



Share Benefits and Burdens Equitably

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The benefits and burdens inherent in confronting the dangers of climate change must be fairly allocated, as specified in the *Principles of Climate Justice*. Dismissals of the centrality of equity, or fairness, to the structuring of a comprehensive treaty on climate change for adoption in Paris 2015 implicitly presuppose an archaic interpretation of national sovereignty that is completely inappropriate to the globalized world of the 21st century in its assumption of extreme claims of nationalistic privilege to ignore the vital interests of those distant in space and time. Both the denial of 'historical responsibility' and the assumption of license to develop in any manner one pleases each constitute attempts to keep exclusive national ownership of all benefits of economic processes while evading accountability for the costs of carbon pollution imposed across the entire planet. Instead, those who claim legitimate national political leadership need to understand the shared global nature of the dangers of climate change and the need for every nation to play its appropriate role in confronting the common threats through climate justice

This essay partly draws on Henry Shue, "Historical Responsibility, Harm Prohibition, and Preservation Requirement: Core Practical Convergence on Climate Change," Moral Philosophy and Politics, forthcoming.

Introduction: The Carbon Budget

Climate change is as deeply and as thoroughly global as any problem could imaginably be. No nation can effectively protect itself through its own efforts alone. At the Conference of the Parties to the *UN Framework on Climate Change* in Cancun in 2010 negotiators representing every nation made a formal commitment to prevent a rise in average global temperature above the pre-Industrial Revolution average temperature of more than

2° C (Cancun Agreements 2011). But studies have consistently shown that the paltry pledges of action by national governments fall woefully short of even a good start on fulfilment of that firm commitment (UNEP 2013). Indeed, studies by one of the leading research institutes in the world, commissioned by the World Bank, show that we are currently on a trajectory toward a rise of 4° C in this century, twice the limit to which national governments committed themselves (World Bank 2013).

The basic shape of the task before us has become quite clear as a result of a broad consensus among scientists. For any given amount of rise in temperature beyond the temperature that held steady for 10,000 years prior to the Industrial Revolution, there is a cumulative carbon budget. The budget must be cumulative because of the extraordinary persistence of total amounts of carbon dioxide in the atmosphere once the atmospheric concentration reaches any particular level; individual molecules of carbon dioxide come and go among oceans, soil, vegetation and atmosphere, but high percentages of the levels of overall concentration in the atmosphere persist over many centuries (Volk 2008; Ciais, Sabine, Bala, *et al.* 2013). The overall atmospheric concentration of carbon dioxide is the primary driver of climate change, although other greenhouse gases exacerbate the effects. The only proven way to stop the atmospheric concentration of carbon dioxide from expanding, since the levels that enter the atmosphere persist, is to stop adding to it. The amount of carbon dioxide that can accumulate in the atmosphere without more than a specified probability of the average temperature rising more than a specified number of degrees is the cumulative carbon budget for that amount of temperature rise. The cumulative carbon budget for a 50/50 chance of not exceeding a temperature rise of 2° C is the carbon dioxide equivalent to 1 trillion tons of carbon, beginning to measure the accumulation from 1750 (Allen, Frame, Huntingford *et al.* 2009; Meinshausen, Meinshausen, Hare, *et al.* 2009). If emission trends of the past twenty years continue, the trillionth ton will be emitted no later than the early months of 2040 - in a little more than 25 years (Oxford e-Research Centre 2014). The urgency of ending the widespread use of fossil fuel, including natural gas, cannot be exaggerated. This is an emergency at the global level.

In their splendid little volume imagining a future historian looking back on a past that is

our present and (possible) future, Naomi Oreskes and Erik Conway have their future historian write about us: “while analysts differ on the exact circumstances, virtually all agree that the people ... knew what was happening to them but were unable to stop it. Indeed, the most startling aspect of this story is just how much these people knew, and how unable they were to act upon what they knew” (Oreskes and Conway 2014). We must not allow this possible future to become our actual history. See Policy Recommendation 1.

