18

Equity and Justice in Polycentric Climate Governance

CHUKWUMERIJE OKEREKE

18.1 Introduction

Equity and justice considerations have always been central to understanding past and current forms of global climate governance as well as the motivations and goals of different actors. Climate justice scholarship has demonstrated that concerns about equity and fairness played a significant role in shaping the form, mandate, functions and development of the United Nations Framework Convention on Climate Change (UNFCCC) (Mintzer, 1994; Grubb, 1995; Paterson, 1996; Okereke, 2007, 2010). Analyses of international climate politics after the 2015 Paris Agreement suggest that equity concerns are likely to continue to occupy a vital place in future approaches through which societal transformations in the face of climate change might be managed (Okereke and Coventry, 2016; Rajamani, 2016).

It has long been observed that while the UNFCCC was the main structure and process for coordinating the international response to climate change, the governance of climate change has involved a multiplicity of actors exercising agency and authority in a non-hierarchical mode, (co-)creating norms across different scales (Okereke, Bulkeley and Schroeder, 2009). In a sense, therefore, climate governance has always exhibited some degree of polycentricity – that is, having 'many centres of decision-making which are formally independent of each other' (Ostrom, Tiebout and Warren, 1961: 831). As one might expect, contestations for justice have also been a key feature of the different arrangements for climate governance outside of the UNFCCC, even though these have received less attention compared to analyses of justice within the international climate regime. For example, Bulkeley *et al.* (2013) and Bulkeley, Edwards and Fuller (2014) have provided an important analysis of the contestations for climate justice in global cities. Justice concerns have also been analysed in the context of transnational climate networks (Lidskog and Elander, 2010), urban climate adaptation

https://doi.org/10.1017/9781108284646.019 Published online by Cambridge University Press

(Schlosberg, 2012; Shi *et al.*, 2016), business and corporate actors (Verbruggen, 2008; Matt and Okereke, 2014) and in national climate and energy transition programmes (Newell and Phillips, 2016) – among several other issues, dimensions and scales.

In this chapter, I pursue two main objectives. First, I explore the influence of climate justice contestations on the emergence of polycentric governance. Second, I explore the implications of polycentric climate governance for climate justice as well as the potential role of equity in a more complex and fragmented global climate governance arrangement. With the entry into force of the Paris Agreement heralding a new, more voluntary approach to international climate cooperation (through nationally determined contributions), and with the increasing proliferation and diversity of actors in the climate governance space, it is fair to suggest that the global community has entered a new phase of more polycentric climate governance. It is therefore necessary to analyse, on the one hand, what this new era and architecture for climate governance means for climate justice and, on the other hand, how considerations of equity and fairness might impact the new polycentric climate governance arrangement.

This chapter starts with a brief discussion of the concept of climate justice, a mapping of the key dimensions of justice in climate policy and a review of some of the key themes and aspects of climate justice scholarship. Next, I consider the role of equity concerns in both facilitating and hindering polycentric climate governance, covering both the international and other levels of governance. I then discuss the implications of greater polycentricity for climate justice and equity, drawing attention to issues of effectiveness, transparency and accountability before ending with some concluding remarks.

18.2 Climate Justice and Equity

Broadly speaking, climate justice is concerned with the equitable distribution of rights, benefits, burdens and responsibilities associated with climate change, as well as the fair involvement of all stakeholders in the effort to address the challenge. Following Aristotle (1976), equity can be understood as decisions intended to prevent injustice arising from the rigid application of broad, just principles. Political justice and equity mostly sit on the same continuum and are here used interchangeably.

Reflecting its historical core framing as an international problem as well as the dominant role of the United Nations (UN) multilateral process in driving response options, the focus of the early climate justice literature was on the international level, especially on burden sharing between developed and developing countries (Agarwal and Narain, 1991; Shue, 1992, 1993; Grubb, 1995; Paterson, 1996a,

https://doi.org/10.1017/9781108284646.019 Published online by Cambridge University Press

1996b, 2001; Shukla, 1999). The concern for justice in the international regime is rooted in three dimensions of asymmetries, related to contributions, impacts and participation (Okereke, 2010). The first is asymmetry in the contribution, which recognises massive differences in the historical and current contributions of different countries to climate change. For example, the 20 largest economies in the world together account for 82 per cent of total global carbon dioxide emissions (Raupach *et al.*, 2014). The United States and the European Union (EU), which account for about 10 per cent of the global population, are responsible for 24 per cent of global carbon emissions, while the whole of Africa, home to about 20 per cent of the global population, accounts for just about 3 per cent of global emissions (IPCC, 2014; Wiedmann *et al.*, 2015).

The second is asymmetry in impacts, which focuses on the fact that the negative impacts of climate change will not be borne proportionately by countries (Schaeffer *et al.*, 2014). A key observation in the international climate justice literature and policy discourse is that the 'unavoidability of justice' (Shue, 1992: 373) resides in the fact that climate impacts will be disproportionately borne by the poorest nations that have contributed the least to the problem. This leads to the charge that climate change involves rich countries imposing significant risks on poorer countries (Agarwal and Narain, 1991; Okereke, 2011).

