

# Justice and Democracy in Climate Change Governance

Steve Vanderheiden

University of Colorado at Boulder, USA

## Abstract

Among the challenges posed by human-caused climate change are issues of justice and democracy, in how the environmental problem is expected to affect human social and economic systems and in the response taken by states and the international community to mitigate the problem. While unmitigated climate change unjustly harms the most vulnerable and widens existing unjust inequalities, programs to mitigate climate change can also be just or unjust, and so must take pains to avoid the latter. Likewise with democracy, as the failure to adequately respond to climate change may intensify scarcity and in so doing undermine new or established democracies, and cooperative efforts to control climate change are likely to be more responsive to the interests of the many if they are informed by democratic ideals and principles. Both sets of issues can constructively be theorized in terms of human rights, which seek to guarantee human interests in a safe and sustainable environment as well as those to self-determination and popular participation in major decisions that shape social and economic life, and which help to link the demands of justice and democracy in common cause. Here, I shall examine several such issues of justice and democracy, in the contexts of both domestic and international climate change governance, grounding these imperatives where appropriate in a human rights framework.

## Keywords

justice, democracy, human rights, climate change governance

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## Justice and International Climate Change Mitigation

As an analytical frame for evaluating climate change as a problem, along with the various efforts within and between states to reduce its causes and minimize its effects, justice offers principled as well as practical advantages as a critical diagnostic criterion. Since responses to climate change involve the assignment of costly mitigation burdens to various parties, backed by coercion, climate regime's institutions and rules must justify the imposition of this coercion as legitimate. To do so, it could ground them in fidelity to some democratic procedure, as shall be discussed below, or by claiming them as just, insofar as just outcomes lend legitimacy to institutions that produce them. As Rawls notes in his seminal treatise on distributive justice, underscoring this link between the legitimacy of coercive institutions and the justice of their ends, "justice is the first virtue of social institutions, as truth is of systems of thought" (Rawls, 1971: 1). As a matter of principle, coercive social institutions ought to serve defensible objectives such as securing or promoting justice, with substantive justice analyses often serving as criteria for assessing the legitimacy of such institutions.

Seeking justice in the design of social institutions like the international climate change mitigation regime or domestic mitigation efforts also confers pragmatic benefits alongside such principled reasons for adherence to justice norms. In the international context, given the absence of any strong system of global governance capable of imposing regulatory burdens upon nation-states without their consent, any imposition upon state sovereignty or individual liberty from cooperative efforts to control greenhouse gas emissions is likely to gain greater support for and thus compliance with its terms if these are viewed as fair to all. This more practical advantage of aiming for justice in cooperative climate change efforts can perhaps best be appreciated by contemplating its absence. As Athanasiou and Baer have pointed out of climate treaty proposals that unfairly limit development opportunities in India and China by imposing unjust mitigation burdens upon developing countries—given the importance of participation by these significant and rapidly-growing emitters in any successful post-Kyoto treaty—such proposals “will not be accepted as fair and, finally, will not be accepted at all” (Athanasiou and Baer, 2002: 75). A just allocation of burdens not only provides the legitimacy for an effort that must assign such burdens, but it may also be essential to that effort’s political feasibility.

In its known causes and expected effects, climate change is widely regarded as involving issues of distributive justice, with its origin in greenhouse gas emissions that have been widely disparate in their per capita origins and conferred benefits within and between states, and with scientists predicting that its impacts “will fall disproportionately upon developing countries and poor persons within all countries, and thereby exacerbate inequities in health status and access to adequate food, clean water, and other resources” (Intergovernmental Panel on Climate Change, 2001: 3.33). Since many of the world’s poor reside within food insecure and drought-prone regions, expected changes in rainfall patterns and increases in the frequency and intensity of droughts are likely to result in increased starvation and hunger that primarily threatens these most vulnerable populations. With less adaptive capacity in response to extreme weather events like storms and floods, the world’s most disadvantaged are also among the least able to escape from such impacts. In its disparate impact upon the poor, then, climate change violates egalitarian principles that seek to decouple poverty and vulnerability, by making the most disadvantaged even worse off than they would be otherwise, exacerbating injustice (Vanderheiden, 2007: ch1). The injustice inherent in these disparate

impacts are only compounded when also considering that they result from a kind of pollution that is disproportionately caused by the world's affluent, who have benefited by their disproportionate historical appropriations of the planet's carbon sink capacity. In both its patterns of causes and effects, then, climate change involves the kind of inequality for which distributive justice analyses are designed.