Beyond the urgency of action, what is most relevant here is the thoroughly global nature of both the problem and all known solutions. A single cumulative carbon budget is available for the generations currently alive and all foreseeable generations in the future. It will not be safe to add carbon dioxide to the atmosphere again for centuries because of the high percentages of the atmospheric concentration that will persist for centuries. For all human practical purposes we have a single cumulative carbon budget for all time. The same is true across planetary space: one budget is available for carbon emissions from all people of all nations. Carbon emissions are zero-sum globally: any unit of carbon dioxide emitted becomes unavailable for everyone else everywhere on the planet.

We all share a single cumulative carbon budget that is shrinking hour-by-hour. If anything should ever be shared equitably, or fairly, the single human carbon budget should. In order not to exceed the carbon budget, total global carbon emissions must be brought down very rapidly. So we ought to share the burden of these rapid reductions fairly, as the *Principles of Climate Justice* specify. Significant steps can be taken by reductions in inessential energy use by those with the highest per capita emissions. But however great the reductions in energy waste can be, it is obviously necessary to replace fossil fuels with alternative sources of energy that do not generate carbon dioxide (or any other greenhouse gas). This is most

especially true for those whose lives are already made precarious or miserable by 'energy poverty': "a life without access to energy is a life of drudgery" (Practical Action 2013). Sharing the benefits of the energy transition fairly as well, as the *Principles* also require, means that it is not simply necessary to replace fossil fuels with alternative sources of energy within the developed countries that can relatively easily afford the energy transition from carbon-based to non-carbon-based energy, but to replace fossil fuels everywhere, including in the poorest countries that cannot afford the energy transition now on their own but in fact desperately need more energy so that their people can begin to live decent lives by developing sustainably in spite of the threats already being created for them by the emissions of others and the resultant changing climate. As the *Principles* note, **people in low income countries must have access to opportunities to adapt to the impacts of climate change and embrace low carbon development to avoid future environmental damage.**

A minimal first step would be the early fulfilment of the proposed Goal 7 for the *Sustainable Development Goals*, "ensure access to affordable, reliable, sustainable and modern energy for all," provided this is achieved exclusively with additional non-carbon energy. Fossil fuels can no longer be considered modern, and the speculative reference to "advanced and cleaner fossil fuel technologies" in proposed Goal 7a. is far too vague and unambitious. Goal 7.2 is similarly unambitious and weak in aiming merely to "increase substantially the share of renewable energy in the global energy mix by 2030". The rapidly shrinking cumulative carbon budget does not permit such a leisurely transition away from fossil fuels. See Policy Recommendation, 2., A.

Why Be Fair?

Discarding every constraint in a unilateral pursuit of one's own national interests is the formula for a struggle of all against all. If each

nation entirely disregards the interests of the others, cooperation will be impossible, and the current stalemate will spiral downwards. Some minimal ethical constraints are pre-conditions for social cooperation - this is why they are the minimal social constraints. And social cooperation is itself a pre-condition for dealing with global challenges of the magnitude we now all share. Far from being extra baggage, the basic ethical constraints are essential tools for sustainable societies.

The most elemental ethical constraints are not at all mysterious or exotic. People across many cultures understand what is meant by 'do no harm' and 'be fair', arguably the two basic standards. Each of these two constraints involves pursuing one's own national interests in a way that shows a reasonable degree of respect for the interests of others.

First, avoiding harm means pursuing one's own interests in ways that do not directly attack the interests of others, or at the very least, not their vital interests. Avoiding harm is a form of self-restraint, and self-restraint within a community where others practice self-restraint need not be contrary to one's own interest and can as a general practice promote one's own.

Second, fairness requires not merely not attacking the vital interests of others but restraining one's pursuit of one's own interests in order to leave space for others to pursue their own. The purely adversarial who exploit every advantage to the fullest have no sense of fairness. Fairness means not squeezing each situation for every drop of benefit for oneself whatever the costs for others, and fairness too is a form of self-restraint. In some individual instances fairness may demand unselfishness, but the general practice of fairness can be in one's interest overall and in the long-run because other people do not willingly cooperate with those whom they can see are not willing to treat them fairly. This is certainly true in the case of the so-far-failing international negotiations over how to share

the burdens of tackling climate change, in which unfair demands, misleadingly cloaked in a vocabulary of fairness, have been widely and rightly perceived as self-serving in the extreme and therefore not to be caved-in to.

