

Climate justice: between Mammon and Mother Earth

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Abstract

Purpose – This paper aims to contribute to the ethical debate over roles and responsibilities to address the injustices of climate change and its impacts. The current impasse over taking action may lie in the very different ways people view the world and their place in it. The aim is to explore some profound contradictions within differing strands of knowledge feeding into common understandings of climate justice.

Design/methodology/approach – A literature review of appropriate peer-reviewed and “grey” literature was conducted with a view to defining the term “climate justice”.

Findings – In addition to there being no single, clear definition of climate justice, a fundamental schism was found between what indigenous peoples want to see happen and what industrialised nations can do with respect to both the mitigation of, and adaptation to, climate change.

Research limitations/implications – One limitation to defining climate justice, and reason for publishing, is the lack of peer-reviewed work on this topic.

Practical implications – This paper has many practical implications, the most fundamental of which is the need to reach a consensus over rights to the Earth’s resources. If humanity, within which there are many societies, chooses to follow a truly equitable path post 2015, industrialised countries and corporations will need to move away from “endless growth economics”. The ways in which climate justice might be operationalised in future are considered, including the concept of a “climate-justice” checklist.

Originality/value – While the reconciliation proposed in this paper might be considered idealistic, unless it is acknowledged the Earth’s resources are limited, over-exploited and for all people to use sustainably, thus requiring a reduction in consumption by individuals relatively affluent in global terms, climate negotiators will continue talking about the same issues without achieving meaningful change.

Keywords Knowledge, Sustainable development, Human rights, Equity, Climate justice, Climate change

Paper type Conceptual paper

1. Introduction

Climate justice means different things to different people and it means different things to the same people depending on a particular time and space (Thorp, 2014, p. 127).

While many have questioned the validity of traditional economic growth (Tol, 2001; Fankhauser and Sjtol, 2005; Spash, 2007; Nelson, 2008, O’Hara, 2009; Nelson, 2011), and who benefits from it (Helm, 2008; Hope, 2008; Nelson, 2008; Aakre and Rübhelke, 2010; Bowen, 2011), this paper explores the fundamental schism between what indigenous people want to see happen and what industrialised nations are prepared to do, in an attempt to address climate change and reach a consensus on climate justice.



Without significant effort by all parties to reconcile the very different needs of developed and developing countries, it will be difficult to overcome the fundamental impasse that has plagued the United Nations Framework Convention on Climate Change (UNFCCC) since its inception in 1992 (Ockwell *et al.*, 2010). Long-standing stalemates on the questions of historical responsibilities have repeatedly obstructed progress on the practical dimensions of implementing the low-carbon transition in emerging economies (Hultman *et al.*, 2011). Yang and Sirianni (2010) find diametrically opposed opinions from the two largest polluters: China and the USA. The USA will commit to global greenhouse gas (GHG) mitigation requirements if several major polluters (including China and India) also undertake mitigation efforts. On the other hand, China maintains that for developing countries with fewer historical emissions and low per capita emissions, the priority is to achieve sustainable development, rather than reduce emissions. These opinions show the subjectivity of “fairness”.

This paper argues that the division goes a lot deeper. Both China and the USA are industrialised countries, albeit at different stages in their development. The Bali Principles of Climate Justice (ICJN, 2002) were produced by the International Climate Justice Network, whose members include the Indigenous Environmental Network and the National Alliance of People’s Movements. The principles state that “combating climate change must entail profound shifts from unsustainable production, consumption and lifestyles, with industrialized countries taking the lead”. The science of climate change, and the associated political cul-de-sacs, demonstrates that we are in a profoundly unsafe, interdependent and uncertain world. Goodman (2009) argues that the global climate commons is now in direct collision with the pursuit of private interests under consumer capitalism. If humanity, within which there are many societies, chooses to follow a truly equitable path, industrialised countries and corporations will need to move away from “endless growth economics”. According to Nelson (2011), in addition to Nicholas Stern’s “new industrial revolution”, we also need to overhaul the ideas of the eighteenth-century enlightenment upon which much economic theory is based.