Indeed, the injustice of unmitigated climate change along with imperatives of justice in the international response to it have played prominent roles in political efforts to craft an international climate treaty. The 1992 *United Nations Framework Convention on Climate Change* (UNFCCC) calls upon the world's nation-states to “protect the climate system for the benefit of present and future generations of humankind,” charging the climate policy process with developing a treaty framework that assigns burdens to states “in accordance with their common but differentiated responsibilities and respective capabilities” (Principle 1). These ideals, which refer to principles of distributive and corrective justice in referencing equity and responsibility, require that climate change be viewed as a global and intergenerational justice challenge, where responses are charged with avoiding the injustice of unmitigated climate change as well as the unjust imposition of remedial burdens in mitigation efforts.

One influential heuristic for framing the justice dimensions of the global climate challenge can be seen in the question of how to allocate the remaining half trillion tons of carbon that can still be emitted without exceeding the two degree global temperature target that has served as a reference point in international climate politics (Shue, 2001). With humanity having already released 1.5 trillion tons of carbon from fossil fuel combustion since the Industrial Revolution, and with several trillion tons of carbon in known coal and oil reserves that cannot be utilized without violation of the UNFCCC's intergenerational equity imperative of avoiding “dangerous anthropogenic interference” with the climate system, that half trillion tons must be rationed within and among generations with a view toward phasing out carbon emissions altogether. By posing the problem in terms of rationing carbon emissions, or of carbon budgets, this heuristic focuses upon the intergenerational as well as the international dimensions of carbon abatement challenges, given the need to sharply reduce current usage patterns. Releasing too much of that remaining carbon in the near term increases mitigation costs

for future generations, while steeper near-term carbon emission reductions potentially raise issues of international justice if current budgets are not equitably assigned. Likewise, failure to limit global emissions to that half trillion tons results in climate change exceeding that two degree threshold, imposing additional climate-related harm upon future persons as the result of present activities. Equitable emission budgets must therefore be just along both of these dimensions, across borders and over time.

This principled and practical imperative of justice in carbon rationing raises the question of what justice principles ought to guide international and intertemporal carbon budgets. International carbon rationing schemes have followed two basic approaches, with variations upon each and hybrids incorporating elements of both. The *grandfathering* approach, which was used in the setting of national carbon abatement targets under the 1997 Kyoto Protocol, seeks to assign roughly equal mitigation burdens regardless of the emission profile or other features of various nation-state parties. Under Kyoto, for example, Annex I developed state parties were assigned carbon reduction burdens that averaged five percent of 1990 baseline levels, with some parties expected to make reductions somewhat above that level and others assigned targets somewhat below it. By assigning future emission targets on the basis of current emission levels, the percentage reduction from current levels would be roughly equal, but abatement costs would not necessarily be, given variation in per unit abatement costs. In countries that had already acted to harvest the “low-hanging fruit” of CO<sub>2</sub> abatement, additional reductions would be more expensive, so an equal reduction target would come at a higher cost. Under Kyoto, for example, per capita emissions within the EU were substantially lower than in the US or Canada, given prior ecological modernization efforts that retired some of the most polluting energy infrastructure, leaving costs per tonne of further abatement higher than in North America. Yet, the EU took on higher percentage based reduction burdens under the 1997 treaty, resulting in significantly higher burdens. Since it begins with widely disparate carbon access and seeks only to assign roughly equal percentage reductions on state parties, this has also been termed the *equal burdens* approach.

A contrasting approach would seek to equalize access to resources rather than carbon abatement burdens, taking equal per capita entitlements rather than latent inequality in such emissions as its default. Here, the emphasis is upon the sharing of a resource rather than a remedial burden, with the

capacity to absorb greenhouse gases as the relevant resource, performed by carbon sinks as a kind of ecological service. Under such a resource-sharing approach, per capita carbon emissions would be assigned on a roughly equal basis, so this has been termed the *equal shares* approach. Rather than merely assigning roughly equal carbon abatement costs under an equal burdens scheme, this approach would require significantly greater mitigation efforts by developed countries with high per capita emissions, such as the United States, Canada, or Australia. Egalitarian resource-sharing approaches are popular amongst academics as well as advocates for some developing country interests, given their promise to close the currently wide gap between developed and developing country emission patterns through the phasing in of an equal per capita emission rights scheme that would provide significant benefits for the latter in the short run, given the allowance for emissions trading and the international transfers that such a market would allow. But such models have thus far been viewed as politically infeasible, given the much higher mitigation burdens they would assign to parties like the US, which has rejected relatively modest mitigation schemes.

