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# Territory Lost – Climate Change and the Violation of Self-determination Rights

**Abstract:** Inhabitants of low-lying islands flooded due to anthropogenic climate change will lose their territory and thereby their ability to exercise their right to political self-determination. This paper addresses the normative questions which arise when climate change threatens territorial rights. It explores whether the loss of statehood supports a claim to territorial compensation, and if so, how it can be satisfied. The paper concludes that such claims are well founded and that they should be met by providing compensatory territories. After introducing a differentiation between land rights and territorial rights, previous theoretical responses to the problem of sinking islands are criticized. It is argued that states may be required to give up parts of their territory as compensation. The paper develops criteria of sufficiency for compensatory territories and proposes to base their selection process on a negative auction. Since it is unlikely that unsettled compensatory territories that meet the specified requirements are available, the rights of their original inhabitants are discussed.

**Keywords:** Climate Change, Territorial Rights, Self-determination, Compensation, Auction

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## 1 Introduction

Climate researchers widely agree that high carbon dioxide emissions will cause a significant rise of the sea level in the decades to come. As a consequence, some low-lying islands and coastal regions will most likely be flooded or become otherwise uninhabitable. The populations of the areas concerned will be adversely affected by the environmental disaster in a variety of ways.<sup>1</sup> Most

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<sup>1</sup> The Intergovernmental Panel on Climate Change Report (2007: 48) states on the probable impacts of the greenhouse effect: “By the 2080s, many millions more people than today are

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evidently, they will lose immovable possessions, such as buildings and farmland, when their estates are swamped. Furthermore, they will have to abandon their familiar surroundings and to resettle somewhere else. Since individuals typically have strong emotional ties to their homelands, leaving it may cause a sense of loss. In addition, the predicted rise of the sea level may endanger their continued existence as independent political communities. For instance, island states such as Kiribati, Tuvalu, the Marshall Islands and the Maldives will possibly be entirely submerged. Lacking any territory of their own, these nations will no longer be capable of exercising their right to political self-determination (Yamamoto/Esteban 2010: 3–4).

In this paper, we will primarily address the normative questions which arise when climate change threatens territorial rights. As a preparatory step, we differentiate in Section 2 between property rights over land and jurisdictional rights over territory. Based on this distinction, we argue in Section 3 that the loss of statehood gives reason to a claim to territorial compensation. In Section 4 we offer a critique of the leading theoretical responses to the territorial rights challenge posed by anthropogenic climate change in order to emphasize that a new account is needed. In Section 5 we develop the details of our approach and examine several intricate problems which our proposal faces. Finally, in Section 6 we briefly summarize our argument.

Note that we make a number of assumptions we cannot base on explicitly stated arguments, due to the limited scope of our paper and the constraints in space. First, we assume that emitters of greenhouse gases have causal responsibility for climate change and that even single emissions are not, as some have argued, inconsequential.<sup>2</sup> Second, we assume that in the case of climate change moral responsibility follows from causal responsibility – with two qualifications. The first qualification is that emitters are neither morally responsible nor liable to provide compensation if they were excusably ignorant of the causal connection between their emissions and climate change.<sup>3</sup> Shortly before and after 1990 important international documents issued clear warnings regarding the dangers of climate change in general and those of a sea level rise in

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projected to experience floods every year due to sea level rise. The numbers affected will be largest in the densely populated and low-lying megadeltas of Asia and Africa while small islands are especially vulnerable (very high confidence).”

**2** For the view that individual emissions are inconsequential see Sinnott-Armstrong (2005) and Sandler (2010). For the opposing – and in our view persuasive – perspective Hiller (2011) and, more abstractly, Kagen (2011).

**3** Some authors hold the view that while excusable ignorance shields from blame and punishment, it is incapable of protecting past emitters of greenhouse gases from any liability for costs (e.g. Shue 1999: 535–536). For a critique of this view see, for example, Caney (2005: 762).

particular.<sup>4</sup> Therefore we assume that such excusable ignorance exists prior to but not after 1990. The second qualification is that subsistence emissions are justified even if they contribute to the sinking of islands. Therefore, in our view, emitters are morally responsible for the flooding of the islands in question, depending on their relative contribution to unsustainable non-subsistence emissions after 1990. In this context we define unsustainable emissions as those exceeding the level of emissions at which territories would not have vanished.

## 2 Land rights vs. territorial rights

Our discussion in the subsequent sections is predicated on a distinction between two kinds of rights (Nine 2012: 11–13). The flooding of islands and coastal regions brought about by global warming affects, on the one hand, property rights over land. A defining feature of a property right is the entitlement to exclude others from the use of the object concerned. A property right over land, or in short: a land right, encompasses a variety of different competences. A landowner may, for instance, extract natural resources, cultivate fields, or erect buildings on his or her estate. Moreover, he or she may lease some parcels of the land or grant rights of way to third parties. Land rights are typically held by individuals, but they may also be possessed by collectives or corporations.

