources contained within their territories *when* those resources are necessary to meeting those rights.<sup>12</sup> Blomfield's argument is compatible with this more limited functionalist view: 'some control over resources,' she tells us, 'appears to be an enabling condition of collective self-determination.'<sup>13</sup> But endorsing this more nuanced view makes it difficult to say anything definitive about the degree of resource control we should favour across the board. Self-determination will, to be sure, be thwarted when other communities intervene to remove, destroy or restrict the use of particular resources such that a state is unable to meet the basic rights of its citizens. But we do not get from this argument any automatic presumption of control over a particular resource. We would need to make the case contextually, by providing reasons for believing that control over *this* resource was *in fact* necessary for

meeting basic rights. Most likely we are pushed towards a regime where states retain control over a (fairly minimal) set of resources insofar as these prove necessary to meeting basic rights, but where the remaining ‘excess’ – which in many cases would be a very large excess – will be untouched by that claim, and will be vulnerable to redistributive claims on the part of communities struggling to exercise self-determination with the resources currently available to them.

On this account, then, what actually needs to be demonstrated is that *not* granting forested states ownership of the sink capacity of their forests (and not granting them, therefore, extra emissions rights) will in fact leave their ability to exercise self-determination compromised. It seems to me that that case is going to be a hard one to make. We would need to show that without these extra emissions rights, at least some of the relevant countries would be unable to meet the basic rights of their citizens. The difficulty here will be that forest states with endemic poverty – or which have demonstrated an ongoing failure to meet basic rights – are also likely to be low-emitters. Countries such as Ecuador or Cameroon, for example, are currently emitting considerably below what even an equal per capita principle would grant them, and hence would already have license to ratchet emissions up considerably. Any argument for the necessity of extra emissions rights on their part therefore threatens to be superfluous. Brazil might be a different kind of case. It is already emitting close to, or beyond, what an equal per capita principle would allow, and Brazilians might feel that they should be able to emit considerably more given the sink capacity contained in their territory. But whilst it might be able to marshal improvement- or protection-based arguments for special rights (see below), it is hard to see how respect for its self-determination exerts any real pressure in this direction.<sup>14</sup>

### *Improvement*

This leaves us with a third argument, from improvement. Agents sometimes act on natural resources in such a way as to make them more economically valuable. Perhaps they refine or purify them, or prune and tend them, in such a way as to make the benefits they supply us more bountiful or more precious. Agents can also increase the quantity of natural resources, as when they breed animals, or sow plants, or extend the range of forests. When these kinds of actions occur it seems plausible to suggest that the agents responsible for them thereby

generate some entitlements. Given that the value of the resources in question has been augmented the entitlement, on one view, would be to the increased value itself.<sup>15</sup> There are two kinds of reason for holding that agents can generate such entitlements through their improving actions. A direct reason would suggest that other things being equal justice is served better when agents retain benefits for whose existence they are responsible. Blomfield expresses this kind of argument in the language of desert, but we could, alternatively, describe the idea as a way of catering to the value of responsibility.<sup>16</sup> We could also endorse such an idea for instrumental reasons. Perhaps it is socially desirable that agents have incentives to improve resources, and to create value which would not exist otherwise. Perhaps this allows us to serve ends of justice such as the funding of public goods, or wealth redistribution. If allowing agents to retain some of the value or benefits they create when they improve resources is the best – or perhaps the only – way of doing so, we have a reason for allowing entitlements to track such acts.<sup>17</sup> In principle we could accept one of these reasons whilst remaining sceptical of the other. Often, though, both sets of reasons figure in accounts of entitlements.<sup>18</sup>