Along with applications of equity principles, a primary concern for the development of remedial climate policy architecture involves the assignment of liability for the finance of mitigation and adaptation efforts. Since it starts with a burden-sharing question but rejects the grandfathering approach taken in the Kyoto Protocol, one might view the remedial liability approach recommended by those focused upon full or recent historical emissions as a kind of hybrid, allocating burdens rather than resources but doing so in a manner that seeks to narrow rather than maintain disparities in national per capita emissions. Stressing the “common but differentiated responsibilities” (CBDR) rather than “equity” referent within the UNFCCC, such approaches seek to assign remedial burdens in proportion to historical emissions (or perhaps to post-1990 emissions), so that early industrializing countries have a substantially larger remedial burden by virtue of their larger contributions to the problem in comparison to later-industrializing or developing countries. Here, countries with relatively high per capita emissions would, as the result of their current and historical emissions, face relatively high abatement and adaptation costs, from backward-looking assessments of their responsibility for climate change and not from forward-looking equal per capita emission

assignments. According to this approach,<sup>1</sup> which some have used to assign all climate-related burdens but others (myself included) have limited to the assignment of remedial adaptation costs, remedial duties are grounded in corrective rather than distributive justice, with liable parties paying in proportion to their liability.

Along with equity and responsibility, national capability has served to differentiate remedial state liability for climate-related harm. Understood in terms of stages of economic development or level of economic wealth, some climate ethics scholars have developed indices that combine national responsibility and capacity, or group country parties into categories defined in terms of per capita income or development stage.<sup>2</sup> Likewise, the Kyoto Protocol distinguished between the so-called Annex 1 parties that, as relatively affluent developed countries were both more responsible for causing climate change and in possession of greater capacity to mitigate it, and the non-Annex 1 developing country parties that were not assigned any binding targets under the Protocol. This Annex 1 “firewall” remains a contested aspect of international climate negotiations (Pickering, Vanderheiden and Miller, 2012), with staunch defenders resisting any assignment of binding emission targets upon developing countries until all developed ones have taken adequate action but critics noting the potential for carbon leakage with some states pricing carbon under a cap when others do not along with the lack of any method or process for fast-growing economies like China to “graduate” from non-Annex 1 to Annex 1 status.

Other conflicts over climate policy architecture divide parties along lines defined in some measure by capacity, including limits on the extent to which developed countries might comply with carbon abatement targets through emissions trading with or carbon offsets in developing countries, as opposed to domestic decarbonisation efforts, and the potential for the carbon offsets available through reforestation projects under REDD leading to a kind of “carbon colonialism” in which developed countries acquire additional control over resources or territories within developing ones (Bachram, 2004). Such concerns highlight the importance of differences in national capacity, even if these don’t feed directly into remedial liability formulae in the same way that differentiated responsibility (understood in terms of historical emissions) do.

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1 For example of an approach that seeks to hold states liable for their historical emissions, see (Shue, 1999).

2 For an example of this approach, see Baer et al. (2008).

Another concerns the relationship between climate change mitigation objectives and those concerned with promoting development within developing countries. Since hard caps on emissions within developing states could impede their industrialization or limit their ability to benefit from it through increased access to energy and transport, such states have insisted upon a “right to development” within climate treaty negotiations, with development recognized within the UNFCCC as an imperative to promote alongside climate change mitigation (Vanderheiden, 2008). Potential conflicts between development and decarbonisation imperatives may be further heightened insofar as developed countries redirect their development aid toward climate finance, in order to satisfy funding pledges to institutions like the Green Climate Fund or otherwise to highlight their contributions toward climate action (Vanderheiden, 2015). Although advocates have called for climate finance to be “new and additional” rather than redirected or recycled development aid, compliance with this “additionality” rule has proven difficult, given the voluntary basis of both climate finance and development aid and the dual role to which much of the projects contribute, as when provision of hydroelectric power both improves access to energy and does so without the use of fossil fuels.

Given the prevalence of impacts from climate change as well as carbon abatement that are expected to threaten human rights, the use of such rights as strategic framing devices and political tools for remedial action on climate change is not surprising. Caney, for example, began by casting the injustice of climate change primarily as violating cosmopolitan principles of distributive justice, but later switched to a human rights frame, partly due to the latter’s higher resonance within world politics.<sup>3</sup> While global distributive justice-based analyses might issue stronger remedial claims than would be available through applications of human rights, with the latter calling for a rough equality in access to ecological services like carbon absorptive capacity and seeking an egalitarian opportunity structure worldwide while the former invokes a sufficientarian principle that only seeks to ensure the global poor a minimal threshold of access to the goods and services essential to their human rights, it also relies upon principles that are more controversial and without much precedent of support within international politics (Vanderheiden, 2013).