In “A Climate of Injustice: Global Inequality, North-South Politics, and Climate Policy”, Roberts and Parks (2006) argue that inequality drives, by two paths, much of the non-cooperative behaviour observed. First is the direct path, whereby extreme poverty and relative powerlessness leave the South without the capacity to negotiate effectively, unable to meaningfully address their emissions of GHGs. The second path, driving non-cooperation on climate change, has been almost universally overlooked. The experience of poorer nations in the world economy has reinforced a worldview and a set of causal beliefs that are at odds with those of the wealthy nations; this has bred generalised mistrust and polarised expectations about how to proceed on climate issues. Mistrust and divergent and unstable expectations have also led to defensive negotiating strategies by poorer nations and reduced the likelihood of reaching a mutually acceptable agreement. In “Ethics and climate change: an introduction”, Gardiner (2010) asks, “Why expect an agreement driven by representatives of the current generation of the world’s most affluent people to produce justice in this context?”

This paper has arisen from an exercise conducted at the Centre for Climate Justice at Glasgow Caledonian University to map the epistemological roots of climate justice. Drawing in part upon the selected papers from the Centre’s Climate Justice Repository, it represents an exploration of some profound contradictions within differing strands of knowledge feeding into common understandings of climate justice.

2. Glasgow Caledonian University repository on climate justice

A systematic approach (Moher *et al.*, 2009) was used to search, identify and select papers for inclusion within the repository. The review was built around the definition of climate justice as given by the Mary Robinson Foundation (MRF) and was structured around the three categories of climate justice as given by the MRF-Climate Justice research database:

- (1) *Pillar 1*: Human, societal and developmental aspects of climate change.
- (2) *Pillar 2*: Adaptation to the impacts of climate change.
- (3) *Pillar 3*: Equitable low-carbon development.

A definitive list of key search terms was created and four global databases were screened: Science Direct, Web of Knowledge, ABI/INFORM, Google Scholar. The search period covered was 10 years. An initial trawl through the databases resulted in over 8,500 articles. Further screening and refined searches resulted in approximately 1,100 articles for inclusion in the repository.

Reflecting upon the papers in the repository, the authors suggest that the differences between the developing and developed countries are more deeply rooted in fundamental perceptions of core climate justice principles, and ask whether the currently unsustainable (carbon- and resource-intensive) levels of production and consumption are considered themselves to be inherently unjust. Such core principles are explored at some length by reviewing papers and recent reports, which have attempted to encompass the breadth of climate justice concerns, as well as touching upon points of difference with environmental justice. The issue of economic growth and climate justice, as well as connections with the UN's Sustainable Development Goals (SDGs), is further examined. Lastly, the ways in which climate justice might be operationalised in future are considered, including the concept of a "climate-justice" checklist.

3. Defining climate justice

This section highlights that there is no single, clear definition of climate justice. While the 2002 Bali Principles of Climate Justice referred to above are comprehensive and representative of many rarely heard voices, they represent but one interpretation of what climate justice is. Before we can proceed, some of these differing perspectives should be considered.

The study of climate change as a collective action problem has evolved from being the domain of the hard sciences to incorporate social dimensions, considering more critically who are likely to be the worst affected by its impacts, and why. Climate justice is a relatively new term, first appearing in 1999 (Bruno *et al.*, 1999), and the concept of "climate justice" may be considered to have arisen out of a number of activist, social justice, environmental justice and academic traditions.

According to Chaturvedi and Doyle (2015, p. 170):

[...] climate's staggering breadth of ideological reach has re-mutated into versions of the climate discourse which include post-colonial and environmental justice arguments. In this light, climate justice attempts to grapple with notions of climate debt caused by centuries of ongoing colonialism, rather than just focusing on current climate footprints.

That the term climate justice has evolved from the world of activism, yet is now a vital component of sustainable development discussions, contributes to the lack of agreement

over what it is. The language and, in some cases, imagery used by some activist groups can be instantly divisive and not conducive to dialogue. While the bulk of GHG emissions are undoubtedly arising primarily from the industrialised world, the key to reaching an agreement over how we proceed will be to open meaningful and robust dialogue between those seen as the “cause” of the problem and those suffering the effects, as opposed to indulging in further demonisation and disengagement. Trust is a big issue for activists and indigenous people alike; what may be construed as “lies” can emanate not necessarily from deception, but from the fundamentally different worldviews of both sides, as we shall discuss later.