The third asymmetry relates to the ability of countries to participate in various international decision-making forums. Facing limited resources, developing countries are generally unable to attend and participate effectively in international climate meetings (Shue, 1992; Okereke, 2007; Okereke and Charlesworth, 2015). Besides being outnumbered, developing countries also very often lack the technical abilities and skills to prepare for and follow complex and lengthy negotiations (Okereke and Coventry, 2016). The lack of meaningful participation raises the possibility that climate policies may be designed in ways that fail to address the interests of the poorest countries and, in doing so, exacerbate global inequalities. Table 18.1 presents an overview of the number of delegates attending the annual UNFCCC meetings from selected developed and developing countries (based on comparable populations). It clearly demonstrates that developing countries are vastly outnumbered in the global conferences where important decisions are made.

The early climate justice literature correctly observed that the three dimensions of asymmetry (contribution, impact and participation) that characterise climate diplomacy at the international level also apply to many other dimensions and scales, such as between present and future generations (Howarth, 1992; Page, 1999), between genders (Terry, 2009) and within countries (Adger, 2001; Baer *et al.*, 2009). A running theme in the climate justice literature in the past two

Table 18.1 *Inequity in North-South participation in UNFCCC meetings*

Country (population in millions as at 2010)	Chad (11.2)	Germany (81.8)	Ethiopia (82.1)	United Kingdom (62.4)	DR Congo (65.9)	Brazil (190)	Nigeria (160)	Canada (34)	Algeria (36)	Japan (127)
2000	2	75	5	41	2	66	15	81	8	69
2001	2	56	3	37	2	40	19	46	8	98
2002	2	54	3	43	2	30	8	54	6	73
2003	1	62	0	38	2	55	13	66	14	76
2004	1	46	2	47	6	207	18	71	13	81
2005	1	48	2	83	7	34	9	371	11	70
2006	1	45	0	40	3	15	7	48	1	39
2007	5	101	2	64	9	196	31	61	8	75
2008	2	57	2	42	2	17	11	33	2	54
2009	2	31	7	22	7	34	27	24	11	55
2010	10	110	28	75	58	736	83	93	27	135

Source: Head count by author based on UNFCCC lists of participants.

decades has been the focus on analysing climate equity *outside* the international regime. Let me briefly highlight some of the notable dimensions.

First, following the work of Paavola and Adger (2006), there has been a proliferation of literature on climate justice in the context of adaptation, reflecting the need to understand how issues of fairness are implicated at local scales of climate governance, with all the diversity and variations that characterise such geographies. More recently, there has been a growing literature on rights- and capability-based approaches to climate justice, which focus on the links between climate actions and individuals' rights to life and well-being (Schlosberg, 2012; Shi *et al.*, 2016). Somewhat related to adaptation is the issue of climate-induced loss and damage as well as migration, which has also begun to receive increasing attention in climate justice scholarship (Marino and Ribot, 2012; Cao, Wang and Cheng, 2016; Lees, 2017).

Second, there has been an increasing body of literature on climate justice in the context of subnational actors, especially cities (Bulkeley *et al*., 2013; Bulkeley *et al*., 2014). At the same time, attention has focused on the equity implications of burgeoning transnational climate governance initiatives – such as the Renewable Energy and Energy Efficiency Partnership, the CDP (formerly, Carbon Disclosure Project) and the Carbon Pricing Leadership Coalition – which often perform important governance functions including agenda setting, norms diffusion, verification and standard-setting (Derman, 2014; Castro, 2016).

Third, more light has been shed on the role of businesses, especially global corporations, in causing climate change and the need to ensure that these entities are doing their fair share in tackling climate change in the context both of mitigation and of adaptation (Heede, 2014; Frumhoff, Heede and Oreskes, 2015). Related to this are the many different lawsuits that have been brought against corporations on climate change, particularly in the United States (see also Chapter 3), as well as analysis of the justice and equity implications of market-based mechanisms or policies for tackling climate change, which have also been on the increase (Peel and Osofsky, 2015).

Fourth, there has been increasing recognition that contestations of climate justice frequently express themselves in several other resource politics at regional, national and local levels. Newell and Mulvaney (2013), Baker, Newell and Phillips (2014) and Bratman (2015) have highlighted climate justice implications in national energy transition initiatives. Schlosberg's (2013) account has focused on food justice, while Gupta (2014, 2015) has covered forest and water resources.

A fifth development, which is connected to many of the aforementioned dimensions, is the increasing attention paid to the need for procedural justice and participation, not with respect to states' participation, but also with respect to broader public engagement of laypeople (Devine-Wright, 2017), citizens' panels

(Kahane and MacKinnon, 2015), indigenous people and local communities (Schroeder, 2010) and civil society groups in climate decision-making (Stevenson and Dryzek, 2014).

The proliferation and intensification of the climate justice literature focusing on other scales of governance in addition to the international regime is a clear indication of the appreciation of the independence, rule-making authorities and impact of these climate governance nodes, and also an implicit acknowledgement that climate governance is indeed multicentred and that justice is relevant to all nodes.