Such an argument could reasonably be applied to terrestrial sinks. The capacities of carbon sinks can be enhanced, as when new trees are planted which sequester greenhouse gases more effectively than older trees. Forests can also be extended by new planting, again so as to sequester more gases. When agents act in such ways it is far from unreasonable to suggest that they generate entitlements over the extra sink capacity thereby created. Communities, on this view, would not have greater emissions rights simply because they *have* forests within their territories, but because in some way they are *responsible* for the existence of at least some of the trees in those forests. A system which tailored emissions entitlements to actions taken to extend forests, or enhance their sequestering capacities, would also be instrumentally attractive. It would generate *incentives* for communities to extend forests, whereas at present all too often incentives appear to be aligned in favour of deforestation. (Notably, such an account may also have wider implications. One of the major strands of development in geo-engineering – collectively known as Carbon Dioxide Removal – involves agents developing technologies such as bioenergy, ocean fertilization or enhanced weathering to remove greenhouse gases from the atmosphere. If such technologies succeed, in effect, in creating new carbon sinks, we will need moral guidance on what entitlements their schemes thereby generate. The improvement-based account would instruct us that their

developers owned their sink capacity, and that under a scheme for emissions trading, for instance, they might have the right to sell that capacity on open markets).

The argument from improvement appears capable of delivering quite plausible special claims over natural resources, then. In cases where a forest has been extended from five hectares to twenty hectares through careful planting and tending, we have at least a strong *pro tanto* reason to consider the agent the owner of the benefits (including greenhouse gas sequestration) delivered by the fifteen hectares of new forest. The pressing issue, to my mind, is not with the structure of the argument from improvement (although it may possess its own problems) but instead, once more, with whether it is at all likely to deliver on the desired conclusion that states (or other communities) should be seen as the owners of the sink capacity of forests within their borders. To put it bluntly it is not, by and large, the case that the rainforests in contemporary states were planted by the inhabitants of those states. Their inhabitants have done relatively little to increase that capacity over the years. To the contrary, year on year that capacity has been steadily – and sometimes rapidly - eroded. This triggers a difficult question about baselines. If the baseline for granting extra emissions rights is to be an historical one (so that the sink capacity which belongs to forested states is construed as present capacity minus capacity at some point in the past), then there will likely *be* no extra entitlements. There might even be debts. Perhaps we could pursue some other counterfactual, to the effect that although sink capacity is now no more – or perhaps considerably less – than it once was, it is nevertheless greater than it *would have been had deforestation continued unchecked*. But that would be a quite different argument, and would not lean on improvement at all, but rather on sacrifices made in the interests of forest preservation. I consider the implications of such an argument in the final section below. In sum, however attractive the improvement-based argument looks as a forward-looking theory of the acquisition of entitlements, it appears unable to deliver a backward-looking justification of extra emissions rights for forest states.

### III.

If we are seeking a justification for extra emissions rights on the part of communities whose territories contain important carbon sinks, the arguments conventionally marshalled in favour of state sovereignty over natural resources turn out to assist very little. As a defence of extra

emissions rights the argument from attachment is misdirected; the argument from self-determination also appears to connect rather poorly to the claim to extra emissions; and whilst the argument from improvement provides a plausible route towards extra entitlements, in practice it cannot take us very far in that direction. Local communities or states simply have not done enough to bring sink capacity about for the argument from improvement to be of much interest.

Should we therefore reject the conclusion that states with terrestrial sinks might be entitled to more than those without? I suspect not. What is significant, I suggest, is not whether states or other communities create or improve sinks (which they rarely do), or indeed whether they become attached to them. One thing which states with sinks such as rainforests often *do* is to incur sacrifices. Let's assume for now (normatively this is a very big assumption, though the status quo operates along just these lines) that each state has the right to use domestic natural resources in the interests of its own economic development. Assume also that whilst other states have a free rein to pursue economic development, states with terrestrial sinks stand to lose out on economic development opportunities if they protect or maintain those sinks. If at the same time we know that terrestrial sinks are an important bulwark against climate change, then we have a quandary. We may believe that forested states *ought* to preserve their forests (in light of the likely consequences of deforestation, we may even believe they have very firm duties of justice to do so). But we may also believe that it is unfair that those communities are required to sacrifice (some of) their development opportunities whereas others do not face similar restrictions. Selecting agents to hold duties on the basis of their capacity to perform them can make moral sense; but it can also produce distributive unfairness if those agents are at the same time required to bear all of the costs of meeting them. The problem may be intensified if forested states happen to be relatively poor, but there is an issue of justice whether or not this is so. When sacrifices are made – when forested states incur opportunity costs when they refrain from cutting down their forests to use the wood for timber, or the cleared ground for agriculture, for example – we may believe that the costs thereby incurred should be shared with outsiders.