The quintessential climate justice approach takes its cue from Rawlsian conceptions of justice (Rawls, 1999), in which the most vulnerable are the most deserving of effort to protect them from harm (Klinsky and Dowlatabadi, 2008; Grasso, 2010). This requires fair distribution of the burden of economic cost, that of adverse climate impacts and of adaptive and mitigative resources. Goodman (2009) defines climate justice as seeking to address a triple inequality relating to responsibility, vulnerability and mitigation. The most vulnerable to climate change’s impacts in terms of climate instability, disruption of agricultural systems, floods, droughts and other impacts are also those least responsible for GHG emissions and least able to mitigate the latter. Goodman considers these injustices as magnifications of greater North–South development divides.

It is important to distinguish between the nature and definition of environmental justice and climate justice; the dimensions of scale and geographic specificity are key. Environmental justice is defined by the US Environmental Protection Agency as:

[...] the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies (It should be noted the “all people” here tends to be interpreted in a nationally specific manner).

Climate justice, in some way, represents the expansion of environmental justice, yet because its focus is upon GHGs whose effects are felt on a planetary scale, it necessitates a different political expression from environmental justice which has arisen from responses to point-source pollution. Such thinking informs Steve Vanderheiden’s influential book *Atmospheric Justice* (Vanderheiden, 2008). Climate justice has enormous value as an interpretative framework within which to examine and evaluate responses to climate change. The fact that it arises from a number of political, activist and theoretical traditions indicates the broad base upon which it is constructed, and its advocacy of an approach to climate change, which is human-centred and concerned overall with fairness and equity, recommends it.

According to the MRF, climate justice links human rights and development to achieve a human-centred approach, safeguarding the rights of the most vulnerable and sharing the burdens and benefits of climate change and its resolution equitably and fairly. Science informs climate justice, which incorporates scientific understandings and acknowledges the need for equitable stewardship of the world’s resources (Mary Robinson Foundation – Climate Justice, 2011). The MRF’s seven Principles of Climate Justice are rooted in the frameworks of international and regional human rights law and do not require the breaking of any new ground to implement:

- (1) respect and protect human rights;
- (2) support the right to development;

- (3) share benefits and burdens equitably;
- (4) ensure that decisions on climate change are participatory, transparent and accountable;
- (5) highlight gender equality and equity;
- (6) harness the transformative power of education for climate stewardship; and
- (7) use effective partnerships to secure climate justice.

Another non-governmental organisation (NGO), the Joseph Rowntree Foundation (JRF), in its evidence review of Climate Change and Social Justice, “found no commonly agreed definition of climate justice” (Preston *et al.*, 2014), nor of social justice, but developed a working definition from the literature they have reviewed:

Climate justice is about ensuring, both collectively and individually, that we have the ability to prepare for, respond to and recover from climate change impacts and the policies to mitigate or adapt to them by taking account of existing and projected vulnerabilities, resources and capabilities.

The authors of the JRF review find that a number of responses tend to be offered to the question “why climate justice?” Ethically, there is the question of fairness regarding those who suffer the consequences of climate change. In this respect, the present climate change policy must address a quadruple injustice, whereby certain groups, usually in lower-income brackets, are:

- impacted most by climate change;
- contribute the least to causing it;
- pay, as a proportion of income, the most towards implementation of particular policy responses; and
- benefit least from those policies (Preston *et al.*, 2014).

A fifth “procedural” injustice could be added to this list: in general, lower-income groups are also less able to participate in decision-making around mitigation and adaptation responses.

Preston *et al.* (2014) take pains to establish a continuity with previous interrogations of social justice:

The interface between climate change and social justice renders it important to acknowledge the long-standing philosophical and research tradition in social justice when framing the climate justice research agenda. This not only helps to avoid “reinventing the wheel” in terms of what constitutes fairness and justice but also helps to embrace climate justice within an already robust research and policy arena.

The JRF review lists six key questions relating to climate justice:

- Q1. Who has the responsibility for and benefits from GHG emissions? There has been very little consideration of distributive climate justice within nations.
- Q2. What is the distribution of the welfare impacts of climate change?
- Q3. What is the distribution of the costs and burdens of mitigation policies?
- Q4. What is the distribution of the costs and burdens of adaptation policies?