18.3 Climate Equity Impact on Polycentric Climate Governance

In this section, I advance the argument that concerns for climate justice are indeed a major factor that accounts for the development of climate governance in a more polycentric direction. First, I look at the role of justice concerns in the evolution of the international climate change regime. Next, I focus on the role of justice in facilitating the profile of adaptation and loss and damage. Then I examine the role of justice in creating global carbon markets, the involvement of cities and in the proliferation of transnational climate governance.

18.3.1 Evolution of the International Climate Regime

The first and arguably still the most significant impact of equity concerns with regard to pushing global climate governance in a more polycentric direction is the role of justice-based apprehensions in mobilising developing countries to insist that the global agreement must be negotiated under the UNFCCC. Early accounts of international climate diplomacy suggest that one of the first battles fought between developed and developing countries was over the nature of the international institution that would henceforth oversee global collaboration on climate action (Mintzer, 1994). In keeping with the view that climate change was essentially a technical problem requiring well-defined and limited collaboration over emission reduction technologies, developed countries very much favoured the formation of a narrow technical body (Bodansky, 1993). Developing countries, for their part, maintained that climate change was a developmental problem which not only implicates fundamental issues of equity but also offers the opportunity to address broader issues of economic inequality between developed and developing countries (Bodansky, 1993; Dasgupta, 1994). For these reasons, they insisted that the climate negotiations should be brought under the remit of the UN. They felt that only a UN-driven process could facilitate and oversee the large scale of structural changes needed to address the scale of climate injustices. The UN was also preferred because it would offer developing country parties the ability to express

https://doi.org/10.1017/9781108284646.019 Published online by Cambridge University Press

their voices more effectively. Two famous quotes from top developing country negotiators captured this sentiment.

> The sharing of costs and benefits implied in the conventions could significantly alter the destinies of individual countries.
>
> *(Indian negotiator in Dasgupta,1994: 131)*

> The UN system permits all sides to express their opinions from a position of sovereign equality and therefore to maintain self-respect. Countries acknowledged to have dominant economic, political and military power are forced to take into account the contrasting views of many other countries, however weak those countries may be. This balance promotes a more equitable dialogue.
>
> *(Pakistani negotiator in Hyder, 1994: 203)*

Once the developing countries had succeeded in bringing the climate negotiations under the UN's ambit, they also pressed hard, on the basis of equity concerns, for the UNFCCC to have an expansive objective that accommodated the need for adaptation, food security and economic development alongside the stabilisation of greenhouse gas concentrations. Alongside other provisions on North-South technology transfer (see Chapter 15), financial assistance and capacity building, these provisions contributed to increasing the scope of the regime and creating the space for the involvement of a range of other actors in climate governance. It is conceivable that if climate negotiations had remained within the ambit of a narrow technical body as developed countries initially canvassed, much of global climate governance today would have probably consisted of a range of emission reduction technology agreements between countries, with little or no attention paid to matters such as adaptation and loss and damage (Wrathall *et al.*, 2015).

At the same time, the replacement of the Kyoto Protocol with the Paris Agreement, with all its implications for polycentric climate governance (see Chapters 1 and 2), is also firmly rooted in concerns for justice – especially from the United States, which felt that an equitable climate agreement must create similar, if not the same, obligations for developed countries and the rest of the world, especially rapidly industrialising countries like China, India and Brazil (Okereke and Coventry, 2016; Rajamani, 2016). It is instructive that President Donald Trump cited equity and fairness concerns several times in his speech to announce the withdrawal of the United States from the Paris Agreement.

18.3.2 Adaptation and Loss and Damage

An equity-fuelled emphasis on adaptation is another distinctive way in which justice concerns have facilitated more polycentric climate governance. Although the UNFCCC has always included a mention of adaptation as a key aspect of

https://doi.org/10.1017/9781108284646.019 Published online by Cambridge University Press

international climate governance, much of the focus on early climate diplomacy focused on mitigation (see also Chapter 17). Following the signing of the Kyoto Protocol in 1997, developing countries consistently drew attention to the need to elevate climate adaptation as a key element of international climate governance. This insistence finally yielded tangible results in 2001, when the Marrakech Accords included a range of decisions on adaptation, including the undertaking to formulate the National Adaptation Programmes of Action to identify the urgent and immediate needs and priorities of the Least Developed Countries. Other landmark achievements included the establishment of the Special Climate Change Fund and the Least Developed Countries Fund, both of which were mostly targeted at funding adaptation activities in vulnerable developing countries. As of December 2016, 51 countries had submitted their National Adaptation Programme of Actions, and 46 of them have started implementing some of the National Adaptation Programme of Action activities through the funding from the Least Developed Countries Fund. Subsequently, the 2004 UNFCCC Conference of the Parties (COP) laid out the Buenos Aires Programme of Work on Adaptation and Response Measures, which led to the launch of the Nairobi Work Programme on impacts, vulnerability and adaptation to climate change at COP11 (2005). When parties adopted the Bali Action Plan at COP13 (2007), adaptation was placed alongside mitigation, technology transfer and finance as one of the four pillars of global climate policy.