Rising sea levels caused by climate change have, on the other hand, a bearing on political rights over territory. The political self-determination of some group of people, e.g. a national community, presupposes a place where it can be realized. A territorial right may be understood as the spatial component of a self-determination right; it describes the jurisdictional authority to enact and enforce laws within a particular region (Miller 2012: 253). Territorial rights entail the competence to control borders and to regulate the movement of people and goods. They impose a corresponding duty on third parties, especially other states, to respect the right holder's authority over the area concerned. Contrary to property rights, territorial

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<sup>4</sup> Since the General Assembly of the United Nations adopted a resolution on the “Possible adverse effects of sea level rise on islands and coastal areas, particularly low-lying coastal areas” on 22 December 1989 (A/RES/44/206) it is evident that the international community of states was fully aware of the problem at this time. Moreover, the United Nations Framework Convention on Climate Change (1992: 2) explicitly refers to the negative impact of the expected sea level rise on low-lying islands and coastal areas in its preamble.

rights are typically exercised by states or groups who are entitled to establish independent political units.<sup>5</sup>

Since both types of rights refer to the same spatial units, it does not come as a surprise that they are connected in several respects. There are, at least, three interrelations between land rights and territorial rights worth mentioning. First, a state may use its jurisdictional authority to regulate property rights over land on its territory. The lawmaker may, for instance, stipulate environmental standards which limit the owners' capacity to make use of their estates. In some cases the public interest or other weighty reasons may even justify the expropriation of land (see Section 5.3). Second, a state may possess property rights over land on its own or some other state's territory. A state-owned enterprise may, for instance, acquire farm land in a neighboring country to improve the food supply of its population. If a state acts as a landowner, it is subject to the same legal requirements as other proprietors.

Third, some theorists – following a Lockean tradition – argue that the territorial rights of states originate from individual property rights over land (Simmons 2001; Steiner 1998). According to John Locke's natural rights theory, property rights are not created by the state; rather the state is established for the purpose of protecting pre-existent property rights. By founding a state the individuals submit themselves and their estates to the authority of the government (Locke 1988: II §120). Consequently, a state's territory, i.e. the spatial validity of its laws, is coextensive with its members' landholdings. Within the context of this paper, the Lockean justifications of territorial rights need not to be discussed in more detail. Our claim is that land rights and territorial rights are conceptually different because they specify distinct competences. This holds even if a state's territorial rights could be derived from individual property rights.<sup>6</sup>

### 3 In-kind compensation for territorial rights

By now it may have become clear that property rights over land and jurisdictional rights over territory purport to protect different interests. Property rights authorize individuals to exclude others from their estates and to make independent use of their possessions. They allow the owners to achieve

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<sup>5</sup> However, as explained in the subsequent paragraphs, one may hold the view that a state's territorial authority must be derived from individual entitlements.

<sup>6</sup> For a critique of property-based justifications of territorial rights see Dietrich (2011: 82–85).

economic benefits from their piece of land, e.g. by cultivating fields and selling crops. Jurisdictional rights over territory, on the other hand, are an important precondition for the political self-determination of certain groups. They enable the members of a collective to jointly decide on crucial societal issues, such as educational or immigration policies. To be sure, philosophers hold conflicting views on the justification of collective self-determination rights and the groups that qualify as right-holders. For instance, some authors (e.g. Miller 1995: 81–118) refer to the need to protect national cultures, whereas others base their argument on the deontic value of group autonomy (Wellman 2005: 34–64) or the individual freedom of association (Lefkowitz 2008). However, the given interests promoted by the assignment of jurisdictional authority over a territory can be accepted from various theoretical perspectives. The above-mentioned authors agree that the possession of a territorial right is of vital importance for self-determining groups because it allows their members to freely shape their political future. Given this special significance of territorial rights (and their status as a necessary condition of political self-determination), it is beyond dispute that destroying their physical basis constitutes a harm. Further, we assume that this harm is unjustified and that unjustified harms are to be compensated. Therefore, the destruction of territory by means of emitting greenhouse gases must be compensated. What remains is the question of *how* those harms are to be compensated.<sup>7</sup> In the following we argue that this compensation must be in kind.

As regards rights violations, it seems reasonable to assume that any liability for compensation should focus on the interests the right concerned is supposed to protect.<sup>8</sup> Evidently, the flooding of low-lying island states caused by anthropogenic climate change affects land rights and territorial rights alike. The destruction of property can be compensated by cash transfers, enabling the owners of swamped estates to buy an equivalent piece of land somewhere else. However, the payment of any amount of money does not enhance the capacity of a group which is lacking a territory to exert its self-determination rights. Nowadays there remains no vacant territory, and the existing states no longer regard their domains as something

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<sup>7</sup> For an informative discussion of this issue in the context of international law see Oliver (2009).

<sup>8</sup> If the actions that effectuated the loss of territory are morally justifiable, the group concerned may not be entitled to demand compensation. As an example one may cite the exercise of a group's right to self-defense – provided that the destruction of the territory caused by that self-defense is unavoidable and proportionate. However, since we believe that moral responsibility for climate change can be established, we do not examine this case in more detail.

which can be sold and bought.<sup>9</sup> Hence, a financial recompense would not allow the inhabitants of drowning island states to reestablish sovereign political communities elsewhere. The only way to restore the self-determining capacity of a group which has irrevocably lost its territory due to rising sea levels is to provide it with a surrogate territory.<sup>10</sup>

At this point it may be instructive to draw a parallel to the violation of individual rights to political self-determination. Most importantly, the citizens of democratic states enjoy voting rights which allow them to exert influence over the political course of their countries. Imagine some citizens were not able to participate in a general election because the ballot boxes were missing at the relevant polling station. An investigation has brought to light that the incident was caused by the negligence of some state officials. If the state paid financial compensation, this would be an inappropriate response to the citizens' inability to exercise their right to vote. Rather, the state would have to repeat the entire election or to allow the relevant constituency to ballot at a later date.<sup>11</sup>

Here the question may arise whether it would make a difference if some citizens explicitly preferred a financial recompense to an election rerun. In our view, the aggrieved persons can merely demand the protection of the interests which are at the heart of the violated right. They have no claim to receive a compensation which exclusively serves the achievement of other objectives. Individuals are granted voting rights in order to provide them with the opportunity to participate in the democratic process of their country. Given this rationale for the suffrage they are not entitled to yield economic benefits by way of compensation. Similar considerations apply to the inhabitants of flooded island states who have suffered a violation of their territorial rights. It would be against the intention of granting a group exclusive control over a territory for the purpose of enabling their self-determination if its members were able to demand cash transfer instead of in kind compensation.