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3 For his earlier justice-based framing, see Caney (2005). For his later human rights-based framing, see Caney (2008).

Insofar as climate change also threatens to violate human rights on a wide scale—both in terms of individual rights to life, health, and subsistence as well as group rights to culture, self-determination, and territory—seeking to mobilize support for international efforts to mitigate climate change through a rights-based justice frame that better resonates with recalcitrant parties like the United States rather than one rooted in global distributive justice may yet prove to be strategically effective.

However, the human rights frame for climate change has yet to yield palpable results within human rights law and adjudication. In a 2005 challenge before the Inter-American Commission on Human Rights, for example, the Inuit people of Arctic North America filed a human rights complaint against the United States for its domestic contributions to climate change and obstruction of international cooperation on mitigation, claiming that human-caused changes to food sources and water flows threaten their human rights to culture, life, health, and subsistence. Although their challenge was unsuccessful, it represents a novel use of human rights law and politics in an effort to mobilize support for an international climate treaty, and in that such environment-mediated impacts could be used to identify correlative duties associated with human rights interests (Osofsky, 2006: 675). Whereas previously the loss of food sources from environmental change might have been regarded as unfortunate, perhaps justifying relief efforts grounded in humanitarian concerns for the avoidance of suffering, the human rights frame used in the Inuit case relied upon claims of culpability grounded in justice.

## Democracy in International Climate Change Efforts

Justice and democracy are both important political ideals, but enjoy a complicated relationship with one another. Unjust outcomes can result from democratic procedures, as when a majority seeks to reserve some benefit of privilege for itself rather than extending it to all, and just outcomes may result from undemocratic procedures, as when legal rights are used to overturn some democratic but rights-violating and unjust decision. This tension is sometimes reduced by contrasting between substantive and procedural elements of democracy, where civil rights and liberties are often cast as substantive aspects of democracy, with justice also being distinguished in terms of outcomes and procedures. While the two ideals can come into conflict, necessitating some priority rule for choosing either the more just or

more democratic option, the two can also work together in harmony, with democracy enabling and reinforcing justice and vice versa. Rather than explore their interactions, I shall here focus upon the relationship between climate change and democracy, then later consider how democracy and justice might interact within the context of climate politics.

Along with its other impacts, and through many of them, climate change can threaten democratic governments. Given predicted environmental impacts including coastal flooding that displaces residents and may require emergency services to avoid significant suffering and losses of life, agricultural crop losses that risk plunging states that are perpetually in the verge of food insecurity into conditions of deprivation, with the direct suffering that results from malnutrition as well as indirect harm resulting from increased conflict over remaining food resources, and water scarcity that likewise involves direct and indirect harm to persons, the capacity of any government to adequately respond to climate-related events would be tested by such emergencies. For fledgling democracies that may not yet have developed capacities to respond to such emergencies, democratic government itself might be threatened (Burnell, 2012). Even established democracies can fall in the worst case or adopt undemocratic reform measures in the best when faced with conditions of severe scarcity (Ophuls and Boyan, 1992), or when their legitimacy is called into question when they prove unable to respond to climate-related emergencies.

In addition to impacts upon natural systems, social impacts can threaten states and governments if those cannot adequately respond to the turmoil that climate change causes. Many thousands of people are expected to be displaced by climate-related impacts, from coastal or river flooding to persistent drought or changes in disease vectors, with the resulting climate-induced migration threatening the territorial integrity of some states and the border security of others, and likely overwhelming the world's humanitarian refugee resettlement programs with forced movements of people much larger than those that the current system struggles to handle (Biermann and Boas, 2010) As the world responds to climate change, depending upon how it does so, among the impacts upon the world's vulnerable could be significant energy shortages, which threaten to worsen existing patterns of energy injustice in the world (Coley, 2008). As scholars have suggested, several of these drivers can lead to increases in violent conflict, which in turn can lead democratic

regimes to suspend or end some democratic protections, which therefore become further casualties to such conflict (Reuveny, 2007).

Climate change is also aptly described as a “wicked” problem for democratic forms of government to address, given its several features that challenge popular control of state regulatory processes through democracy. As a global problem, its cross-border effects create a disjuncture between the polity making decisions about some driver of climate change and those affected by that decision. Insofar as it might cost one state to reduce the domestic emissions that cause climate-related harm in other states, the combination of diffuse benefits and concentrated costs make it unlikely that such measures could garner sufficient support for them to be adopted. In addition, the extended time scales involved in climate change and its mitigation introduce another disjuncture between the democratic polity asked to undertake some preventative measure and those that might benefit or be harmed by that decision, as action undertaken now will not manifest its full harm or benefit for generations. Finally, the kinds of uncertainty that are involved in estimating climate impacts further complicate its democratic control, as voters are easily confused and misled about such uncertainty by those engaged in climate scepticism, and given findings about the general public’s general inability to properly understand and respond to issues of risk (Gardiner, 2011).