This would be a quite different argument to any of those considered earlier. Note that the arguments grounding special claims over natural resources considered in the last section apply readily to resources whose benefits are best conceived as private goods. If I improve the value of something (as when I refine a unit of crude oil), and if I can feasibly exclude

others from enjoying those benefits, then a principle which dictates that I should be able to retain those benefits can get some traction. It may make sense to treat me as the owner of those benefits (if not, necessarily, the resource as a whole). It is less obvious that such a principle will be of much use in cases where others *cannot* be excluded from consuming benefits which we are responsible for the existence of – where benefits, that is, operate as public (including collective) goods. Here, I suspect, we want to turn to a quite different argument. The principle of fairness, when applied to the provision of public goods, suggests that those who benefit from public goods ought to share in the costs of their provision (provided the benefits are worth the costs, and the costs are fairly shared).<sup>19</sup> The ground is then open for us to try to show how *protecting* terrestrial sinks – enabling greater benefits to exist than would occur if they went unprotected – is morally akin to *producing* public goods.

The details and precise implications of such an account would then need to be worked out. We would want to know just which costs should be shared, and when. Here reimbursing states for lost opportunity costs looks likely to be especially controversial. For an economist, the opportunity cost of rainforest protection lies in the revenues accruing to the most profitable use to which forests, or the land they occupy, could have been put. But perhaps some opportunities provide inappropriate benchmarks for compensation. Imagine, for instance, that a state would have allowed a forest to be razed for cocaine production. Would other states then have a duty to make up *that* shortfall? That seems unpalatable. More plausibly, we might compensate for the opportunity costs of activities which would generally have been permissible, but where some agents fall liable to a selective prohibition. Imagine that we are generally at liberty to pursue paid employment. But some individuals are selected, because of their strength, to protect our community from threat. It may make sense for them to bear this duty, but not for them to bear all of the (here, opportunity) costs of performing it. If so, the pooling of that opportunity cost is appropriate. The case for pooling the opportunity costs of rainforest protection operates according to the same logic: a general right to make the most of the natural resources within a territory is specifically truncated in the case of forest states; to pool those opportunity costs is to disentangle the duty to protect from the duty to bear the costs of protection alone.

The argument from the principle of fairness appears to enjoy good prospects of success.<sup>20</sup> But two significant features of the argument require attention. First, note that the argument, far from *justifying* territorial rights, will not apply unless we presume something

like territorial rights in the first place. We need to presume, that is, that states with sinks have the right, other things being equal, to develop those sinks for it to make sense for us to share with them the opportunity costs of refraining from such development. Someone who is resolutely opposed to a state's right to use 'its' natural resources to fuel national development will require persuading on that point. Perhaps, we might say, even if permanent sovereignty should be rejected as a general principle, there are grounds for endorsing it where and insofar as it helps alleviate serious poverty, or reduce global inequalities. Some such argument has appealed to scholars of global justice in the past, and perhaps it can be reprised.<sup>21</sup>

Second, the *target* of the argument is quite different to the one we started with. The argument targets transnational payments for protection, treating sink capacity as a public good whose provision properly needs common funding. Its objectives coincide, roughly, with what are known as 'payments for environmental services,' currently funded (in fact, chronically under-funded) through mechanisms such as REDD+.<sup>22</sup> However, no particular view on who ought to own, or have the right to use, the sink capacity thereby secured appears to flow directly from the account I am suggesting here. It is not obvious, that is, that the argument leads us to endorse local ownership over the emissions capacity which has been protected. The reverse might just as well be the case: perhaps the protected capacity should be treated as a *common* asset, since all of us have shared in the costs of its protection.<sup>23</sup> The argument for the pooling of protection costs offers no answer to that question. The argument from the principle of fairness, in short, grounds some entitlements (entitlements that costs should be shared, and not borne alone). But it does not ground a wider set of entitlements over protected sink capacity.<sup>24</sup>