On the other hand, 'do no harm' and 'be fair', as familiar and apparently simple as they are, have, when firmly grasped, powerful implications for how it is possible and how it is necessary to get a grip on the now-rapidly worsening climate change while providing for sustainable development by the poorest. In the case of climate these two elemental ethical constraints also have a surprising interconnection.

The imperative of being fair includes playing one's appropriate part in the joint solution to shared problems. What it is fair for one party to do is normally relative to what it is fair for other parties to do, so the fair part for one contributor to play in an effort cannot be specified independently of the specification of the fair parts for others. The sum of the efforts of each need add up only to the accomplishment of the task as a whole. If some ought to do more, then some others may do less, and conversely.

By contrast, what it means to do no harm can often be specified independently of what others ought to do. The imperative to do no harm often means simply not being part of a threat to a vital interest of anyone else. One can eliminate one's own contribution to the threat to the climate on one's own, and it is not unfair to cease harm irrespective of whether others do the same. And this is the case with regard to some of one's primary responsibilities concerning climate change. To the extent that a nation was not the cause of excessive emissions of greenhouse gases, it would not be contributing to undermining our current climate and in this respect would be doing no harm. However, thanks to the concept of the carbon budget and its demonstration that carbon emissions are zero-sum both transnationally and

transgenerationally, we can understand that the generation of excessive emissions is simultaneously an instance of both grabbing more than one's fair share and causing double harms. Engaging in excessive emissions - emissions beyond an unavoidable portion of the permissible total firmly specified scientifically by the cumulative carbon budget - threatens harm to both

(1) the climate itself (and indirectly future generations of humans, and other living things, whose survival is dependent upon the climate's not departing too radically from the climate to which they, and their agriculture, are adapted) and

(2) sustainable development by those who remain dependent for affordable energy on fossil fuels during the transitional period to the very-low-carbon energy regime and therefore temporarily remain dependent on carbon emissions (through exhausting the shrinking supply of 'tolerable' carbon emissions, that is, emissions compatible with limiting climate change to only a 'tolerable' amount). This means that a national policy that insists on continuing to engage in excessive GHG emissions is aggressive toward those too poor to afford anything except fossil fuel as well as pernicious for the climate: harmful as well as unfair. This is the surprising, and disturbing, convergence between fairness and harm mentioned above: in the case of the zero-sum cumulative carbon budget, the unfair is unfailingly harmful. Hence, the *Principle* is entirely right to insist: **the benefits and burdens associated with climate change and its resolution must be fairly allocated.**

Referring to the necessity of our exiting the global carbon energy regime, John L. Brooke concludes his monumental study, *Climate Change and the Course of Global History: A Rough Journey*, with these judgements: "Over the past 500 years, all significant epochs of economic transformation have had a fundamentally political dimension.... In each of these transitions there was a heated political

struggle between the established order and the advocates of change..." (Brooke 2014). The negotiating stances of the feuding national governments over the past two decades, since their supposed joint embrace of the *UNFCCC*, have proven utterly inadequate to the challenge faced. The prospects for a global solution have been kept dim by a number of factors, but we focus here on an obstructive ideological factor that can and should be modified: an increasingly obsolete understanding of sovereignty that leaves no space for climate justice.

It has long been accepted that in the established international system a sovereign state is free to pursue its own national interest. But both material and normative changes are under way. First, on the ground it has become increasingly evident that even the militarily most powerful states are helpless to protect their people against many of the threats to life, health, and subsistence that come from climate change: "Every state is a 'failed state' as far as climate is concerned" (Shue 2014/2011). Second, at the normative level previously unconstrained conceptions of state sovereignty are being qualified. For instance, in 1945 a historic limit on the promotion of the national interest was universally agreed in the form of the prohibition in the *UN Charter* on the initiation of military force, with force now permitted only in defence against prior attack. The adoption of such a revolutionary constraint on sovereignty reflects a pivotal distinction between *exclusive* promotion and *unlimited* promotion of the national interest (Shue 2014/1997). While it is still widely considered to be reasonable that every nation may pursue its own national interest exclusively if its values permit that - no nation is under any legal obligation to promote the interests of anyone outside its own jurisdiction - it is now generally accepted that no state's promotion of its national interest may employ an unlimited array of means, for instance, no initiation of military force except in defence against prior attack.