Q5. Who has voice and power in the formation of responses to climate change?

Q6. Are decision-making processes designed to distribute power in proportion to stakes?

Climate justice is a fluid concept with recurring themes across definitions. The following definitions taken from “Organizing Cools the Planet” give a picture of the various understandings of climate justice by activist communities (Moore and Russell, 2011):

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- *As environmental justice:* Climate justice is a vision to dissolve and alleviate the unequal burdens created by climate change. As a form of environmental justice, climate justice is the fair treatment of all people and freedom from discrimination with the creation of policies and projects that address climate change and the systems that create climate change and perpetuate discrimination.
- *As an evaluative model:* Climate justice is a struggle over land, forest, water, culture, food sovereignty, collective and social rights; it is a struggle that considers “justice” at the basis of any solution; a struggle that supports climate solutions found in the practices and knowledge of those already fighting to protect and defend their livelihoods and the environment; a struggle that insists on a genuine systematic transformation to tackle the real causes of climate change [...]. Climate justice addresses four key themes: root causes, rights, reparations and participatory democracy.
- *As global justice:* The historical responsibility for the vast majority of GHG emissions lies with the industrialised countries of the Global North. It is imperative that the North urgently shifts to a low-carbon economy. At the same time, to avoid the damaging carbon-intensive model of industrialisation, countries of the Global South are entitled to resources and technology to make a transition to a low-carbon economy that does not continue to subject them to crushing poverty. Indigenous people, peasant communities, fisherfolk and especially women in these communities have been able to live harmoniously and sustainably with the Earth for millennia. They are now not only the most affected by climate change, but also the most affected by its false solutions, such as agrofuels, mega-dams, genetic modification, tree plantations and carbon offset schemes.

According to the Indigenous Environmental Network, “Industrialized society must redefine its relationship with the sacredness of Mother Earth” and there are four principles for climate justice:

- (1) leave fossil fuels in the ground;
- (2) demand real and effective solutions;
- (3) industrialized – developed countries take responsibility; and
- (4) living in a good way on Mother Earth.

Bond (2012) has noted the trends towards commodification of the natural world and bioresources, such as the REDD initiative relating to forest resources, which broadly neglects the interests of forest people, and which can be considered the “thin end of the wedge”. Much of Bond’s writing attacks “the myth that a market failure of the magnitude of climate change can be solved by yet more markets” (Bond, 2012, p. 77)

and the espousal of market systems, including carbon markets, by “elite” commentators such as Mary Robinson and Nicholas Stern. He also documents the lack of procedural justice at high-level international discussions as evidenced *inter alia* by the 2009 Copenhagen Accord, which came about as a result of a very narrow section of the nations represented at the UNFCCC – a “high table of polluters” – agreeing what amounted to a “back-room deal”. The issues of ecological debt and climate debt are most vehemently espoused by Bolivia, Venezuela, Nicaragua, Cuba, Malaysia and others, backed up by eminent ecological economists from the West such as Richard Norgaard. Bond marks the failure of the G77’s lobbying in this regard in the run-up to Copenhagen, despite conservative concessions from the EU. REDD, carbon markets and the development rights framework are all found wanting as approaches because of “the adverse balance of forces at world scale”. Looking to the future for climate justice activism, Bond stresses the importance of unity in grassroots movements, pushing for social and climate justice and the potential of a mass popular movement (red-green or “blue-green” in the USA) galvanised by localised climate flashpoints. Such an approach, however, as he notes, will struggle to gain traction under repressive regimes where the right to protest – even if the desire is present – is less than sacrosanct.

Shiva (2011) argues that the struggle for climate justice and trade justice is one struggle, not two. The climate crisis has arisen from an economic model based on the fossil fuel energy and resource-intensive production and consumption systems. “The world order is shaped”, notes Shiva, “by corporate globalization and the WTO, not by the UN Climate Treaty”. She continues:

[...] to consider those who are losing their land and livelihood to make way for energy-intensive industrialisation as polluters would be doubly criminal. Corporations are the appropriate level for regulating atmospheric pollution in a globalised economy, not nations. Climate justice requires a new paradigm.