Note, finally, that if we pursued such an argument we would also need to take a position on just whom any payments for rainforest protection should percolate down to. We might simply treat states as agents and allow them to spend receipts from any protection schemes as they see fit. Or we might place constraints which sought to ensure that all citizens benefited – or that the poorest benefited the most. We might, in many real-world cases, want to ensure that the livelihoods of indigenous forest inhabitants were protected from disruption. In reality the effects of schemes to fund rainforest protection on indigenous groups have tended to be neutral at best, in the sense that they have not seen the benefits which have often been promised. In many cases they have suffered profoundly negative effects, including being excluded from the forests in which they have long lived in case their customary

activities affect the way in which a forest's sequestering capacity is estimated.<sup>25</sup> Given this tension, we would need to take a view on the difficult question whether payments for protection should be calibrated to serve local justice goals (such as equalizing incomes, or protecting the poor or the local indigenous populations), or whether they should be calibrated by *results* in protecting sink capacity. It would be tempting, but quite mistaken, to assume that such diverse goals as protecting sink capacity, maintaining biodiversity and protecting the ways of life of indigenous peoples all point towards the same institutional solutions. In practice a focus on maximising sink capacity has often led to backward steps in terms of biodiversity and indigenous rights. Developing policies which might pay proper heed to a more diverse set of goals is a formidable challenge.

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<sup>1</sup> Thanks to Megan Blomfield for a helpful discussion of some of the issues discussed in this paper.

<sup>2</sup> Just how large we consider their capacity to be will hinge on the degree of climate change we believe is tolerable. Once we fix on a target – such as keeping global mean temperature rises under 2°C – we can then estimate a cumulative total for the greenhouse gases that can safely be emitted by human activities. The 'Trillionth Tonne' project, for instance, estimates that cumulative total at one trillion tonnes of CO<sub>2</sub>, measured since 1750, and calculates that at current consumption levels we will have exhausted that capacity within thirty years. See [www.trillionthtonne.org](http://www.trillionthtonne.org)

<sup>3</sup> Peter Singer, *One World: the Ethics of Globalization* (New Haven: Nota Bene Press, Second Edition 2004), at p. 35.

<sup>4</sup> For a full and persuasive argument to that effect, see Simon Caney, 'Just Emissions,' *Philosophy and Public Affairs* 40.4 (2012): 255-300. See also Chris Armstrong, 'Natural Resources: the Demands of Equality,' *Journal of Social Philosophy* 44.4 (2013): 331-47.

<sup>5</sup> See Singer, *One World*. For further defences of equal emissions on the basis of a view about sinks as global commons, see for instance Paul Baer, 'Equity, Greenhouse Gas Emissions, and Global Common Resources,' in Stephen Schneider, Armin Rosencranz and John Niles (eds) *Climate Change Policy: A Survey* (Washington DC: Island Press, 2002): 393-408; Steve Vanderheiden, *Atmospheric Justice* (Oxford: Oxford University Press, 2008). For a view that common ownership of the atmosphere should be seen within the context of common ownership of the earth more broadly – precisely because no-one created either - see Mathias Risse, *On Global Justice* (Princeton: Princeton University Press, 2012), chapter 10.

<sup>6</sup> Megan Blomfield, 'Global Common Resources and the Just Distribution of Emissions Shares,' *Journal of Political Philosophy* 21.3 (2013): 283-304.

<sup>7</sup> The three arguments I canvass here are roughly equivalent to what Lea Ypi calls arguments from attachment, from legitimacy, and from acquisition. Ypi, 'Territorial Rights and Exclusion,' *Philosophy Compass* 8.3 (2013): 241-53. For a fuller discussion of these arguments and an examination of their general prospects of supporting permanent sovereignty in particular, see Chris Armstrong, 'Against "Permanent Sovereignty" over Natural Resources,' *Politics, Philosophy and Economics* (forthcoming 2014).