These two points about, respectively, material weakness and normative constraint combine to support an important principle. Since in fact even the strongest states are unable to protect themselves against threats like climate change, and since in principle it is acceptable to limit the means by which sovereign states may promote their own interest, it ought to be prohibited for one state to inflict on another a type of threat against which states are generally defenceless except out of necessity in defence of some utterly vital interest of its own. Accordingly, a sovereign state must take into account the harms that would be inflicted on everyone who is affected by its policies - not merely the people in its own jurisdiction - when the policies, their context, and their harm have the following four features:

1. The policies contribute substantially to harm to people living outside the territory of the state that controls the policies.
2. The states that govern the territories in which the harmed people live are powerless to block this harm.
3. The harm is to a vital human interest like physical integrity (a physically sound body).
4. An alternative policy is available that would not harm any vital interest of anyone inside or outside the state that controls the choice among policies.

Domestic policies that allow excessive national carbon emissions, exacerbating the severity of climate change for everyone, are paradigm examples of the infliction on others of such unacceptable transboundary harms. Excessive emissions exacerbate climate change and encroach on other nations' and other generations' shares of the quickly dwindling carbon budget. This double harm is profoundly unfair. But can we say positively what fairness means in practice?

What Is Fair?

The most common complaint made about climate change by ordinary people is that who suffers the costs from climate change, for example, the costs of adapting to the sea-level rises, bears no relation at all to who has received the benefits from the emissions causing the sea-level rise. One might initially think that this is simply because as a matter of physical fact the climate changes do not occur where the emissions are released, for example, emissions from the temperate zones produce melting in the Arctic and the Antarctic. However, while the locations of the physical changes are determined by the complex dynamics of the climate system, the distribution of the costs is a strictly man-made political artifact. The benefits of emissions go mainly to the owners of the sources of the emissions, but the costs of the effects of the emissions are scattered generally across the globe.

This divergence between the distribution of benefits and the distribution of costs is the product of a particular outmoded interpretation of national sovereignty that allows emitting nations to claim accountability for, and thus ownership of, the benefits of emissions while groundlessly washing their hands of accountability for and ownership of the damage done and the costs inflicted by their pollution. This is clearly internally inconsistent, unless someone could provide a persuasive rationale for why damage caused by emissions ought to be generally shared while benefits produced by emissions ought to be retained exclusively by the emitters. This is, at a national level, exactly the kind of 'externalization' that economists regularly observe is irrational and creates perverse incentives – 'externalization' at the level of the nation: keep the benefits of the polluting process and shed the costs. This conception of national sovereignty protects the sources of environmental harm instead of its vulnerable victims, and it is obsolete and intolerable in a globalized world with a single carbon budget.

The fundamental argument, then, is not that the historically greatest emitters have emitted 'too much' by emitting more than some 'proper share' judged by some contentious standard of per capita emissions. The fundamental argument is about the unjustifiable evasion of national accountability for unilateral carbon pollution of the shared atmosphere. One nation's emitters arbitrarily claim ownership of the benefits of the emissions from their industrial activity while renouncing accountability for all the costs of the very same activities that fall outside the national border. Such an interpretation of sovereignty is misleading at a deep level about a nation's role in history and constructs a skewed version of what has happened by acknowledging only the good and omitting all the bad in its accounting of itself, like a magic mirror that does not reflect defects. More important, this is profoundly unfair, and severely so when the 'costs' include severe harms inflicted on the defenceless by the carbon emissions lodging in the atmosphere for the long-term.