Up to now, we have placed strong emphasis on the interests that motivate the recognition of territorial rights; viz. the ability of a group to determine its

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**9** It is widely assumed that under modern international law states are not authorized to sell an area – as, for instance, in the Alaska purchase of 1867 – unless the majority of its inhabitants agree with the transfer of power in a plebiscite (see Cassese 1995: 189–190).

**10** The inhabitants of sinking island states may suffer additional losses for which they cannot be adequately compensated. It may, for instance, prove impossible to provide an equivalent substitution for sacred sites or buildings of special cultural importance which are destroyed due to rising sea levels.

**11** For an argument that vote buying and selling is under certain circumstances morally acceptable see Brennan (2011: 135–160).

internal affairs. It may be worth noting, however, that we do not deem the collectives concerned obliged to make a specific use of their right to self-determination. Although its members are not entitled to choose financial recompense should their self-determination rights be violated, they enjoy a wide discretion regarding the exercise of their territorial authority. They may, for instance, forego political independence and seek to unite with a larger state if they believe the fusion to be to their advantage. The point of assigning a territorial right is to transfer decision power to a group, not to impose a certain decision on its members. Similar considerations apply to individual participatory rights within democratic states; there is wide agreement that the citizens are free to abstain from voting or to spoil their ballot.

Finally, we consider it important to respond to a criticism that may be leveled against our argument. One may, in principle, agree that the flooding of island states calls for in-kind compensation but doubt that “climate sinners” can be obliged to cede parts of their territory. Consider, as an example, the occupation of a state which has launched a war of aggression against bordering countries. It is commonly thought that the intervening forces have to withdraw if there is no risk of further military attacks. Then the people who initially exercised their political self-determination on the territory must regain full sovereignty over it.<sup>12</sup> Arguably, high emissions of carbon dioxide are morally less reprehensible than, for instance, the killing of innocent people in a war of aggression. Hence, one may wonder how massive polluters can be obliged to cede parts of their territory, although states which have committed more serious misdeeds do not owe their victims territorial compensation. Here it seems important to take the different kinds of damage into account that are caused in both cases. A population which is militarily attacked may suffer a substantial loss of human life and property, but it is not irreversibly deprived of the territorial precondition for exercising its right to political self-determination. The inhabitants of drowning island states, on the other hand, will irreversibly lose the territorial basis for their continued existence as an independent political community. Hence, it is not the severity of the damage but the nature of the destroyed good which explains the particular demands for in-kind compensation of sinking island states.

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<sup>12</sup> In a recent article, Anna Stilz has persuasively argued that “outlaw states”, such as Nazi Germany, may be legitimately occupied but not annexed. According to Stilz (2011: 591), there is a “residual claim, vested in the people, to reconstitute legitimate political institutions on their territory when their prior state fails, becomes illegitimate or is usurped” (see also Stilz 2009: 206–210).

## 4 The insufficiency of leading theoretical responses

The importance of in-kind compensation is not recognized by the leading theoretical responses to the territorial rights challenge posed by anthropogenic climate change. Therefore, the leading responses are insufficient in that they do not adequately take into consideration the moral responsibility and compensatory liability of emitters. Specifically, they are insufficient because they support inadequate compensation, provide the wrong reasons, or make the wrong actors responsible for paying that compensation.

Being one of the first to have given detailed consideration to the problem at hand, Mathias Risse argues that all humans are co-owners of the earth and that, therefore, there exists a “human right to relocation” for those whose “existence becomes impossible where they presently live” (Risse 2009: 296, 282).<sup>13</sup> Risse does not go as far as claiming that co-owners have a claim to an equal share of natural resources but understands them as having a claim to “an equal opportunity to satisfy basic needs to the extent that this turns on obtaining collectively owned resources” (Risse 2009: 288; see also Risse 2012: 111). Therefore, co-owners must not prevent other co-owners from satisfying their basic needs by way of using collectively owned resources. Applied to the case of sinking islands this means, according to Risse, that affected islanders – by virtue of being co-owners of the earth – have a right to immigrate to other countries and that those countries are required to “put the new immigrants in a position to make a living” (Risse 2009: 293; see also Risse 2012: 145–146). Based on arguments by Michael Blake, according to which partial citizenship is exploitative or otherwise unjust, Risse concludes that immigrants must be granted “full membership” (Risse 2009: 294).

On the question of which countries in particular are supposed to offer membership to affected islanders and to shoulder other burdens brought about by the relocation, Risse has a twofold response, relying on “the principles of ‘polluter pays’ and ‘ability to pay’” (Risse 2009: 296; see also Risse 2012: 202–206). Countries are expected to shoulder the relevant burdens depending on their current contribution to climate change as measured by per capita emissions as well as depending on their wealth. To decide where particular climate refugees will resettle, Risse also wants to take into account “preexisting relations, cultural or linguistic ties, historical connections, or practical capacity”

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<sup>13</sup> Arguments for an immigration right of the island populations concerned are also advanced by Byravan/Rajan (2010) and Zellentin (2010).