<sup>8</sup> Blomfield, 'Global Common Resources,' at 294-6.

<sup>9</sup> For an argument from the creation of ‘symbolic value’ to national rights over land and resources, see David Miller, ‘Territorial Rights: Concept and Justification,’ *Political Studies* 60.2 (2012): 252-68.

<sup>10</sup> Chris Armstrong, ‘Justice and Attachment to Natural Resources,’ *Journal of Political Philosophy* 22.1 (2014): 48-65. Avery Kolers has presented a more demanding account of what follows from what I am calling attachment to resources; see Kolers, ‘Justice, Territory and Natural Resources,’ *Political Studies* 60.2 (2012): 269-86. I reject his account in Chris Armstrong, ‘Resources, Rights and Global Justice: A Response to Kolers,’ *Political Studies* 62.1 (2014): 216-22.

<sup>11</sup> Might the claim be that they cannot pursue those plans without having exclusive rights to use that capacity themselves? It is hard to see how such a claim could succeed. We might well wonder, if so, how they have been able to pursue their plans up to this point in a world in which sink capacity has been annexed by outsiders on a ‘finders keepers’ basis.

<sup>12</sup> For an example of this type of argument as applied to rights over land, see Anna Stilz, ‘Nations, States and Territory,’ *Ethics* 121.3 (2011): 575-601. Stilz remains neutral on whether the argument gives us reason to endorse control over natural resources too. But for a similar argument with regards to natural resources, see Cara Nine, *Global Justice and Territory* (Oxford University Press, 2012), chapters 4 and 6.

<sup>13</sup> Blomfield, ‘Global Common Resources,’ at 296 (emphasis added).

<sup>14</sup> One further argument might be invoked by the defender of self-determination, but it is again doubtful that it pushes us any closer to the conclusion of extra emissions rights. Even if exclusive rights to harness the benefits flowing from the natural resources within a state’s territory proves unnecessary for meeting basic rights, wouldn’t the self-determination of that state be trampled over if *other* communities were able to enter that state’s territory and consume its resources? Could we really countenance agents of some United Nations Resource Agency dropping out of the sky, entering the territories of states and appropriating resources for use elsewhere? If not, then a state might still have the right to *block* use of ‘its’ resources by others even if its right to use them for its own exclusive benefit was in question. There are three things to note in response to this apparently dystopian scenario. The first is that it assumes what is at stake in many debates about territorial rights – it leans heavily, that is, on our prior acceptance of rights to control borders and to exercise exclusive jurisdiction over land. Those unpersuaded of the robustness of such rights will be less troubled by the scenario. Second, advocates of global justice might point out that there are many ways of sharing the benefits arising from natural resources – for example, by taxing their extraction or sale – which do not require us to actually expropriate those resources. But third and most important for my argument, the scenario does not apply to the case at hand. The sequestering capacity of terrestrial sinks is already consumed by outsiders, in ways that do not require them to enter the territory of forested states. Indeed outsiders could not be prevented from consuming sink capacity (which is why sink capacity counts as a collective good in the first place). The spectre of territorial incursions adds nothing to the case for extra emissions rights.

<sup>15</sup> See e.g. David Miller, *National Responsibility and Global Justice* (Oxford: Oxford University Press, 2007), at p. 218. Hillel Steiner’s account also assumes a distinction between improved and unimproved resources, where redistributive claims are to the unimproved value of resources only and agents have a right to retain the value of improvements. Steiner, *An Essay on Rights* (Oxford: Blackwell, 1994).

<sup>16</sup> Blomfield, ‘Global Common Resources,’ at 296-7.