Perhaps the most pernicious weakness of democratic governance in the context of an international and intergenerational harm like climate change, then, lies in its absence of any sufficiently strong form of accountability upon decision makers within the polity. Given that impacts of decisions made by a polity will largely be borne by residents of other polities and future generations, neither of whom has a voice within the polity’s decision making processes, there can be no electoral accountability for externalized harm. External forms of accountability capable of holding states accountable for their climate policies are similarly weak, and limited to a form of reputational accountability (Keohane, 2006) that has proven to be inadequate for motivating strong climate policies. When combined with the democratic deficits that critics have identified within international climate policy development bodies like the UNFCCC (Bäckstrand, 2008), there exist neither prospects nor mechanisms for effective democratic control over the state-based decision making processes that can either enact or refuse the kinds of greenhouse

emission controls capable of mitigating climate-related harm.

The real or perceived impotence of democratic forms of governance in mitigating global climate change has led several critics to call for or propose less inclusive and even nondemocratic procedures whereby decision making authority over climate policies would be concentrated rather than dispersed. Victor, for example, has denounced the inclusive and consensus-based UNFCCC process as unworkable, calling instead for smaller “climate clubs” of major emitters (e.g. the US, EU, China, and so on) to work toward a limited agreement outside of the UNFCCC, thus avoiding the objections and veto powers of smaller states that might exert pressure for more ambitious actions (Victor, 2011). In reply, Eckersley endorses what she terms a form of “inclusive minilateralism” that would seek to reduce the number of participants in climate policy negotiations while remaining attentive to their interests (Eckersley, 2012).

Bodansky attributes the end-run around UNFCCC processes at Copenhagen, along with the more recent retreat from legally-binding commitments within COP negotiations, to the consensus rule through which a single dissenter can potentially block any action and thus derail the climate policy development process (Bodansky, 2010). Others have likely proposed institutional bodies in which control over some aspects of climate policy making would be vested in nondemocratic bodies as a counter to what are perceived as the deficits and weaknesses of democratic decision making procedures, such as the Earth Atmospheric Trust proposal (Steffen, Rockström, and Costanza, 2001), or cast climate politics as prototypical of what Crouch terms the emerging “post-democratic” world (Crouch, 2004). Comparing climate change to the kind of emergency used to justify suspension of democratic rule during wartime, Lovelock raised eyebrows by suggesting that in the context of climate change “it may be necessary to put democracy on hold for a while” (Hickman, 2010).

While civil society activity that surrounds the annual Conferences of the Parties (or COP meetings) to the UNFCCC is widely inclusive and representative of those likely to be most affected by climate change, the decision making processes within the COPs are far less so, formally representing only the interests of states and in practice being dominated by those of a few powerful states. Sub-state and non-state actors have little opportunity to influence international climate policy agreements, and as a

result are largely relegated to a marginal and oppositional role as critics rather than architects of climate policies. Moreover, the consensus rule that in theory should increase the power of small and otherwise marginalized states by giving them a veto over UNFCCC decisions has in practice largely resulted in a tendency toward stalemate that works to the advantage of big polluters without empowering smaller ones. Acting in a way that Goodin describes in game theoretic terms as an “almost hegemon” in that it requires only assent by others to its hegemonic behaviour (Goodin, 2003), the United States has acted primarily to obstruct the development of international climate policy, relying not on its formal veto within UNFCCC processes that it shares with all other parties to the convention but to the informal veto that it wields as the biggest historical greenhouse polluter and primary Annex 1 holdout from participation in the Kyoto Protocol.

Reform proposals to make democratic climate policymaking processes more responsive to those typically excluded from them offer means by which the interests of future generations, residents of other polities, and nonhuman animals might gain representation within a “green democracy” designed to close democratic deficits of the kind found within national legislative bodies, but are unlikely to be adopted.<sup>4</sup> Enhanced NGO participation at COP meetings might help narrow extant democratic deficits, and devices like deliberative juries might provide more responsiveness to global public opinion (Baber and Bartlett, 2009). Indeed, one must not conclude that democracy is inherently unable to guide sustainable transitions or to support adequate measures for environmental protection, nor should one conclude from shortcomings in existing democratic institutions or processes that international climate governance cannot be beneficially and constructively democratized.

