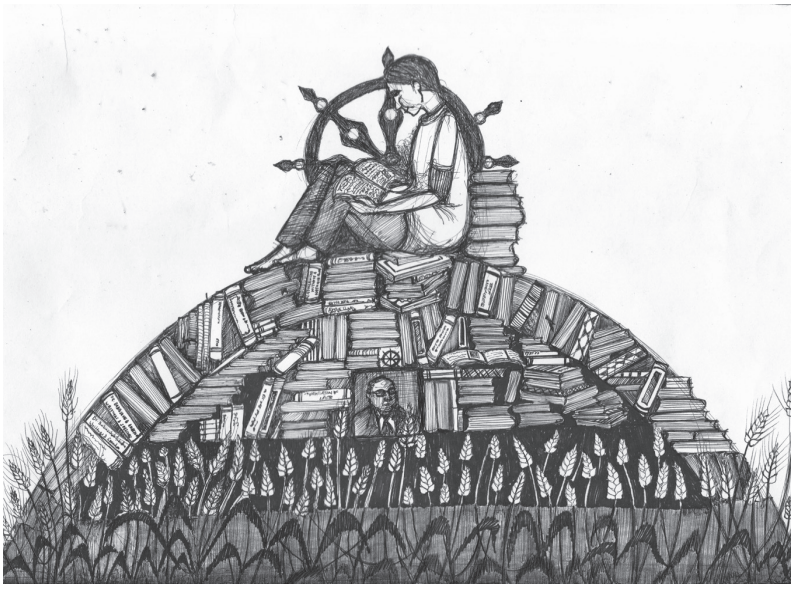


Empowerment by Nidhin Donald

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

Chapter 1

Introduction
Climate Justice in India

Prakash Kashwan

Arundhati Roy famously described the COVID-19 pandemic as a

> portal, a gateway between one world and the next. We can choose to walk through it, dragging the carcasses of our prejudice and hatred, our avarice, our data banks and dead ideas, our dead rivers and smoky skies behind us. Or we can walk through lightly, with little luggage, ready to imagine another world. And ready to fight for it. (Roy 2020)

As inspiring and insightful as these words are, such juxtaposition of utopia and dystopia barely scratches the surface of what and who we *are* as a nation. The soul-crushing images of burning pyres in parking lots turned into makeshift graveyards, which international and national media have immortalized, offer a clue, as does the sombre poetry of Parul Khakhar (Tripathi 2021). India is a land pockmarked with a million fires.

The COVID-19 crisis has come as a shock to many middle-class Indians. Yet, to India's Dalits, Adivasis, women, and other marginalized groups, haunted by centuries of oppression, this crisis is yet another in a long list of historical and ongoing crises. For example, the coalfields of Jharia in Jharkhand have been burning for over a century now. As a result, at least 130,000 families have, quite literally, lived through a century-long trial by fire (Rahi 2019). Since 1995, the state-owned Bharat Coking Coal Limited (BCCL) has claimed to have a 'master plan', which is possibly gathering dust in some almirah of the coal ministry (S. Kumar 2021). One would imagine that a pandemic like COVID-19 might scare the minister whose job includes ensuring

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

the welfare of the 3.6 million people who work in mines with a less than adequate supply of fresh air. Yet, in 2020, India's coal minister valorized coal workers as 'our coal warriors who are toiling day and night to keep the lights on even during the corona pandemic' (Press Information Bureau 2020). They toiled very hard indeed.

A year later, as India struggled to confront the monstrous second wave of the pandemic, Central Coalfields Limited (CCL), a subsidiary of Coal India Limited (CIL), recorded the highest-ever single-day coal dispatch of 80 railway rakes (PNS 2021). Unfortunately, such exceptional productivity in the middle of a pandemic came at a steep cost, as at least 400 CIL employees died from COVID-19. CIL appealed publicly to Prime Minister Narendra Modi, requesting about 1 million doses of vaccines for its employees (Singh 2021). However, it is unclear if CIL's request was fulfilled. Nevertheless, India's coal workers and the residents of Jharkhand, the latter hardened by century-long neglect and violence of extractivism, continue to be caught in the crossfire between advocates of national development and stakeholders in the ongoing contestations over the impending renewable energy transition. The involvement of these varied parties and interests has not translated into negotiating power for mine workers, as seen among their counterparts in the West, who have managed to mobilize under the banner of a just transition.

In the midst of the COVID-19 pandemic, the Government of India 'unleashed coal', that is, they opened up coal mining to the private sector. In doing so, Prime Minister Modi declared that he was 'unshackling [coal mining] from decades of lockdown', as he wanted 'India … to be a net exporter of coal' (Varadhan 2020). This celebration of coal is linked to long-standing traditions of coal nationalism (Lahiri-Dutt 2016). For the Indian prime minister, the advocacy and support for expanding coal mining does not appear to conflict with the country's ambition of playing a prominent role in global climate negotiations. At the Leaders Summit on Climate convened by United States President Joe Biden, Modi announced the US–India Clean Energy Agenda 2030 Partnership, which is to 'proceed along two main tracks: the Strategic Clean Energy Partnership and the Climate Action and Finance Mobilization Dialogue' (CNBC TV18 2021). How might these partnerships and India's continued expansion of coal mining shape India's climate action, and the welfare of the multitude of coal miners, most of whom work under extremely exploitative conditions? What will happen to the young boys descending steep chutes – little more than 'rat holes' – to dig coal from hard rock, with just a pickaxe and a torch, in the Jaintia Hills in eastern India (Chandran 2016)?