The raised profile of adaptation has contributed significantly to increasing the multiplicity of climate governance nodes by widening the scope and range of climate governance activities and opening the space for a greater diversity of actors to play a part. Unlike climate mitigation, which focuses mainly on how we use energy, climate adaptation has covered an even wider range of activities, such as health management, rainwater harvesting, improving seed varieties, irrigation, desalination, tourism management, coastal zone management and land use planning, to mention a few (Burton *et al.*, 2002; Paavola and Adger, 2006; see also Chapter 17). At the same time, while the bulk of climate mitigation activities could be managed at the national level, climate adaptation and vulnerability management require local-level activities (Eriksen, Nightingale and Eakin, 2015). Furthermore, adaptation concerns, especially in developing countries, are intricately bound up with poverty reduction and efforts at the local level. These factors have all combined to expand the climate governance landscape and to draw in a diverse range of actors, such the World Health Organization and the UN Food and Agricultural Organization, into climate governance. More recently, a growing emphasis on loss and damage is drawing in more actors (e.g. the International Red Cross) and leading to the creation of additional governance platforms (e.g. the

Hyogo Framework for Action) to deal with disaster risk management and climate insurance (Simon and Leck, 2015).

18.3.3 Carbon Markets

The Clean Development Mechanism (CDM), a market-based mechanism for climate change mitigation created through the Kyoto Protocol, has played a significant role in widening the space for non-state actors to participate in climate governance (Green, 2013). In early international climate diplomacy, developing countries – motivated by equity concerns – demanded an international fund from which they could draw to assist them to take climate action (Dasgupta, 1994; Hyder, 1994). Following contentious negotiations, where the developed countries vehemently opposed the idea of a fund, a compromise was eventually reached to establish a mechanism – the CDM – that allowed developed country governments to invest in 'clean development' projects in poor countries in return for carbon credits. The carbon offsets purchased could then be used to achieve compliance for the developed countries' Kyoto targets. The CDM was thus a product of equity-related contestation in the international regime, with developing countries seeking a fund to help address their developmental needs, and with developed countries preferring a market-based mechanism as a way of meeting this demand. One critical aspect of the CDM, which is in keeping with its market-oriented philosophy, was that it allowed for the participation of myriad companies and other entities to earn carbon credits by investing in emission reduction activities in developing countries. This provision is partly responsible for opening the climate governance space to a variety of public and private entities including firms, institutional investors and third-party validating agencies involved in the mechanism. It is evident, therefore, that the CDM has served to enhance the complexity of the climate regime (Green, 2013) and to increase the polycentric nature of global climate governance.

Alongside the larger CDM-based 'compliance' market, which yields units and credits that count towards developed countries' emission reduction obligations in the UNFCCC, a voluntary carbon offset (VCO) market also emerged, which allowed individuals, companies and governments to purchase carbon offsets to mitigate their own greenhouse gas emissions. With the emergence of VCOs, myriad activities such as electricity use, holiday flights, hotel stays and car rentals were drawn in as legitimate climate actions, and alongside this arose initiatives such as the Voluntary Carbon Standard, the Climate Registry, the Chicago Climate Exchange and numerous other transnational labelling, certification, verification and trading entities that facilitate VCO transactions (Castro, 2016).

Several organisations selling VCOs argued that it offered opportunities for rich consumers to take action on climate change, while simultaneously supporting laudable development projects, such as installing solar panels and building schools in the poor South. Furthermore, by connecting rich, climate-aware and penitent polluters in the North with poor beneficiaries in the South, the voluntary offset programme was thought to play a useful role in the 'co-creation of global environmental values' (Gössling *et al.*, 2009: 1). However, VCOs came under a barrage of criticism: they have been described as an emotional Band-Aid for the rich, a tool for carbon colonialism (Bachram, 2004) and a primitive accumulation strategy (Bumpus and Liverman, 2008) that allows the rich to exploit the poor. The point here is not to analyse the justice implications of the CDM and VCOs (as significant as they may be), but simply to assert that: (1) the creation of both the compliance and voluntary carbon markets have at least in part their rationale in equity concerns; and (2) these carbon markets have served to create self-organising, locally acting, independent actors in ways that have increased the complexity of the regime and restructured climate governance along more polycentric lines.

18.3.4 Cities

Cities have emerged as important actors on climate, and discussions about the polycentric nature of climate governance have often included reference to cities either in their individual capacities or in the form of global transnational networks (Betsill and Bulkeley, 2006; Andonova, Betsill and Bulkeley, 2009; Okereke *et al*., 2009; see also Chapter 5). Some of the notable examples of transnational city initiatives include ICLEI's Cities for Climate Protection programme, the C40 Cities Climate Leadership Group, Climate Alliance and Energy Cities. Given that cities are homes to a significant percentage of the world population and most of the world's high-polluting corporations, and considering that they are also centres of global innovation, it was unavoidable that cities would emerge as important arenas for climate governance. It is not surprising, therefore, that cities have recently been identified as a vital arena for justice contestations about both climate mitigation and adaptation activities (Bulkeley *et al*., 2013; Bulkeley *et al*., 2014).