Key to the development of environmentally sustainable democracy is its form, with models of democracy that stress stakeholder participation and deliberation offering more promise than those focusing upon national or multinational institutions alone. As Brown (2006) has shown, citizen panels like deliberative polls can substantially improve levels of civic competence with regard to technically complex environmental policy issues like climate change, while at the same time generating higher levels of support for sustainable policies. Dryzek and Stevenson argue for the inclusion of elements of deliberation within UNFCCC processes, demonstrating improved

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4 For examples of such reformist proposals, see Eckersley (1995) and Ball (2006).

environmental performance to result from the presence of deliberative elements in governance (Dryzek and Stevenson, 2011). A key element of such deliberation is discursive transmission from the active transnational civil society movements that follow COP meeting to the forum in which policies are made (Price, 2003). Similarly, Bäckstrand calls for attention to be paid to stakeholder participation in climate policy making processes, which she casts as a form of “democracy from below” in contrast to the centralized and hierarchical forms within formal UNFCCC processes (Bäckstrand, 2006). Creative new forms of democratic governance offer the promise of greater responsiveness to those affected by climate impacts while also lending legitimacy to decisions reached through more inclusive processes, suggesting that it is not democracy itself but rather particular manifestations of it that block more effective climate efforts.

In the context of climate change adaptation, the challenges of democracy are serious but consequential. With the development of climate finance instruments for directing and funding adaptation measures within vulnerable regions, the interests of recipient states and the people most affected by local and regional projects are often dominated by those of donor states, whose concerns are with accountability of funds and the benchmarking of outcomes. While such concerns are not unimportant, they must also take into account of needs and preferences of those affected by adaptation measures, which as Paavola and Adger note will require some participation by non-state actors representing local interests as well as “measures to rectify inequalities between the states that originate from unequal levels of economic development, state capacity and access to human and other resources” (Paavola and Adger, 2006). In order for such measures to serve the interests of those putatively benefitting from them, and to gain the legitimacy that they require within recipient countries and local communities, some sharing of power over adaptation governance is needed, with democracy in this instance promoting the fairness and efficacy of such efforts while also improving upon their legitimacy. Like justice, the orientation of remedial climate efforts around democratic ideals offers both principled and pragmatic benefits, and so ought to continue guiding such efforts.

## Justice and Democracy in Domestic Climate Politics

Turning to domestic climate politics, through which states implement the

policy measures needed to comply with their national mitigation obligations in the second of what Miller describes as a “two-stage” sequence, justice and democracy concerns return, with some taking similar form as seen in international burden-sharing analyses but with several novel concerns also arising (Miller, 2008). In both cases, the burdens associated with carbon abatement must be assigned in some manner or according to some criteria or justice principles, whether through carbon pricing or increased costs associated with some goods and services, and access to carbon must be restricted in some way. From the perspective of the UNFCCC process, the manner in which states implement their abatement targets is a matter of state sovereignty rather than justice, so long as they comply with those targets. But insofar as the domestic implementation of national mitigation targets involves its own set of burden-sharing or resource-sharing assignments, it involves justice, as well.

Those sovereignty concerns may explain why scholars writing about climate justice have focused almost exclusively upon international burden-sharing under a climate treaty rather than how mitigation burdens are shared internally through measures like emissions trading schemes or carbon taxes. As Miller writes, states in this second stage decide how they will implement their national obligations “according to guidelines that are agreed internally,” but which he casts as avoiding the justice and responsibility challenges that he attributes to international burden-sharing assignments. While agreement may be necessary, again highlighting democratic criteria of how such decisions are made, it should also reflect defensible assignments of remedial burdens if such measures are also to be just.

As collectives, states are involved in many of the decisions that will determine whether national mitigation targets are met as well as the manner in which these will affect persons residing within the state’s borders. In this sense, they exercise a form of collective responsibility for justice outcomes, whether or not they attend to the distribution of costs associated with their mitigation efforts, or seek to align them with what justice principles recommend (Vanderheiden, 2011). In the clearest example, as Miller notes, states decide upon which carbon pricing instrument they will use if they plan to price carbon in an effort to reduce emissions of it, selecting upon emissions trading and a carbon tax, and set the structure of these carbon pricing schemes, including any offsets for regressive or other objectionable

impacts. States also make policies that indirectly affect national emissions and ought therefore to be regarded as among its climate efforts, including the development of transit infrastructure and systems, the development of energy systems and regulation of energy demand, the influence upon population size and growth rates available through taxation, welfare, and immigration policies, and the residential settlement patterns and building codes that affect demand for energy and energy efficiency. Though all of these policies, persons are affected in ways that involve the creation of benefits and assignment of burdens, and these can be examined in terms of their distributive impact, with reference to justice principles.