Greenhouse gases are multiple, but by far the single most important greenhouse gas cumulatively to date is CO₂ (Ciais, Sabine, Bala, *et al.* 2013). Calls for the acknowledgement of 'historical responsibility' by the developed countries in the context of climate change are mainly calls for the acceptance of accountability for the full consequences of an industrialization that relied on fossil fuels and imposed the costs of that reliance - the costs of extensive carbon pollution - on people generally all over the planet. Those with the historical responsibility contributed to climate change by constructing industrialization around carbon energy, and they benefitted especially greatly because they did not bear many of the costs of the problem thereby created - climate change driven by carbon emissions - themselves. The primary source of the anthropogenic CO₂ accumulated in the atmosphere has been the processes of industrialization. While industrialization has to some degree benefitted humanity generally,

the benefits have been heavily skewed toward those who have themselves industrialized and have controlled the process. This is one main reason why developed countries became wealthy and non-developed countries did not.

The climate costs of industrialization, on the other hand, have been universally distributed throughout the planet in the form of, among other things, the growing dangers constituting climate change that face everyone, including everyone in future generations. The contention of the proponents of the application of 'historical responsibility' to climate change, then, is that the nations that have controlled the process of industrialization, and consequently have tended to benefit by far the most from industrialization, should restore the playing field to a level position by bearing more of the costs for mitigation and adaptation that are resulting from the accumulated greenhouse gases injected into the atmosphere by industrialization. This contention appeals to both contribution to a harm and benefit from the processes that create the harm, taken generally to go together through control of the process of industrialization. The appeal to 'historical responsibility' invokes both contribution to harm done and extent of net advantage accruing from retention of resulting benefits, accompanied by arbitrary imposition of resulting costs from carbon pollution generally on others.

But weren't many of the emissions produced by long-dead ancestors? Shrinking proportions of total cumulative emissions were, although because rates of emissions are rapidly accelerating over time, rising proportions of the cumulative total are more recent and have been injected during the life-times of those of us alive today. Equally important, the quality of our lives now is deeply dependent on the prior emissions by national forebears precisely because our dated conception of sovereignty has permitted the retention of most benefits inside the nation causing the emissions. Present and future generations of a nation

benefit enormously from the actions of their nation in the past, because the nation is a continuing corporate entity of which individuals are members. Simply because I was born in a rich industrialized nation, my life has been easier, healthier, and full of opportunities that I would not likely have enjoyed if I had been born in a non-industrialized nation. I did not request or consent to the carbon emissions of my ancestors, but I benefit by living amidst national affluence produced by means of those emissions. A nation contains continuing structures and institutions; past, present, and future members are primary beneficiaries of these on-going national formations and practices. If I do not plan to renounce these benefits, I can hardly refuse to acknowledge the costs their production also yielded.

Other things equal, it seems clearly fairer for those who have contributed most to the creation of a problem to bear much more of the burden of dealing with the problem than those who have contributed least. Moreover, other things equal, it is evidently fairer for those who have benefitted most from the creation of a problem to bear much more of the burden of dealing with the problem than those who have benefitted least. And, further, other things equal, it is patently fairer for those who are most able to pay to bear much more of the burden of dealing with a problem than those who are least able to pay. While the present descendants of those who contributed most to the creation of the polluting carbon regime did not themselves contribute to its initial creation, we guarantee its perpetuation insofar as we simply rely on the carbon regime and do nothing to change it, and we enjoy both the benefits and the ability to pay inherited by present members of the nations whose earlier members did create the problem. This is why the *Principles of Climate Justice* justifiably invoke causal responsibility, capacity, and benefit as grounds for equity/fairness:

“those who have most responsibility for greenhouse gas emissions and most capacity

to act must cut emissions first. In addition, those who have benefited and still benefit from emissions in the form of on-going economic development and increased wealth, mainly in industrialised countries, have an ethical obligation to share benefits with those who are today suffering from the effects of these emissions, mainly vulnerable people in developing countries.” See Policy Recommendation 2., B.

Conclusion: Urgent and Fair Action

In 2014 and 2015 the nations sharing this planet have one last opportunity to leave behind narrow, short-sighted, and obsolete understandings of national interest suitable only for simpler times and to rise to the challenge of formulating a common solution to a common danger. Twenty years of insistence on narrowly conceived national advantages has yielded only deadlock. Joint action is possible only if the plans proposed are widely perceived to be fair – to rest on an equitable sharing of the burdens and benefits inherent in the monumental task of creating the energy revolution necessary for a stable climate and stable economies. And proposals are unlikely to be perceived to be fair unless they are in fact fair. This paper has attempted to spell out the practical meaning of fairness in the context of international action to limit climate change.