<sup>17</sup> We could imagine another instrumental argument which was not conditional on improvement taking place. On this rather Humean view, one reason for according states an interest in the natural resources in their territories is the fact that those states will thereby derive an incentive to conserve those resources, or to use them most efficiently (thereby avoiding a tragedy of the commons). John Rawls briefly suggests such a justification of state ownership of natural resources in *The Law of Peoples* (Cambridge, Massachusetts: Harvard University Press, 1999). I consider but reject this justification of state ownership in Chris Armstrong, ‘Against Permanent Sovereignty over Natural Resources.’ In short, it suggests giving states an interest in domestic resources, but does not rule out also granting outsiders a stake.

<sup>18</sup> Famously, John Locke's account of justice in acquisition both suggested that agents generate entitlements in the act of appropriating natural resources, *and* that we should accept a regime of private property rights because such a regime will generate substantially greater benefits than leaving resources in the commons. Locke, *Two Treatises of Government*, edited by Peter Laslett (Cambridge: Cambridge University Press 1960).

<sup>19</sup> See e.g. Richard Arneson, 'The Principle of Fairness and the Free-Rider Problem,' *Ethics* 92.4 (1982): 616-33; Garrett Cullity, 'Moral Free Riding,' *Philosophy and Public Affairs* 24.1 (1995): 3-34. For a sceptical discussion of the principle, particularly as a ground for political obligation, see A. John Simmons, *Moral Principles and Political Obligations* (Princeton: Princeton University Press, 1979), chapter V.

<sup>20</sup> I unpack and defend an argument from the principle of fairness elsewhere, and deal with just these issues. See Chris Armstrong, 'Fairness, Free-riding and Rainforest Protection,' ms.

<sup>21</sup> Charles Beitz, for instance, argued very briefly that whilst national control over natural resources should be rejected as a general principle, there are reasons for endorsing it in the case of the poorest countries. See Beitz, *Political Theory and International Relations* (Princeton: Princeton University Press, 1979), at p. 142, n. 31. More recently Doris Schroeder and Thomas Pogge have defended state rights over biological resources on a similar basis. Doris Schroeder and Thomas Pogge, 'Justice and the Convention on Biological Diversity,' *Ethics and International Affairs* 23.3 (2009): 267-80.

<sup>22</sup> A United Nations initiative, REDD stands for 'Reducing Emissions from Deforestation and Degradation.' REDD+ is a consolidated initiative which also includes, inter alia, a focus on enhancing and not just protecting forests. For a discussion, see Peter Kanowski, Constance McDermott, and Benjamin Cashore, 'Implementing REDD+: lessons from analysis of forest governance,' *Environmental Science & Policy* 14.2 (2011): 111-117.

<sup>23</sup> In fact, a principle which grants ownership rights over benefits to those who have protected them from threats may produce perverse and unpalatable implications. Consider someone grinding out a match which, if left to burn, would destroy a forest. Does the match-grinder therefore derive rights over all of the benefits which the forest secures? The argument that those who protect benefits ought to have the costs of doing so shared (where benefits are worth their costs, and costs are fairly shared) is a much more modest one, which will avoid such troubling conclusions. See Armstrong, 'Fairness, Free-riding and Rainforest Protection.'

<sup>24</sup> Of course, it might be the case that we could approach the latter conclusion in practice. If states are to be paid to protect terrestrial sinks within their territories, then under a quota-trading system they could of course use the money gained to buy themselves extra emissions entitlements. It seems to me to be difficult, in advance, to estimate just how much in the way of greater emissions entitlements terrestrial sinks would then end up with. We can affirm that the capacity which might be bought would not exceed that protected (a fact determined by the proviso that the benefits of protection must be worth their costs). But there is no reason to expect them to match the capacity of sinks themselves; they might fall well short of such levels.

<sup>25</sup> See e.g. Jacob Phelps, Edward Webb, and Arun Agrawal, 'Does REDD+ Threaten to Recentralize Forest Governance?' *Science* 328.5976 (2010): 312-313; Anne Larson, 'Forest Tenure Reform in the Age of Climate Change: Lessons for REDD+,' *Global Environmental Change* 21.2 (2011): 540-549.