While states have broad autonomy over their domestic affairs, including limited rights over how they use or conserve their domestic natural resources, such autonomy is limited by several considerations. The principle of permanent sovereignty over natural resources, which was developed in response to practices of resource colonialism and grants to states the right to sell and control resources found within territorial borders, cannot be used to sanction unlimited greenhouse pollution that causes harm beyond that state's borders, given the remit of sovereignty as applying within but not beyond borders (Armstrong, 2015). As this principle of international law is cast in the UNFCCC, states may have "the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies," as prior treaties have also claimed, but they also have "the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction." National mitigation targets cannot be overridden by appeals to state sovereignty, nor can punitive measures taken against states that refuse to cooperate in international efforts to mitigate climate change.

In addition to complying with national emission targets, states are limited in the means and impacts of measures used to comply with such targets, primarily though standards set by human rights. States cannot take mitigation measures that threaten the subsistence of their citizens, so highly regressive impacts that push the global poor into further deprivation would violate rights. But perhaps more pertinently to rights-based constraints on domestic mitigation strategies, states cannot trade away domestic carbon emission credits through international carbon trading if this imperils the human development of their people. Indeed, the UNFCCC recognizes

a right to development that is opposed to strict emission limits within developing countries, calling for action on climate change “to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner” (Principle 2). Such limits would also apply against voluntary measures undertaken by states to excessively limit domestic greenhouse emissions, which pose the same potential constraints upon development opportunities. For such reasons, the first COP meeting held in a developing country produced the 2001 Marrakesh Accord, calling for international emissions trading to be “supplemental to domestic action” rather than allowing developed countries to meet their abatement targets by trading along, requiring “domestic action” to “constitute a significant element of the effort” by Annex 1 parties to compliance with their mitigation targets.

In implementing national emission targets through domestic policy mechanisms like carbon taxes or emissions trading schemes, states increase the costs of carbon-embedded goods and services, with downstream users bearing the costs. Absent some deliberate effort to assign those costs justly, they are likely to fall disproportionately upon the poor, in effect assigning remedial liability to those least able to pay and in many cases least responsible for causing climate change. In so doing, they would run afoul of the equity and responsibility based principles that are often used to guide the allocation of international burdens. Although carbon pricing would in one sense reflect the polluter-pays principle, in that costs associated with carbon pricing would be borne in proportion to each person’s carbon footprint, those costs would be regressive in raising energy and transport prices for the poor. For this reason, states implementing carbon pricing schemes have developed subsidies or offsets to blunt the impacts upon the poor, assigning remedial liability in a more progressive manner as a result.

One alternative to upstream rationing schemes like a domestic emissions-trading scheme (ETS) or carbon taxes that promises to assign remedial liability for climate change in accordance with justice principles similar to those used in international burden-sharing arrangement is a downstream rationing scheme in which persons rather than states or utilities are assigned finite rights to emit carbon. Such personal carbon trading (or PCT) schemes have been proposed under various names, but bear a set of common features. They allocate (usually roughly equal) carbon emission rights to persons for free, requiring them to limit their emissions to that quota or else purchase

additional credits to cover their personal emissions from categories of activities included within the scheme (usually home energy use and transport). Along with this basic personal quote, they allow limited trading between persons, so that those using less than their allotted carbon budget can receive economic benefits in return for making their unused emissions available for trade. Such trades are usually performed within a market, in which persons do not trade directly with each other but buy and sell carbon credits based upon a carbon price that fluctuates with market supply and demand, and shares made available for purchase from unused personal credits are often supplemented by some amount of additional credits, which in total allow for compliance with national abatement targets. In order to ensure that national emissions decline over time, personal carbon credits are allocated from declining budgets that are sensitive to both annual national emission quotes and changes in national population.

Such a scheme promises numerous advantages over those measures more commonly recommended for implementing national climate obligations through domestic policy. They follow the same efficiency logic as is typically cited on behalf of ETS schemes, through which the trading mechanism encourages and rewards efficient behaviour and thus reduces emissions at the lowest cost, while more closely following justice principles, such as the “common but differentiated responsibilities” or polluter-pays principles. Unlike a carbon tax, which prices carbon emissions but does not formally limit them, a PCT scheme allows for carbon budgeting, which some critics of carbon taxes view as needed for compliance with national mitigation targets. Finally, and in perhaps the most novel and important benefit of PCT schemes, the transparency of carbon emissions made possible through a downstream rationing system by which individual persons must track their personal carbon footprints can have empowering effects for carbon abatement, mobilizing support for and ultimately lowering those costs of national mitigation efforts.