Since efforts to prevent dangerous climate change will become a permanent feature of world politics over the coming decades, it is important for a sense of urgency and a sense of fairness to become firmly entrenched together. For that to happen climate rogues who ignore either the urgency or the fairness should be increasingly shamed and sanctioned, and nations who act with urgency and fairness should be honoured and rewarded. With equitable sharing of burdens and benefits we can work vigorously together. If we work together, we still have just enough time to replace the carbon energy regime that is

undermining climate stability with a non-polluting energy regime compatible not only with a stable climate but also with economies adequate for decent lives in all nations over many generations. Climate justice can bring climate hope.

Policy Recommendations: Transform the Energy Regime Urgently but Fairly

1. Share benefits and burdens equitably between generations

Price the carbon in fossil fuel to reflect the extreme dangers of climate change (Parry, Heine, Lis, and Li 2014). Current subsidies, built infrastructure, and entrenched capacities for political lobbying strongly and unfairly favour fossil fuels in ways that must be aggressively counteracted if energy use is to change quickly enough to complete the transition to non-carbon energy before the cumulative carbon budget is exceeded and the climate is irreversibly undermined for future generations.

2. Share benefits and burdens equitably within the current generation

A. How

Promptly eliminate all subsidies for the consumption of fossil fuel and substitute subsidies for the development and dissemination of non-carbon energy, reduction of energy waste, spread of energy sinks like forests and better farming methods, and reduction of black soot through a massive roll-out in poor countries of inexpensive cooking stoves (Berners-Lee and Clark 2013). Public subsidies globally exceed half a trillion US dollars, rising in 2012 to \$544 billion from \$523 in 2011 (International Energy Authority 2014) and directly contradict the purpose of climate mitigation, which is to reduce consumption of fossil fuel rapidly. Yet, energy is essential for sustainable development, and use of carbon

energy can be eliminated by the poor only in conjunction with elimination of non-essential uses of energy and substitution of non-carbon energy for the essential uses.

B. On What Basis

Display leadership and robust ambition in 2015 in (1) moving the world promptly away from the fossil fuel regime and into a regime of alternative energy and (2) enabling those now unable to afford adaptation to the changing climate to develop sufficiently to be able to

afford it, in accord with one's own causal contribution to the danger, past benefits from the processes creating the danger, and present capacity to act, for the reasons just explained at length above. If any nation errs on the side of contributing more than its share to mitigation and the adaptation by others to new dangers, it can be compensated later after the carbon emissions curve has permanently turned sharply downward.

About the Author

Professor Henry Shue is a Senior Research Fellow and Professor Emeritus of Politics and International Relations at Merton College, University of Oxford. He was a co-founder, in 1976, of the Institute for Philosophy and Public Policy at the University of Maryland and the inaugural Hutchinson Professor of Ethics & Public Life at Cornell University. His research has focused on the role of human rights, especially economic rights, in international affairs and, more generally, on institutions to protect the vulnerable. He is best-known for *Basic Rights* (Princeton, 1980; 2nd ed., 1996), "Subsistence Emissions and Luxury Emissions" (1993), and "Climate Hope" (2013). In 2014, Professor Shue published "Climate Justice. Vulnerability and Protection", a collection of essays on climate justice spanning twenty years of moral reflection.



Professor Shue is also a member of the High Level Advisory Committee (HLAC) to the Climate Justice Dialogue, an initiative of the Mary Robinson Foundation – Climate Justice and the World Resources Institute, which aims to mobilize political will and creative thinking to shape an ambitious and just international climate agreement in 2015.

In 2013, the members of the HLAC, which includes former presidents and other leaders from the fields of politics, science, business, civil society and academia, issued a [Declaration on Climate Justice](#).

[Click here](#) to listen to Professor Shue discuss the importance of a climate justice narrative.

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