Lucas (2006), Byrne *et al*. (2016) and many others have noted the role of green infrastructure such as cycle lanes, green spaces and trams in promoting climate justice in cities, while Wolch, Byrne and Newell (2014) and McKendry and Janos (2015), among others, have suggested that greening in cities could have the unintended consequence of promoting injustice and inequality through, for example, increasing housing cost and inducing gentrification. Dawson (2010) has noted the role of cities as hotbeds for climate justice activism, and Bulkeley *et al.* (2014:

31) have argued for an expansion of the concept of climate justice beyond fair procedure and equitable distribution of rights and responsibilities to encompass '"recognition" of existing forms of inequality and the ways in which climate change interventions might serve to either exacerbate or redress these underlying structural issues'. This suggests that questions of justice may manifest in unique ways and require specific contextualisation in different platforms of climate governance. Furthermore, the intense contestations for justice in cities indicate that regardless of the scale, initial rationale or origin of any given climate governance platform, it will only be a matter of time before significant and complex questions of justice arise in such arrangements. At the same time, some studies have found that despite growing visibility and claims, many cities are actually not doing much to reduce carbon emissions (Araos *et al*., 2016). This not only highlights the well-known analytical challenge of how to effectively determine the significance of many of these local level, non-traditional and 'experimental' climate governance initiatives, but it also raises the question of whether these initiatives actively distract attention from the pursuit of equity within the international regime.

18.4 Impact of Polycentricity on Equity

While global climate governance has always exhibited many of the characteristics associated with polycentric governance (see Chapter 1), the global community may have entered a new and distinctive era of even more polycentric climate governance. The question here is: what are the implications of this increasing polycentric climate governance on equity and vice versa? Here, at least three points can be made.

First, equity considerations remain important in the context of the Paris Agreement. The central concern here is whether a more polycentric governance structure has been secured at the expense of creating an effective regime. So far, it is known that the nationally determined contributions pledged by states, if fully implemented, fall far short of what is needed to keep the global mean temperature well below 2°C (du Pont *et al.*, 2016). If parties fail to find a way of ratcheting up their commitments, the result will be more severe climate change impacts on the global poor, which have done the least to cause the problem. This would constitute a gross violation of the key tenet of climate justice. Furthermore, there are serious questions as to whether parties will abide by the pledges to which they have committed themselves. Evidence from the past as well as other areas of international cooperation (e.g. human rights and development assistance) suggests that states often renege on their commitments when confronted by domestic circumstances that are considered more pressing (e.g. elections, unemployment, etc.). Also, given the non-legally binding nature of the pledges, they may be easily

https://doi.org/10.1017/9781108284646.019 Published online by Cambridge University Press

ignored or rolled back, as is evidenced by the case of the Trump administration. In this sense, the new agreement creates challenges relating to transparency and accountability (see also Chapter 12). Some (e.g. van Asselt, 2016) argue that non-state actors can play strong roles in enhancing transparency and accountability under the regime through their roles in reviewing ambition, implementation and compliance. If such roles were to be fulfilled, this would further increase the diversity of actors and push the global governance architecture towards greater polycentricity. However, it is not immediately clear what impact that will have on the actual quality of action and on climate justice.

Second, there is an important ethical question regarding whether the new voluntary and arguably more polycentric climate governance arrangement with its pledge-and-review system downgrades the concept of common but differentiated responsibilities and respective capabilities, which has been the ethical cornerstone of global climate policy. Some have indeed suggested that the new agreement, by demanding pledges from all countries (both developed and developing countries), has managed to side-step contentious equity issues that have long dogged international climate policy (Falkner, 2016). It would seem that the new agreement indeed envisages a diminished role for the principle of common but differentiated responsibilities by skirting over the vexed issue of differentiation between states. However, given that commitments for capacity building – and for North–South financial and technology transfer – remain in the agreement, it can be argued that the principle continues to be an important aspect of the regime post-Paris. One key aspect going forward will be how far the developed countries go to meet their obligations for financial assistance to poor countries under the new agreement. Many of these points are expected to re-emerge strongly in the context of the global stocktake in 2023, which will take place 'in the light of equity and the best available science' (Article 14.1 of the Paris Agreement).

Third, and going beyond the regime, there are legitimate questions as highlighted in the preceding section – especially in relation to cities and offsets – as to the extent to which these multiple sites of governance are actually resulting in meaningful climate action and carbon emissions reduction. Related to this is whether their proliferation and activities may be helping to create the illusion that something is being done and diverting attention that might be better devoted to getting traditional state actors to take ownership for and tackle the problem. It has been observed that climate voluntarism (Okereke, 2007), regime complexity (Green, 2013), carbon markets (Paterson, 1996a) and transnational climate governance (Bulkeley *et al*., 2014; Castro, 2016) are all driven by a neoliberal agenda, the ethical basis of which is not compatible with more radical interpretations of climate justice. The more radical and direct charge is that these multiple climate governance sites are in fact creating spaces for resource-rich Northern actors – including

non-governmental organisations and businesses – to further exploit the poor South under the guise of taking climate action (Bachram, 2004; Lohmann, 2011). Even when manipulation and exploitation are not the original intention, the fact that navigating multiple sites of governance is easier for developed countries (as well as non-state actors) with greater resources raises a distinctive prospect that greater regime complexity could inadvertently exacerbate existing inequalities (Benvenisti and Downs, 2007; Okereke, 2007). One might note, however, that equity concerns have become a stronger part of some of the transnational governance initiatives (e.g. with the Gold Standard including social impacts of offset projects). However, it is interesting that considerations of equity in these initiatives often leads to the creation of additional initiatives and standards which could in turn increase regime complexity and polycentricity.