(Risse 2009: 297). According to Risse, his response has the advantages that it does not rely on establishing causality (Risse 2009: 282), that it is not exclusively focused on the refugees' needs (Risse 2009: 284), and that instead it relies on the well supported egalitarian notion of common ownership of the earth (Risse 2009: 284–293).

Unfortunately, it is unclear whether these advantages materialize. When answering the question of what help climate refugees are to receive, Risse puts the argumentative burden on the concept of common ownership rather than causality, thereby arriving at the sufficientarian conclusion that all co-owners should have the opportunity to fulfill their basic needs by being allowed to immigrate to other countries (Risse 2009: 288, 293–294). Alternatively, an argument based on the causality of harm would focus on the fact that those who are causally responsible for climate change harms must compensate the climate refugees. Such compensation could not be limited by considerations of basic needs but would necessarily focus on what has been lost.

On the other hand, when answering the question of who is supposed to provide these opportunities to the refugees, Risse in part reverts back to considerations of compensation and, therefore, causality (Risse 2009: 296–297). This dichotomy not only introduces a justificatory tension between – what would appear to be – competing approaches but ironically invites the worst of both worlds: the meager rights offered to refugees based on their co-owner status as well as the argumentative challenges of any account of historical compensation. It would be preferable to base both the rights of the refugees and the corresponding duties of other parties on either the concept of common ownership or on damages caused by polluting the atmosphere. In our view, the correct approach is based on causation because the destruction of land and territorial rights by anthropogenic climate change is ultimately a story of grossly negligent harm rather than bad luck. Therefore, the help Risse offers to climate refugees is supported by suboptimal reasoning (common ownership rather than compensation), is of the wrong kind (immigration rather than territory) and therefore insufficient. Further, his proposal of who is to shoulder the compensatory burden is not exclusively focused on causality and, therefore, in danger of demanding payment from the wrong party.<sup>14</sup>

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**14** Note that Risse is, in general, open to placing exclusive weight on compensatory considerations (see Risse 2012: 205–206) and even to the suggestion that states “relinquish territory, allowing for the founding of other political entities [...]” if this is preferred to admitting immigrants (Risse 2012: 154–155). Therefore, while the differences in argumentative strategy and policy recommendations between our approach and Risse (2009/2012) appear large, there is also some common ground.

Cara Nine chooses a more common position on territorial rights when arguing that climate refugees not only deserve full resettlement rights but potentially territorial rights that allow them to resettle their entire state (Nine 2010 and 2012). Nine's approach boils down to an application of the Lockean sufficiency proviso to the justification and distribution of territorial rights.

With respect to the acquisition of property, this proviso specifies that "enough and as good" should be left in common for others (Locke 1988: II § 27). Nine (2010: 367) seeks to apply this proviso to territory rather than property and, importantly, argues that it should not apply to the acquisition of territory but to current territorial holdings. Therefore, the current territorial holdings of existing states may violate the sufficiency proviso by not allowing a people of ecological refugees to exercise their right of self-determination on the basis of newly established territorial rights. To avoid this proviso violation, Nine (2010: 369–71) claims that existing states must "downsize". This general result, based on the sufficiency proviso, does not yet offer a solution to the question of where the new state of the ecological refugees may be located. To arrive at a tentative solution Nine employs Locke's spoilage proviso, according to which natural resources should neither be spoiled nor destroyed. Based on Tamar Meisels' (2002) application of the spoilage proviso to territorial rights, Nine (2010: 372) concludes that "[w]hen there is a group with the right of self-determination who is unable to exercise that right because the system of territorial rights excludes them from doing so, then the uninhabited, neglected land is more vulnerable to legitimate claims made by these groups". Thus, Nine envisions that new territories for refugee states are preferably to be found where other states – according to the culturally relative criteria of said states – let land spoil.

The main advantage of Nine's approach is that it offers, contrary to Risse's account, an adequate response to the plight of the inhabitants of sinking islands. Nevertheless, in our view, Nine's response is insufficient because it treats climate change as if it were a random ecological event without culprits.<sup>15</sup> Therefore, with its focus on blameless climate change, Nine's approach not only provides the wrong reasons for redrawing state borders, but it is necessarily also unable to demand compensation from the right party: those responsible for anthropogenic climate change. This approach may lead to the inadequate conclusion that a state that holds a relatively small piece of territory but emits large amounts of

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<sup>15</sup> Of course this does not imply that Nine views climate change as an event without culprits. In fact, Nine (2010: 372) explicitly states that her theory is to be understood as a "baseline for the treatment of ecological refugee states" and that, if blame for climate change can be established, additional reasons for compensation will arise. However, her analysis does not provide these reasons and the required compensatory approach.

greenhouse gases will go scot-free, while a large and sparsely populated state without significant emissions may be forced to accept a reduction of its territory because parts of its land are “uninhabited and neglected”. However, given the culturally relative interpretation of those terms it might be unlikely that we find lands that fit this description while at the same time being of any value to ecological refugees whatsoever (see Section 5.1). Therefore, Nine’s approach of locating compensatory territory may be practically irrelevant.