Shiva (2011) also notes the multiple contests witnessed at the Conference of the Parties to the UNFCCC (COP) in Copenhagen in December 2009 (COP15), reflecting multiple dimensions of “climate wars”, which include those:

- Between the earth’s ecological limits and limitless growth (with its associated limitless pollution and limitless resource exploitation).
- Between the need for legally binding commitments and the USA-led initiative to dismantle the international framework of legally binding obligations to reduce GHG emissions.
- Between the economically powerful historical polluters of the North and economically weak southern countries who are the victims of climate change, with the BASIC countries (Brazil, South Africa, India, China) negotiating with the South, but finally signing the Copenhagen Accord with the USA.
- Between a corporate rule based on greed and profits and military power, and “Earth Democracy” based on sustainability, justice and peace.

Climate justice principles “from the North” emphasise the need for fairness. However, those from “the South”, the Bali Principles, require much more demanding changes, such as:

Affirming the sacredness of Mother Earth, ecological unity and the interdependence of all species, Climate Justice insists that communities have the right to be free from climate change, its related impacts and other forms of ecological destruction.

Our “dominant culture” simply does not recognise a discourse containing terms such as “sacredness”, which is radically at odds with the techno-scientific ways of thinking. The two sides are talking in different languages, and a definition of climate justice should reconcile this divide.

The Bali Principles also state:

Climate Justice requires that we, as individuals and communities, make personal and consumer choices to consume as little of Mother Earth’s resources, conserve our need for energy; and make the conscious decision to challenge and reprioritize our lifestyles, re-thinking our ethics with relation to the environment and the Mother Earth; while utilizing clean, renewable, low-impact energy; and ensuring the health of the natural world for present and future generations.

How can this be reconciled with an economic system which fundamentally requires people to consume more and more of the Earth’s resources, which has to grow inexorably and which has never had fairness at its heart? Teresa Thorp suggests that the climate justice movements can tackle the injustices they focus upon by means of an interconnected, universal system of law with the government of injustice at its core (Thorp, 2014). She recommends that they, the private sector and “other constituencies” (such as indigenous groups or those concerned with gender and development), be integrated into such a system as a priority.

4. The prospects for global justice

The perspective of intergenerational equity tends to focus upon the rights of future generations, sometimes conceding that children now alive “may” be the first to experience impacts of climate change. This uncertainty is not to be found in commentators from the South, who are in little doubt that the impacts of climate change in the form of increased climatic variability, floods, storms and droughts, and their effects on the human rights to nutrition, health, shelter and continued existence, have been palpable for some years already (Sokona *et al.*, 2001; Okereke, 2006). The South attributes great importance to past emissions from the North, calling for retroactive justice and compensation for historical harms, which has led on to current discussions of “loss and damage”.

Climate-related loss and damage have been most concisely defined as “negative effects of climate variability and climate change that people have not been able to cope with or adapt to” (Warner and van der Geest, 2014, p. 369). In this context, “damage” refers to impacts from climate change which can be recovered from, while “loss” refers to those which cannot. Saleemul Huq has recently summarised the progress of the concept within the UNFCCC (Roberts and Huq, 2015). Establishment of the Warsaw International Mechanism for Loss and Damage in 2013 means that the once-theoretical damages of climate impacts have been recognised as a reality, one which existing measures and funding to mitigate and adapt will not of themselves address. Van der Geest and Warner (2013) have delineated some of this current loss and damage with examples of drought, flood and cyclone impacts from Nepal, Bangladesh, Kenya and Gambia. While the loss and damage mechanism in no

way vitiates the need for effective mitigation and consistently well-resourced adaptation, it stands as probably the closest politically feasible measure to historical reparations within the current system for climate-related impacts incurred by developed-world emissions. However, the plan of activities to establish loss and damage as an international mechanism is still ongoing, and has yet to come to grips with the crucial issue of technical, financial and capacity building support for developing countries (Harmeling, 2014).