18.5 Conclusions

This chapter has argued that equity concerns have played a major role in shaping the global climate governance architecture. More specifically, it has suggested that considerations of justice have served to push climate governance in a more polycentric direction. It was shown that the decision to negotiate the international climate agreement under the UN umbrella (rather than by a narrow technical body), the expansion of objective of the agreement signed in 1992 to include adaptation, food security and economic development, the CDM, North–South technology transfer, and capacity building among many other issues, are all rooted to more or less degrees in concerns and controversies around equity and justice. At the same time, the subsequent demise of the Kyoto Protocol model of governing and the emergence of the Paris Agreement are strongly linked to equity concerns.

Furthermore, equity considerations are also central to explaining the emergence of the voluntary carbon markets and several other subnational and transnational initiatives which legitimised the involvement of a wide diversity of actors in climate governance and in so doing rendered the global climate governance architecture more polycentric.

The relationship between equity and polycentricity is complex and even seemingly paradoxical. Equity considerations may be helping to create multiple sites of governance, which may be necessary to accommodate more actors, issues and interests. However, it is not clear that the existence of these multiple sites of governance is necessarily resulting in greater climate justice. In fact, there is a legitimate concern that some of these sites have been created or at least usurped by actors with greater resources for their own advantages and operate in ways that exacerbate existing inequalities. Climate injustices are both symptoms and

magnifiers of broader structures of historical injustice and inequality that characterise the global system. Hence, unless these fundamental structural injustices are addressed, it is not clear that more or less fragmentation will address climate justice. Yet, insofar as equity concerns are inextricably tied to any climate governance arrangement, understanding the equitability of climate action (or inaction) at multiple levels, spaces and jurisdictions – and how these both link the international regime and contribute to ambitious climate governance (or a lack thereof) in the context of global sustainable development – will remain of great relevance both intellectually and in practice.

References

Adger, W. N. (2001). Scales of governance and environmental justice for adaptation and mitigation of climate change. *Journal of International Development*, 13(7), 921–931.

Agarwal, A. and Narain, S. (1991). *Global Warming in an Unequal World: A Case of Environmental Colonialism*. New Delhi: Centre for Science and Environment.

Andonova, L., Betsill, M. and Bulkeley, H. (2009). Transnational climate governance. *Global Environmental Politics*, 9(2), 52–73.

Araos, M., Berrang-Ford, L. and Ford, J. *et al*. (2016). Climate change adaptation planning in large cities: a systematic global assessment. *Environmental Science and Policy*, 66, 375–382.

Aristotle. (1976). *The Nicomachean Ethics*. Cambridge, MA: Harvard University Press.

Bachram, H. (2004). Climate fraud and carbon colonialism: the new trade in greenhouse gases. *Capitalism Nature Socialism*, 15(4), 5–20.

Baer, P., Kartha, S., Athanasiou, T. and Kemp-Benedict, E. (2009). The greenhouse development rights framework: drawing attention to inequality within nations in the global climate policy debate. *Development and Change*, 40(6), 1121–1138.

Baker, L., Newell, P. and Phillips, J. (2014). The political economy of energy transitions: the case of South Africa. *New Political Economy*, 19(6), 791–818.

Barrett, S. (2014). Subnational climate justice? Adaptation finance distribution and climate vulnerability. *World Development*, 58(C), 130–142.

Benvenisti, E. and Downs, G. (2007). The empire's new clothes: political economy and the fragmentation of international law. *Stanford Law Review*, 60(2), 595–631.

Betsill, M. and Bulkeley, H. (2006). Cities and the multilevel governance of global climate change. *Global Governance*, 12(2), 141–159.

Bodansky, D. (1993). The United Nations Framework Convention on Climate Change: a commentary. *Yale Journal of International Law*, 18(2), 451–558.

Bratman, E. (2015). Passive revolution in the green economy: activism and the Belo Monte Dam. *International Environmental Agreements: Politics, Law and Economics*, 15(1), 61–77.

Bulkeley, H., Carmin, J. and Castán Broto, V., Edwards, G. A. and Fuller, S. (2013). Climate justice and global cities: mapping the emerging discourses. *Global Environmental Change*, 23(5), 914–925.

Bulkeley, H., Edwards, G. and Fuller, S. (2014). Contesting climate justice in the city: examining politics and practice in urban climate change experiments. *Global Environmental Change*, 25, 31–40.