Avery Kolers (2012: 334) corrects the mistake of interpreting climate change as an event without culprits and not only identifies climate change as being caused by industrialized countries but also proposes to “think of [...] lost countries as crime scenes”. Therefore, Kolers is acutely aware of the moral responsibility for climate change. Further, Kolers recognizes the important difference between individual displacement due to climate catastrophes and the disappearance of entire states. In his view the harm to an individual when an entire state is lost is much greater, for it entails the loss of “the individual’s political identity, political community, status in that community, currency, civil-society institutions, and perhaps even her language of political participation and culture” (Kolers 2012: 334). On this basis Kolers rejects individualistic solutions to these catastrophes such as the one proposed by Risse. Kolers correctly concludes that collective rather than individual resettlements are necessary to do justice to the victims of climate change induced disappearance of states.

To decide where these collective resettlements are to take place and which states are responsible for enabling them, Kolers (2012: 341) introduces a novel and intriguing definition of territory:

If territory is understood roughly as *the ratio of achieved public aims to the volume of geographical space*, then the amount of territory in the world *increases* whenever states need less geographical space to achieve similar results, or when they achieve those results more compatibly with other populations’ achievement of their own public aims.

Contrary to the mainstream perspective which has it that territory is available in an essentially fixed quantity directly corresponding to the available geographical space (e.g. Nine 2012: 175), Kolers believes that we can make more territory by achieving more public aims while using the same amount of land. From this perspective he derives a requirement that states continually make more territory by “continually enhancing justice relative to environmental impact” (Kolers 2012: 339). This implies that states should grow the available territory by actions that affect themselves and other states because alternatively they are, according to Kolers, in violation of Locke’s sufficiency proviso. In Kolers’ view this approach is superior to Nine’s because it “lay[s] the loss of territory at the feet

of those who are destroying it: the perpetrators of the climate catastrophe” (Kolers 2012: 339).

However, his insistence on providing an analysis based on an improved interpretation of the Lockean sufficiency proviso as applied to land (rather than, say, the atmosphere) commits Kolers to an undue focus on efficient land use. Contrary to what he believes, this focus on efficient land use in turn precludes Kolers from seeking redress exclusively from CO<sub>2</sub> emitters. For, according to Kolers’ definition of territory, not only climate change culprits but also those who use land inefficiently to achieve public aims destroy territory. Those who use land inefficiently (e.g. inefficiently organized states) may not be responsible for destroying the particular landmass of the sinking islands, but in union with the climate change culprits they are in the same way responsible for violating the Lockean sufficiency proviso.<sup>16</sup> Even more counterintuitively, based on Kolers’ view, a state that is a large CO<sub>2</sub> emitter could make up for the negative environmental externalities, with which it harms others, by using its own land mass – for the benefit of its own population – with great care and efficiency. That such tradeoffs are possible, even in theory, spells trouble for Kolers’ theory. It could of course be amended by, for example, forbidding such tradeoffs and by specifying that mere inefficient land use does not weaken the territorial claims of states. However, such solutions would be ad hoc rather than derived from the proposed approach. Therefore, if we wish to adequately take into consideration the moral responsibility and compensatory liability of emitters, what is needed is a theory of pure territorial compensation.<sup>17</sup>

## 5 Territorial compensation: details of implementation

Up to now, we have argued in a general way that the inhabitants of sinking island states have a claim against climate culprits to rectify that harm in kind.<sup>18</sup>

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**16** Kolers (2009) presents a basic normative theory of territory. Among other interesting applications, it includes a discussion of famine refugees seeking to establish a separate territory in Australia which, of course, shares important elements with the sinking islands case (Kolers 2009: 147–152).

**17** Note that, concerning two states sharing the same land mass, Kolers does offer some very interesting thoughts on the subject of implementing a solution. However, he does not attempt to develop them further (Kolers 2012: 341).

**18** It is perhaps worth emphasizing that in this paper we focus exclusively on drowning island states. Our argument is not directly pertinent to states which do not lose their entire territory but

We still have to address a number of complicated problems that need to be solved in order to make territorial compensation practically viable. Most importantly, we have to answer the question of location, i.e. we need to explain a mechanism for the assignment of a particular piece of territory. We will begin with a brief account of the basic requirements any compensatory territory has to meet (see Section 5.1). Thereafter, we will propose a negative auction as a procedure for selecting among these territories and determine who is to pay for the compensatory process as a whole (see Section 5.2). In addition, our scheme will face the problem that hardly any uninhabited territory is left which could be used for the relocation of a state's population. Hence, we have to consider possible effects on the rights of individuals whose area of residence is designated to come under foreign dominion (see Section 5.3). Finally we will address specific challenges pertaining to the requirement to grant liberty rights as well as the alternative of immigration (see Section 5.4).

## 5.1 Criteria of sufficiency for new territories

As a first step toward the allocation of specific pieces of territory, we have to stipulate sufficiency criteria for compensation. Thereby we can (possibly) exclude a high number of options which would fail to provide the victims of global warming with an adequate substitute. Basically, a territorial compensation has to meet two closely connected requirements which may be referred to as “cultural identity condition” and “appropriate size condition”.<sup>19</sup> The first mentioned condition takes into account that the culture of a population is typically shaped by the particularities of the area it traditionally occupies. Usually the climatic and geographic conditions of a territory exert a significant influence on the modes of production, habits, life-styles, and character traits of its inhabitants.

One prominent reason for considering collective political self-determination important is that it allows a group to realize its particular goals and values. A political self-determination right protects a group from becoming subject to rules which are hostile to its particular culture. Hence, a compensatory territory

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only some low-lying coastal areas. It would only apply to the latter cases if the remaining territory became too overpopulated to allow the exercise of the population's self-determination right. On the demographic aspects of territorial rights see Dietrich (2014).