Because persons would have to account for the carbon contained within their transport and home energy use, carbon footprints from those items would need to be made transparent. As Fawcett notes, this transparency would reveal “carbon ‘costs’ to every purchase of motor fuel, plane tickets and payment of household energy bills,” which users would then become more cognizant than would be required under an upstream ETS or carbon tax (Fawcett, 2010). As a result, this more transparent feedback would “create

a perceptual and cognitive framework enabling individuals to integrate understanding across emissions from different activities, and in the context of energy use as it occurs” that is “crucial for behavioral change” (Parag and Strickland, 2010). Persons would “feel responsible” for environmental problems that resulted from their energy use patterns, according to Parag and Strickland, and “feel morally obliged to do their bit to help solve these problems.” Far from privatizing the project of climate change mitigation, as critics have alleged of other market-based policy tools, PCT promises to foster a sense of solidarity and “common purpose” in achieving social CO<sub>2</sub> abatement goals (Fleming, 2005), making the activity of reducing individual emissions part of a public and collective effort, through which each benefits by cooperation.

While other schemes might be used on behalf of domestic climate change mitigation measures, efforts must be evaluated not only upon their efficacy, although of course their ability to realize national carbon abatement goals remains the key bottom line. They ought also to be evaluated in terms of their ability to realize such goals efficiently, as through social efforts that lend legitimacy to ends and means, and which assign remedial liability according to defensible justice principles. While specific measures taken to implement national climate change mitigation targets may largely (if not entirely) be a matter of state sovereignty, the aims and constraints of climate justice as well as human rights must continue to inform them, and be used in their evaluation and revision. Indeed, while deference to the sovereignty of states reflects a commitment to democracy and human rights to self-determination, these same commitments require respect for these same rights, as well as for justice, in the manner through which domestic climate change mitigation efforts are implemented.

## Conclusion: A Just and Democratic Response to Climate Change?

When viewed as a justice problem, and when constrained in available remedies to assign remedial burdens justly, climate change challenges us to apply abstract theoretical principles to real-world problems. Alleviating the injustice of unmitigated climate change without exacerbating injustice within or between generations is not an easy task. To demand also that such efforts adhere to democratic ideals might be viewed as piling on to an already formidable task. However, justice and democracy must work together in the

enterprise of developing a cooperative international solution to this vexing and pernicious environmental threat, as part of the broader effort of protecting and advancing the cause of human rights.

As Caney and others have argued, climate change violates human rights while also violating principles of global distributive justice. While the latter framework may connote more ambitious remedial measures be taken to reduce emissions and more equitable assign carbon budgets within and between states, a sufficientarian approach that seeks merely to protect or advance human rights would alleviate the primary injustice of climate change. To disallow popular participation is social efforts to guide transitions to more sustainable low carbon societies would thus infringe upon a people's democratic rights while seeking to protect its security and subsistence rights, taking a step back after making steps forward. In theorizing climate change obligations through human rights, these commitments to justice in its distributive dimension and to democracy and self-determination can more effectively be reconciled while being more credibly motivated and feasibly advanced.

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# 氣候變遷治理中的正義與民主

Steve Vanderheiden

美國科羅拉多大學博德校區

## 摘要

人類引起的氣候變遷帶來的諸多挑戰中，包含了正義與民主相關議題；其中涉及到環境問題會如何影響人類的社會與經濟體系，各個國家與國際社會如何因應以緩和這些問題等。氣候變遷難以解決，最弱勢的族群因此受到最不正義的傷害，這些都使不符正義的不平等更加嚴峻；但另一個角度來看，我們推出的因應方案也可能正義，也可能不正義，是以需盡全力以防範後者發生。若從民主的角度來看也是如此。倘若未能適當地面對氣候變遷，就有可能加深匱乏的情形；無論新興、或老牌民主國家，都可能因此受害；此外，如果能在民主的理念與原則之下合作，共同控制氣候變遷的程度，就有可能保障多數人的利益。我認為我們可以從人權的角度切入，為上述議題加以理論化；如此一來，人類利益既可在安全與永續的環境中獲得保障，也因為在社會、經濟重要政策中保有人民自決與大眾參與的權利而受惠；這樣的理論，將在共同的層面上連結正義與民主的要求。所以，在本文中，我將以國內與國際層次的氣候變遷治理為脈絡，檢視數個相關的正義與民主議題，並指出這些議題在人權架構中的適當位置。

## 關鍵字

正義、民主、人權、氣候變遷治理

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