Furthermore, advocating for remote “historical responsibility” may sound just, but it may be unjust. Teresa Thorp asks why we should consider only climate change and not other “bad” historical norms that were once legally valid, such as slavery (Thorp, 2014, p. 282). Thorp goes on to argue that pitting developed versus developing countries undermines solidarity (a UNFCCC Article 3.2 provision), that there is no evidence that compensation for remote historical responsibility will rebalance inequalities, that history may show that compensation would reward elites in developing countries and not those who merit compensation, and that the poor are likely to suffer more because undermining the Convention in one area undermines it in others.

Is justice served by those acting for climate justice being right, standing proudly upon the moral high ground and demanding reparations for cumulative historical emissions from the world’s major emitters? This is in a context in which most developed nations, apart from six in Northern Europe, have failed to reach the goal set by the Pearson Commission in 1969 for 0.7 per cent of the gross national income to be devoted to overseas development assistance. Furthermore, the Green Climate Fund, established after COP16 to raise US\$100 bn per year by 2020 for adaptation and mitigation (UNFCCC, 2011), had only managed to garner US\$10.2bn in pledges by June 2015 (Green Climate Fund, 2015), and the loss and damage mechanism mentioned above remains deeply contentious and may well struggle to remain adequately funded in future COPs. Even well-adapted systems, such as the Philippines before Typhoon Haiyan, are unable to cope with the increased energy in the climate system. In such a landscape, where resource flows from actors in the present moment continue to be profoundly inadequate to the scale of the task, historical reparations, however justly founded (they may be), remain something of a pipe dream.

Is justice, rather, served by the set of principles embodied in the corpus of climate justice literature from peer-reviewed researchers, NGOs and activist coalitions being applied as an “acid test” to ensure that proposals, policies and procedures (PPPs) meet the requirement of procedural justice, fairness and equity? Rather than opining “it’s not fair”, climate justice advocates have a duty to highlight the current best practice, where PPPs relating to climate adaptation, mitigation or related impacts have been fair, equitable and inclusively agreed upon. This “operationalised” perspective upon climate justice holds out the promise of increasing the utility of the concept.

5. Climate justice in the real world

By dint of its connection with a panoply of intellectual and philosophical traditions around justice from Aristotle to Sen onwards (Sovacool and Dworkin, 2014; Shue, 2014), climate justice is unlikely to be as vulnerable to co-option as the term “sustainable” has become. This is not the same as saying it is an uncontested term, as the discussion above

has indicated. The identification of injustices around the impacts of and responses to climate change does not necessarily make it straightforward to state what “climate justice” is.

Indeed, one of the first books to explicitly address climate justice (Posner and Weisbach, 2010) took pains to attack the utility of pursuing historical claims of “emissions debt” against industrialised countries, such as the USA. Climate justice is a principle open to interpretation according to the moral and ethical frameworks of those deploying the term. These interpretations may be as expansive as the “ecological pantheism” of Bolivian commentators (analogous to the “deep ecology” thinking of Devall and Sessions, 1985 or Seed *et al.*, 1988) or as prescriptive as Posner (*op. cit.*, Posner and Sunstein, 2008).

Environmental racism can be described as “the disproportionate impact of environmental hazards on people of color” (EJN, undated). In this context, environmental equity means “poisoning people equally”, whilst environmental justice means “stop poisoning people altogether”. Environmental justice is the movement’s response to environmental bigotry, where harms are not simply redistributed, but abolished. Is the climate justice movement similarly demanding not that the root causes of climate change and impacts are shared more equally but that they cease altogether? If so, this is a radical message to deliver as it flies in the face of our growth-obsessed culture.

Climate change will both add to and magnify the existing inequalities. Markandya (2011) notes that the successively greater costs of adaptation will make it harder for governments to contribute to other public goods. To start to answer the question of what climate justice means in practical terms leads to an interrogation of what is needed as a response to climate change (Fritze and Wiseman, 2009), namely, a raft of social, cultural, economic, technological and political transformations.

To use the term as an adjective, to say for example a particular policy is “climate-just”, should indicate an overriding concern with equity and fairness: in the extent to which people affected by the policy have been involved, consulted and considered (including those not spatially or temporally present) and in the scope, ramifications and direct or indirect impacts of the policy. An example of such scope is provided by Magrath (2010), who notes the need for donors and planning agencies to expand their conception of what constitutes “adaptation” to allow for crèches to look after AIDS and HIV orphans. This would, in turn, free up time for women to invest in soil cultivation and water harvesting.