<sup>19</sup> Subsequent to our discussion of residential rights, we will introduce in Section 5.4 an additional criterion that may be called “majority condition”. This requirement is meant to guarantee that the island population cannot be outnumbered by the original inhabitants of the territory that is offered as compensation.

must allow the resettled population to exercise cultural activities to which they attach great value. Imagine, for instance, an island community whose habits and values are deeply influenced by a certain form of agriculture practiced by the vast majority of its members. The right of political self-determination would lose its point if the new territory would not enable them to continue their farming activities.<sup>20</sup> Moreover, it should be stressed that a community which has lost its territory due to anthropogenic climate change is under no obligation to adapt to new surroundings. Since its members have a claim to full compensation, they cannot be expected to significantly change their traditional cultural practices.

The “appropriate size condition” must be explained with recourse to the cultural aspects mentioned above. What counts as an appropriate compensation in terms of size must be determined with due regard to the cultural value of the flooded territory. For instance, if a drowned island included an area which was of no use for the cultural activities of the inhabitants, e.g. a desert, they may be compensated with a proportionately smaller piece of territory. On the other hand, if the new territory contains a worthless area, its overall size must exceed the size of the flooded island.

Here the question may arise whether a population which made use of an underproportional (overproportional) share of the earth’s surface should receive a larger (smaller) territory as compensation. The occasion may appear favorable to achieve a fairer distribution of the world’s territory. However, such a claim would have to be grounded on a theory of distributive justice and is, therefore, beyond the scope of this paper. Our argument is based on considerations of compensatory justice and establishes, if successful, a right to the restitution of the formerly possessed territory. Finally, it may be worth noting that we do not subscribe to a strictly interpreted territorial unity principle.<sup>21</sup> Even a discontinuous territory that consists of several islands or is separated by foreign territory may provide an adequate compensation. As explained before, the crucial question is whether the resettled community is capable of exercising its self-determination right in a culturally meaningful way. A discontinuous territory only presents an admissible option if it does not hinder the population in performing its most significant cultural activities.

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**20** Of course, depending on the culture of a group of climate refugees, the requirements a substitute territory has to meet differ substantially. For compensating a modern and urban population, a wide range of territories may be available, whereas for a traditional community that is dedicated to a specific form of fishing or farming the suitable options may be more restricted.

**21** For a critical discussion of the territorial unity principle see Steiner (2008).

## 5.2 Selecting and funding of compensatory territories

For the specification of a compensatory territory the culprit states must, at first, establish a central fund which is responsible for organizing and monitoring the selection and funding process in close cooperation with the political representatives of the affected island states. Initially, the governing body of the central fund and the victims' representatives must interpret the "cultural identity condition" and the "appropriate size condition" introduced in Section 5.1 to stipulate the specific criteria that any particular replacement territory must meet.

Once these specific criteria are established, a negative auction begins in which local communities may – based on local democratic referenda – propose to surrender certain territorial parts for a particular price at which selling the territory becomes attractive. Of all the offers made by local communities the offer with the lowest price that meets all the specified criteria wins, because – as stated by the central fund and the victims' representatives – the territory offered is suitable as compensation. Should two offers come at the same price but differ in terms of the extent to which they conform to the specified criteria, the territory which offers greater criteria conformity must be chosen. The negative auction ensures that the territorial compensation is not only effective – in that an appropriate piece of land is offered – but also that it is relatively efficient because the resettlement of the chosen land is relatively inexpensive.

Unfortunately, we must nevertheless consider the problem that the central fund may not receive any offers from local communities. Under these circumstances the central fund must – in corporation with the victims' representatives and local communities – determine a territory that is to be provided as compensation. The basis of that determination must be the territory's criteria conformity and its price, with criteria conformity having lexical priority over price. Because in this scenario no voluntary offers are made to the central fund, the price for any particular territory cannot be established by its local community alone. Once the central fund has collaborated with the victims' representatives to locate a number of sites that conform to the relevant criteria, the central fund must interact with the relevant local communities to establish fair prices. These must, of course, not only include the cost of the actual land but also all related expenses necessary for resettling and properly compensating its inhabitants. While specifying the details of this process goes much beyond the scope of our paper, it is clear that – as in the case of the negative auction – the cheapest territory that conforms to the relevant criteria must be chosen as the compensatory territory.

In the context of the procedures of the negative auction, two alternative regulations may be put in place that – while being superficially similar – have

significant effects not only on the degree of efficiency achieved through the process but also on the territorial theory needed to justify it. Either the fund only allows for bids made by local communities from culprit nations or it accepts bids also if they are made by local communities from nations that have not contributed significantly to climate change. The first and more limited approach is less well designed to ensure greater efficiency but, on the other hand, more easily justified. The approach is less efficient because it has at its disposal only local communities from industrialized countries that in large parts face enormous opportunity costs when considering resettlements. However, the approach is more easily justified because the burden placed on the state caused by the loss of a local community must only be shouldered by a state directly responsible for the destruction of other territories.

The second and more inclusive approach achieves maximum efficiency because it can capitalize on the participation of communities from less-developed countries that potentially face much lower opportunity and resettlement costs. However, the inclusive approach also faces the argumentative challenge of explaining why a nation free of moral responsibility for climate change must accept the loss of a local territory. It can only be justified if the local inhabitants are entitled to transfer the territory even against the will of the government. Hence, the inclusive approach must build on individualist theories of territorial rights that assign meta-jurisdictional authority either to the residents (“choice theories”) or the landowners (“property theories”).<sup>22</sup> The limited approach, in contrast, does not depend on the plausibility of any specific understanding of territorial rights. The obligation to compensate for the destruction of territory can be grounded on any theory of territorial rights, including “justice theories” which maintain that only states can hold territorial rights.