Bumpus, A. and Liverman, D. (2008). Accumulation by decarbonisation and the governance of carbon offsets. *Economic Geography*, 84(2), 127–155.
Burton, I., Huq, S., Lim, B., Pilifosova, O. and Schipper, E. L. (2002). From impacts assessment to adaptation priorities: the shaping of adaptation policy. *Climate Policy*, 2(2–3), 145–159.
Byrne, J., Ambrey, C. and Portanger, C. *et al*. (2016). Could urban greening mitigate suburban thermal inequity? The role of residents' dispositions and household practices. *Environmental Research Letters*, 11(9), 095014.
Cao, M., Wang, Q. and Cheng, Y. (2016). Remedies for loss and damage caused by climate change from the dimension of climate justice. *Chinese Journal of Population Resources and Environment*, 14(4), 253–261.
Castro, P. (2016). Common but differentiated responsibilities beyond the nation state: how is differential treatment addressed in transnational climate governance initiatives? *Transnational Environmental Law*, 5(2), 379–400.
Dasgupta, C. (1994). The climate change negotiations. In *Negotiating Climate Change: The Inside Story of the Rio Convention*, ed. I. M. Mintzer and J. A. Leonard. Cambridge: Cambridge University Press, 129–148.
Dawson, A. (2010). Climate justice: the emerging movement against green capitalism. *South Atlantic Quarterly*, 109(2), 313–338.
Derman, B. (2014). Climate governance, justice, and transnational civil society. *Climate Policy*, 14(1), 23–41.
Devine-Wright, P. (2017). Environment, democracy, and public participation. In *The International Encyclopaedia of Geography*, ed. D. Richardson, N. Castree and M. F. Goodchild *et al.* Oxford: Wiley, 1–10.
du Pont, Y. R., Jeffery, M. L. and Gütschow, J. *et al.* (2017). Equitable mitigation to achieve the Paris Agreement goals. *Nature Climate Change*, 7(1), 38–43.
Eriksen, S., Nightingale, A. and Eakin, H. (2015). Reframing adaptation: the political nature of climate change adaptation. *Global Environmental Change*, 35, 523–533.
Falkner, R. (2016). The Paris Agreement and the new logic of international climate politics. *International Affairs*, 92(5), 1107–1125.
Frumhoff, P., Heede, R. and Oreskes, N. (2015). The climate responsibilities of industrial carbon producers. *Climatic Change*, 132(2), 157–171.
Gössling, S., Haglund, L., Kallgren, H., Revahl, M. and Hultman, J. (2009). Swedish air travellers and voluntary carbon offsets: towards the co-creation of environmental value? *Current Issues in Tourism*, 12(1), 1–19.
Green, J. (2013). Order out of chaos: public and private rules for managing carbon. *Global Environmental Politics*, 13(2), 1–25.
Grubb, M. (1995). Seeking fair weather: ethics and the international debate on climate change. *International Affairs*, 71(3), 463–496.
Gupta, J. (2014). 'Glocal' politics of scale on environmental issues: climate change, water and forests. In *Scale-Sensitive Governance of the Environment*, ed. F. Padt, P. Opdam, N. B. P. Polman and C. J. A. M. Termeer. Oxford: Wiley, 140–156.
Gupta, J. (2015). Normative issues in global environmental governance: connecting climate change, water and forests. *Journal of Agricultural and Environmental Ethics*, 28(3), 413–433.
Heede, R. (2014). Tracing anthropogenic carbon dioxide and methane emissions to fossil fuel and cement producers, 1854–2010. *Climatic Change*, 122(1–2), 229–241.
Howarth, R. (1992). Intergenerational justice and the chain of obligation. *Environmental Values*, 1(2), 133–140.

Hyder, T. O. (1994). Looking back to see forward. In *Negotiating Climate Change: The Inside Story of the Rio Convention*, ed. I. M. Mintzer and J. A. Leonard. Cambridge: Cambridge University Press, 201–226.

Intergovernmental Panel on Climate Change (IPCC). (2014). Summary for policymakers. In *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, ed. O. Edenhofer, R. Pichs-Madruga and Y. Sokona *et al*. Cambridge: Cambridge University Press.

Kahane, D. and MacKinnon, M. (2015). Public Participation, Deliberative Democracy, and Climate Governance: Learning from the Citizens' Panel on Edmonton's Energy and Climate Challenges. Available at: http://cisdl.org/public/docs/KAHANE.pdf [Accessed 29 August 2017].

Lees, E. (2017). Responsibility and liability for climate loss and damage after Paris. *Climate Policy*, 17(1), 59–70.

Lidskog, R. and Elander, I. (2010). Addressing climate change democratically: multi-level governance, transnational networks and governmental structures. *Sustainable Development*, 18(1), 32–41.

Lohmann, L. (2011). Capital and climate change. *Development and Change*, 42(2), 649–668.

Lucas, K. (2006). Providing transport for social inclusion within a framework for environmental justice in the UK. *Transportation Research Part A: Policy and Practice*, 40(10), 801–809.

Marino, E. and Ribot, J. (2012). Adding insult to injury: climate change, social stratification, and the inequities of intervention. *Global Environmental Change*, 22(2), 1–7.

Matt, E. and Okereke, C. (2014). A neo-Gramscian account of carbon markets. In *The Politics of Carbon Markets*, ed. B. Stephan and R. Lane. Abingdon: Routledge, 113–132.

McKendry, C. and Janos, N. (2015). Greening the industrial city: equity, environment, and economic growth in Seattle and Chicago. *International Environmental Agreements: Politics, Law and Economics*, 15(1), 45–60.

Mintzer, I. (ed.). (1994). *Confronting Climate Change: Risks, Implications and Responses*. Cambridge: Cambridge University Press.