In an attempt to produce a workable conceptualisation of climate justice in light of the overview and discussion above, the following is suggested by the GCU Centre for Climate Justice:

Climate justice recognises humanity’s responsibility for the impacts of greenhouse gas emissions on the poorest and most vulnerable people in society by critically addressing inequality and promoting transformative approaches to address the root causes of climate change (Jafry, 2015).

The “root causes” in the definition above may be taken literally as GHG emissions, in the understanding that poverty, inequality, gender inequity and power imbalances act as “multipliers” for the negative impacts of climate change.

6. Operationalising climate justice

A climate justice “checklist” could incorporate the following measures understood within the broad terrain of climate change:

- of procedural justice;
- of distributive justice;
- of equality and equity (inter- and intra-generational);
- of gender justice; and
- of energy justice

For this checklist to stand as an operationalised form of climate justice, or to contribute towards having checks and balances upon climate *in*justice, it needs to be broken down further:

Procedural justice requires:

- Parity of access to information in a readily comprehensible form about climate change drivers, impacts and their implications for individuals, communities and nations.
- Parity of access to representation at a number of scales from the grassroots level to international discussions.
- A uniform and consistent application of the same rules for all, for adjudicating conflicts and hearing out proposals and policies.

Distributive justice requires:

- Funding and political priority to be given to the best available technology for emissions reduction for developing countries.
- Adaptation budgets for all countries to have appropriate projections for expenditures and made available in a timely manner from global funding.
- Sufficient funding for loss and damage mechanisms for those climate impacts which cannot be adapted to or avoided.

Ensuring equality and equity, both inter- and intra-generational, requires:

- Representation of youth and the elderly, the disabled and the economically disadvantaged within discussions of action to be taken on climate change, taking account of the specific needs and fundamental human rights of such constituencies.
- Realistic economic assessment of the likely future costs of climate impacts using appropriate discount rates (used in the calculation of possible damage –[Stern, 2006](#)).

Gender justice requires:

- Strengthening women’s capacity to participate on an equal basis with men in climate decision-making and leadership.
- Acknowledgement of currently disproportional impacts of climate change upon women and girls at the global scale.

- Ensuring women's equal access and participation in climate decision-making and power structures.
- Operation of a gender quota system within climate leadership forums.
- Earmarking resources to contract women to participate on an equal basis with men in adaptation and disaster recovery responses.

Energy justice requires:

- Energy decisions should promote availability, affordability, due process and accessible information to be socially and economically inclusive.
- Energy planners to direct most of their efforts towards benefitting the least well-off.

The measures we have set out can be considered a baseline from which the human repercussions of action taken to address climate change, or those of inadequate action, are viewed through a climate justice lens. We hope that this operationalisation can be drawn upon as a starting point, and that our framework will support policymakers and practitioners in reflecting in a methodical way the essential concerns about justice discussed above. The operationalisation we have attempted could be further broken down into sets of specific indicators, but for the moment, our aim is to stimulate debate in the field by proposing this preliminary structure by which climate justice could be transmuted from idealistic paradigm to a real-world expression.

7. Sustainable development: goals, growth and climate justice

Within the climate justice literature can be found challenges to conventional "development", for example, though looking at "survival emissions that are required to meet basic human needs" (Vanderheiden, 2011; see also Hyams, 2009; Rajamani, 2010). If the end goal of "development" is ultimately a standard of life equivalent to the American (4.1 planets' worth of terrestrial ecosystem production if extended to 7 billion humans) or even the French norm (a mere 2.5 planets' worth) (DeChant, 2012), this "survival emissions" view of equal emissions rights has profound implications for current levels of overconsumption. Even "sustainable resource use" (Metz *et al.*, 2002) is beholden to the inescapable attrition of the endless growth paradigm. As Kenneth Boulding put it, "Anyone who believes in infinite growth upon a finite planet is either a madman or an economist" (Boulding, 1973).