The advantages of a solution based on bids by local communities rather than states are morally highly significant. If states were allowed to offer part of their settled territory in an auction, even a democratic decision-making process within the state as a whole would allow for the possibility that the majority of individuals living in the particular region do not want to resettle – even if they are, in turn, compensated by the central fund. Therefore, if local communities, based on local democratic referenda, decide whether and at what price point they are willing to join the auction, we not only strengthen local involvement and thereby local acceptance but also ensure that a clear majority of the inhabitants view the resettlement as advantageous. Also the direct dealings between the central compensatory fund and the local communities avoid the complications that arise when regimes with dubious human rights track records

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22 For an overview of the debate on territorial rights see Dietrich (2011).

wish to sell parts of their territory – potentially for their personal gain. Nevertheless, the central fund must take its fiduciary duties seriously when accepting bids in the auction, to ensure that the local communities have decided democratically and that proceeds will be split fairly.

In sum, two basic pathways to the selection of a compensatory territory are possible. In the preferable case of bids being placed in the negative auction the selection among territories that meet the criteria of sufficiency is, therefore, achieved by that auction. If such bids are not forthcoming the central fund must, together with victims' representatives and local communities, determine a compensatory territory. Either way, as a result of the selection procedure the financial liabilities of the central fund are determined. This, in turn, raises the central question of who is to foot the bill for the central fund's compensatory activities.

In our view, both fundamental and procedural reasons ground the primary moral obligation of states rather than corporations and individuals to finance territorial compensation. One fundamental reason derives from states' far superior ability to affect – via direct actions, laws, regulations, and incentives for citizens such as taxes – the amount of greenhouse gases that are emitted. The second such reason stems from the states' far superior knowledge of climate change. Especially for individuals with limited access to educational opportunities it may be overtaxing to correctly assess their individual contribution to climate change and the personal moral obligations that follow from it. These limitations do not befall highly knowledgeable collectives such as states. The case in point here may be the publications of the Intergovernmental Panel on Climate Change which are well known by government experts but neither available nor accessible to the majority of the world's population, due to the unavailability of internet access or educational opportunities.

In a similar vein we only have information regarding the past emissions of states. What we lack is information regarding the past emissions of individuals and of most corporations. If – as we propose – emissions since 1990 are supposed to be counted in order to assess compensatory obligations, a solution that relies on an assessment of individual or corporate emissions is simply not feasible. These epistemic challenges provide the crucial procedural reasons that ground the primary moral obligation of states. Which states must cover which portion of the associated costs should be assessed depending on their relative contribution to unsustainable non-subsistence emissions after 1990.<sup>23</sup> Internally,

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**23** The calculations to determine what those contributions are may take into account a variety of principles of fairness such as per capita or equal burden approaches.

states may appropriately distribute the financial burden caused by the compensatory process.

As mentioned in the introduction and contrary to standard calculations of permitted emissions, the sustainable amount of emissions – based on which compensatory liabilities are assessed – must be determined exclusively in reference to the relevant loss of territory. Therefore, should it turn out that the sea level rise that floods islands materializes only once a particularly high level of global emissions is breached, that level of emissions must be deemed “sustainable” for the purpose at hand, although – in other respects – it is clearly not. Once it has been determined which states must finance which portion of the compensatory fund, the results of the territorial selection procedure can be used to establish which absolute amount of money needs to be committed to the fund. Based on this information, the specific financial obligations of all states involved can be calculated.

### 5.3 Residential rights

Our proposal needs to address the problem that, today, hardly any uninhabited territory is available that might meet the criteria outlined in Section 5.1. The few areas which have not yet been settled offer such inhospitable living conditions that they are not suitable for the purpose of compensation. However, the subjection of a populated piece of territory to the authority of a drowning island state has serious consequences. The original inhabitants either come under the rule of a new state or they have to abandon their traditional place of residence. But personally, or taken as a collective, they may have contributed only marginally to the greenhouse effect. Thus, territorial compensation implies that one (usually very small) group of people has to bear an overproportional share of the burden. This apparent unfairness in the distribution of the costs among the liable parties poses a serious challenge for our proposal.

Even if a local community, as recommended in Section 5.2, decides in a democratic referendum to offer its territory in the auction, most likely a minority of the inhabitants simply will not want these changes to take effect. To protect the rights of the original inhabitants, we propose to offer them two alternatives. On the one hand, they may choose to resettle on the downscaled territory of their state. Thereby, they could maintain membership in their initial political community and would avoid coming under the rule of a new state. In this case they would be entitled to full financial compensation for all costs associated

with the resettlement.<sup>24</sup> On the other hand, the original inhabitants could decide not to leave their place of residence. Thereby they could preserve their emotional bonds to their homeland but would have to accept the authority of a foreign state. In this case, the relocated island state has to grant them full citizenship status and basic individual liberty rights. Moreover, where numbers allow, it would have to concede a broad range of cultural privileges, such as a claim to native-language teaching. The cession of a territory has to be subject to the condition that the new authority credibly commits itself to respect the rights of the original inhabitants.