Newell, P. and Mulvaney, D. (2013). The political economy of the 'just transition'. *The Geographical Journal*, 179(2), 132–140.

Newell, P. and Phillips, J. (2016). Neoliberal energy transitions in the South: Kenyan experiences. *Geoforum*, 74, 39–48.

Okereke, C. (2007). *Global Justice and Neoliberal Environmental Governance: Ethics, Sustainable Development and International Co-operation*. London: Routledge.

Okereke, C. (2010) Climate justice and the international regime. *WIREs Climate Change*, 1(3), 462–474.

Okereke, C. (2011). Moral foundations for global environmental and climate justice. *Royal Institute of Philosophy Supplement*, 69, 117–135.

Okereke, C., Bulkeley, H. and Schroeder, H. (2009). Conceptualizing climate governance beyond the international regime. *Global Environmental Politics*, 9(1), 58–78.

Okereke, C. and Charlesworth, C. (2015). Environmental and ecological justice. In *Advances in International Environmental Politics*, ed. M. Betsill, K. Hochstetler and D. Stevis. New York: Palgrave Macmillan, 123–147.

Okereke, C. and Coventry, P. (2016). Climate justice and the international regime: before, during, and after Paris. *WIREs Climate Change*, 7(6), 834–851.

Ostrom, V., Tiebout, C. and Warren, R. (1961). The organization of government in metropolitan areas: a theoretical inquiry. *American Political Science Review*, 55(4), 831–842.
Page, E. (1999). Intergenerational justice and climate change. *Political Studies*, 47(1), 53–66.
Paterson, M. (1996a). *Global Warming and Global Politics*. London: Routledge.
Paterson, M. (1996b). International justice and global warming. In *The Ethical Dimensions of Global Change*, ed. B. Holden. Basingstoke: Palgrave Macmillan, 181–201.
Paterson, M. (2001). Principles of justice in the context of global climate change. In *International Relations and Global Climate Change*, ed. D. Sprinz and U. Luterbacher. Cambridge, MA: MIT Press, 119–126.
Paavola, J. and Adger, W. (2006). Fair adaptation to climate change. *Ecological Economics*, 56(4), 594–609.
Peel, J. and Osofsky, H. (2015). *Climate Change Litigation*. Cambridge: Cambridge University Press.
Rajamani, L. (2016). Ambition and differentiation in the 2015 Paris Agreement: interpretative possibilities and underlying politics. *International and Comparative Law Quarterly*, 65(2), 493–514.
Raupach, M., Davis, S. and Peters, G. *et al*. (2014). Sharing a quota on cumulative carbon emissions. *Nature Climate Change*, 4(10), 873–879.
Schaeffer, M., Baarsch, F. and Adams, S. *et al*. (2014). *Africa's Adaptation Gap Technical Report: Climate-change Impacts, Adaptation Challenges and Costs for Africa*. Nairobi: United Nations Environment Programme.
Schlosberg, D. (2012). Climate justice and capabilities: a framework for adaptation policy. *Ethics and International Affairs*, 26(4), 445–461.
Schlosberg, D. (2013). Theorising environmental justice: the expanding sphere of a discourse. *Environmental Politics*, 22(1), 37–55.
Schroeder, H. (2010). Agency in international climate negotiations: the case of indigenous peoples and avoided deforestation. *International Environmental Agreements: Politics, Law and Economics*, 10(4), 317–332.
Shi, L., Chu, E. and Anguelovski, I. *et al*. (2016). Roadmap towards justice in urban climate adaptation research. *Nature Climate Change*, 6(2), 131–137.
Shue, H. (1992). The unavoidability of justice. In *The International Politics of the Environment*, ed. F. Hurrell and B. Kingsbury. Oxford: Oxford University Press, 373–397.
Shue, H. (1993). Subsistence emissions and luxury emissions. *Law and Policy*, 15(1), 39–60.
Shukla, P. (1999). Justice, equity and efficiency in climate change: a developing country perspective. In *Fair Weather: Equity Concerns in Climate Change*, ed. F. L. Tóth. London: Earthscan, 145–159.
Simon, D. and Leck, H. (2015). Understanding climate adaptation and transformation challenges in African cities. *Current Opinion in Environmental Sustainability*, 13, 109–116.
Stevenson, H. and Dryzek, J. (2014). *Democratizing Global Climate Governance*. Cambridge: Cambridge University Press.
Terry, G. (2009). No climate justice without gender justice: an overview of the issues. *Gender and Development*, 17(1), 5–18.
van Asselt, H. (2016). The role of non-state actors in reviewing ambition, implementation, and compliance under the Paris Agreement. *Climate Law*, 6(1), 91–108.

Verbruggen, A. (2008). Windfalls and other profits. *Energy Policy*, 36(9), 3249–3251.
Wiedmann, T., Schandl, H. and Lenzen, M. *et al*. (2015). The material footprint of nations. *Proceedings of the National Academy of Sciences of the United States of America*, 112(20), 6271–6276.
Wolch, J., Byrne, J. and Newell, J. (2014). Urban green space, public health, and environmental justice: the challenge of making cities 'just green enough'. *Landscape and Urban Planning*, 125, 234–244.