However, the SDGs (UN, 2015) seem to signal a long-awaited merging of sustainability and development. One of the main outcomes of the UN Rio+20 Conference on Sustainable Development, which took place in Brazil, in June 2012, was the agreement by member states to develop a set of SDGs, to build upon the Millennium Development Goals (MDGs) and converge with the post-2015 development agenda. The SDGs represent a strategic vision of how the world will look in 2030, and goal 10 states, "Reduce inequality within and among countries". This represents a paradigm shift in that it opens up the possibility of addressing the increasing disparities of wealth at a global and national level. The SDGs aim to eliminate poverty where the MDGs aimed to halve it, and start to establish a requirement for economic growth to be "sustained, inclusive and sustainable" (Goal 8). Now these "Global Goals" have been ratified by all UN member states, it remains to be seen whether their ambition can be fully realised. On

a finite planet, for more people to have more, some people have to have less. Who might those people be, and who decides? While the MDGs spawned the successful Make Poverty History campaign, might the SDGs give rise to a more radical cry of “Make Millionaires History”?

In the 17 goals, the most frequently used adjective after “sustainable” is “inclusive” (six mentions), indicating a concern that procedural justice be brought to the forefront. If pursued assiduously, this focus upon inclusivity and inequality could begin to disentangle the thorny issues of representation and power within climate change politics. The billions that are proposed to be spent on adaptive management – sourcing clean water and resilient crops, reshaping and repurposing the urban environment while protecting rural livelihoods and natural biodiversity – will all be located within power structures, be they neoliberal or otherwise. A bleak vision of “climate-proofed gated communities” would not be recognisable to most proponents of climate justice.

8. Considerations for the future

Despite the definition and operationalisation we have essayed, it is possible that the term “climate justice” cannot be defined in a way on which all will agree. Is climate justice such a wide-ranging concept, covering legal, behavioural, technical and economic aspects of life, that a mutually acceptable definition cannot be arrived at? The lack of a clear definition in the literature may point to this fundamental difference in worldview between indigenous and industrialised countries and people.

The demands made in the Bali Principles beg such questions as:

- Q1. Does the earth belong to humanity, or humanity to the Earth?
- Q2. Is the planet ‘private property’ or ‘global commons’?
- Q3. Did we evolve here on Earth over millions of years or were we created by ‘God’ a few thousand years ago with a mandate to use all of nature’s bounty?

We are in the realm of beliefs and perceptions, cultural biases and blindfolds. From this follows the requirement to define what we mean by “climate justice” in a rigorous way, not shying away from difficult questions, and knowing that this is a working definition to be built on. But the principles of climate justice remain tied to a fundamental change in attitudes towards human rights and ecological balance.

The year 2015 was crucial for both planet and people. At the 21st session of the Conference of the Parties (COP21) in December 2015 in Paris, delegates reached consensus over an international climate agreement that enables us to limit global warming to below 2°C (COP21, 2015). Another potentially key moment in 2015, which may influence proceedings, was Pope Francis’ revolutionary encyclical (Pope Francis, 2015), published 18 June 2015, which cites St. Francis with reference to “Mother Earth”, challenges both the current ethics and economics, and could be seen as a call for climate justice. “We have to realize that a true ecological approach always becomes a social approach; it must integrate questions of justice in debates on the environment, so as to hear both the cry of the earth and the cry of the poor”, argues Pope Francis, recognising that “the same mindset which stands in the way of making radical decisions to reverse the trend of global warming also stands in the way of achieving the goal of eliminating poverty”. Setting ambitious targets is nothing new, but if they form the basis for a “story” we can all believe in, change may indeed come.

The culmination of the post-2015 process has resulted in the UN Global Goals; the process of developing them has indicated an awareness of concepts essential to the definitions of climate justice summarised in this paper. The acceptance of the Global Goals represents an opportunity for an operationalised version of climate justice to become incorporated into discussions of climate change across a number of scales, including deliberative democracy, where political decisions emerge from fair and reasonable discussion and debate. Turning “operational” climate justice to “implementation” supported by climate justice indicators of impact will be the challenge.

What form this climate justice checklist and indicators ultimately assume will be a matter for further analysis and debate. We have comprehensively reviewed the climate justice literature to tease out its primary components and contradictions, developed a broadly based climate justice definition and proposed a means of operationalising the concept. Our exploration of the tensions between majority world and “Western” perspectives on climate justice provides a platform for further consolidation of those positions in a just and equitable manner.

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