In the case of island states, we have argued that the loss of territory does not allow for financial compensation. How can we then be justified in proposing the resettlement of individuals living in the areas where the new states are to be established? The reason is that, while the political units of climate refugees in question lose all or almost all of their territory – which makes resettlement within their borders impossible – the political units of those individuals affected in the areas where the drowning island states are to be reestablished lose only part of their territories. Thus, while climate refugees completely lose the territorial basis of their collective self-determination, those individuals living in the areas selected for resettlement do not.

Analogously, consider the example of mining-induced displacement and resettlement which is meant to make plausible that – under extreme circumstances – it may well be justified to displace or resettle individuals within their own states. In many countries entire communities are resettled in order to allow for open cast mining or other major development projects. Such projects include but are not limited to “dams, irrigation projects, highways, urbanization, water supply projects, mining, conservation of nature, [and the] construction of pipelines” (Terminski 2012: 44). The point is not that the resettlement strategies of all of these projects can be morally justified. On the contrary, many cases of resettlement and displacement cause reprehensible violations of human rights (Terminski 2012: 45). However, if implemented with care and if enough resources are available to adequately compensate the resettled individuals, the worst of these impacts can be avoided. The general question, however, is whether societies are obliged to guarantee an absolute right of residence wherever settlements have been established. We want to argue that although the right of residence is morally significant, there are exceptional cases in which weighty moral reasons may trump that right. Some of these instances may arise when

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<sup>24</sup> Arguably, a small amount – representing the individual responsibility for greenhouse emission – should be subtracted from compensation. However, in view of the huge number of polluters in the industrialized states the reduction would, most likely, be small.

highways must be built to ensure the functioning of national transportation networks or when dams are the only viable option to offer clean energy. Now if one is willing to accept displacements under these circumstances, one should be considerably more inclined to do so in cases where climate refugees are in need of territorial compensation.

## 5.4 Possible doubts on the adequacy of the compensation

One may wonder whether islanders are sufficiently compensated by being offered a new territory under the conditions outlined above. Before their island drowned, they did not have to share their territory with other people, and they possibly did not guarantee liberty rights to everybody. Hence, they may claim that their self-determination has been curtailed since they settled on the replacement territory. However, as argued in the last section, the cession of a piece of territory places particular burdens on its initial inhabitants. The exposure to the rule of a new state and the (involuntary) change of membership can only be justified if the most important individual rights are guaranteed. Under the given circumstances, with no uninhabited territory left, the island population must, therefore, respect the legitimate interests of the original inhabitants. Moreover, the preferences expressed in the wish to withhold liberty rights and to expel the native population are morally objectionable. In our view, the international community should refrain from accepting them as a basis for compensatory claims.

Nevertheless, the compensatory process should ensure that the islanders have a solid political majority in their new state because the right of political self-determination would otherwise be undermined. If they could be outnumbered by the original inhabitants in every political decision, they would be incapable of pursuing their most important aims. Hence, any substitute territory has to meet – in addition to the “cultural identity condition” and the “appropriate size condition” introduced in Section 5.1 – a “majority condition”. In this context it is important to note that the original inhabitants who resettled in other parts of the down-sized state have no right to return to their original place of residence. The newly established state is fully sovereign and, therefore, entitled to decide on its own immigration policy. Its government may restrict the influx of former inhabitants (or their descendants) and is thus capable of ensuring that the cultural community of the islanders remains the political majority.

Finally, it is conceivable that (many of) the islanders prefer immigration to an affluent European or North American society to the continued existence of their own state. Here it is important to recall that we do not regard collective

self-determination as a “mandatory right”; i.e. the populations concerned are under no obligation to exercise their rights (see Section 3). If the inhabitants of a drowning island state decide to forego territorial compensation, the question arises whether the culprit states must admit them as immigrants. In our view, individuals whose original place of residence has become uninhabitable due to climate change are morally entitled to an appropriate substitute. Normally, it will be advantageous for culprit states to accept the islanders as new members instead of ceding parts of their territories. However, as state sovereignty is traditionally conceived, they are not morally obliged to open up their societies for immigration.<sup>25</sup> The islanders’ claim to an adequate place of residence could also be satisfied by the provision of a new territory that meets the criteria specified above.

## 6 Conclusion

In this paper, we have dealt with questions of compensation that arise in the context of climate change. We have argued that the destruction of territory by rising sea levels gives reason to specific claims against the liable parties. Since the presence of territory is a necessary condition for exercising the right to political self-determination, the payment of financial compensation does not suffice. Those states which are responsible for global warming must provide a surrogate territory guaranteeing the continued existence of the concerned political community. By the mechanism of a negative auction, as developed in the last section, we hope to solve the problem of specifying a compensatory territory.

Of course, we do not expect that the industrialized states which are to blame for climate change will be inclined to implement our proposal. Since they have failed to reduce their greenhouse gas emissions in the past two decades, it would be naïve to assume that they will be prepared to compensate for the resulting damage. Nevertheless, for a normative assessment of the measures taken by polluter states, it is important to be clear about their moral obligations. For instance, in our view, the government of a culprit state that “generously” offers climate asylum to the inhabitants of a sinking island, nevertheless deserves

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<sup>25</sup> Obviously, a detailed discussion of the question whether affluent states have a general obligation to receive refugees from destitute countries would be beyond the scope of this paper. Here we only want to argue that the islanders’ right to obtain adequate compensation does not include an entitlement to be admitted as immigrants.

strong moral criticism. While one may acknowledge the reception of ecological refugees as a first step into the right direction, it still fails to provide the victims of anthropogenic climate change with adequate compensation.

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