These snapshots from the year of the pandemic help to outline how Indian leaders respond to crisis situations. They also offer a glimpse of what a major and widespread crisis portends for the majority of India's people, whose lives are locked in multiple

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

intersecting circles of crises and immiseration. A consideration of how myriad social, economic, and ecological crises reinforce the vulnerabilities experienced by the most marginalized, and their efforts to overcome those vulnerabilities, should be at the heart of the pursuits of climate justice.

Climate change in a grossly unequal society

The climate crisis is occurring in a world of extreme inequalities. The history of disproportionate contributions to the accumulation of greenhouse gases (GHGs) responsible for the current crisis is truly staggering. As of 2019, a handful of countries, including the United States, United Kingdom, countries of the former Soviet Union, Germany, France, Poland, Canada, and Japan, contributed about 75 per cent of the world's historically accumulated emissions. China alone was responsible for about 18 per cent. The majority of the world's countries collectively contributed only 7 per cent to the total GHG emissions present in the atmosphere today. These inequalities would be even more significant if one were to account for the transfer of consumption emissions via international trade or travel. India has contributed less than 3 per cent to the accumulated emissions (Ritchie 2019). Despite contributing a negligible share to the accumulated stock of GHGs, various global indices rank India among the countries most vulnerable to the effects of the ongoing climate crisis (Reuters 2018). As such, India is a victim of international injustices associated with the climate crisis.

India is also home to the largest population of poor people anywhere in the world and is one of the most unequal countries globally today. Ranked according to the Gini coefficient, a national-level measure of inequality in income distribution, India was second only to Russia as of 2018 (Chaudhuri and Ghosh 2021). Concepts such as income inequality and poverty do not quite capture the deep-seated nature and wide-ranging effects of caste-based oppressions. Dalit men are lynched for falling in love with non-Dalit women, and Dalit women are routinely raped with impunity. India's National Crime Records Bureau (NCRB) reported that 10 Dalit women were raped daily in 2019 (Kumar 2020). Even more worryingly, Dalit women are often 'raped to keep them "in their place"' (Nagaraj 2020). The disadvantages that Dalit women face are a product of the oppressive caste system and patriarchal norms at home and in the society at large. The oppression of Dalit men and women is instrumental to the power, authority, and privileges upper-caste men enjoy in India. Caste hierarchy is therefore an embodiment of violent social norms with widespread social acceptance in today's India (Coffey et al. 2018).

Considering these challenges, the editor and contributors to this volume have grappled with how best to refer to a normatively repelling social reality in which

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

many Indians consider references to 'lower' caste and 'upper' caste as objective descriptions. Caste is socially constructed and therefore always political, even when discussed in other contexts. In this text, we will use the vocabulary of 'upper caste' and 'lower caste' to designate groups of people, their experiences, and how they are represented in public discourse. The quotation marks here indicate our personal disavowal of this system of caste hierarchy and its continued normalization in public discourses and writings.[1] But for the sake of brevity, we use these phrases without scare quotes in the remainder of this volume.

The nexus of the climate crisis and socioeconomic and political inequalities is at the root of various types of climate injustices. For decades, hundreds of thousands of poor Indians have died prematurely because of unacceptably high levels of air and water pollution. A recent study estimates that about 2.5 million people in India die every year because of toxic air (30.7 per cent of all deaths in the country) (Vohra et al. 2021). Similarly, the tens of millions of people displaced by annual floods, the hundreds of deaths because of heatwaves, and enormous disruptions to poor people's lives due to climate disasters find scant mention in the national press. These statistics are rarely a subject of public debate in India, except when a health minister, who also happened to be a doctor, denied the existence of data that link air pollution to premature deaths in India (Kaur 2019). Clearly, the worst impacts of air pollution and the climate crisis are being denied, ignored, and normalized, because these burdens fall on the urban poor, women, Dalits, Adivasis, Muslims, and other marginalized people with little political voice. Accordingly, India is an archetypal site for the manifestation of the myriad injustices associated with the climate crisis.

The COVID-19 pandemic has further exacerbated India's inequality problem. The catastrophic failure to plan for the widely anticipated second wave of the COVID-19 pandemic exposed the dark underbelly of India's public institutions, and the lack of freedoms afforded to the press and civil society (Ghoshal and Das 2021). In 2020 alone, an additional 75 million people in India were pushed into poverty, accounting for nearly 60 per cent of the global increase in poverty that year (Lee 2021). In the same period, India counted 55 new billionaires, or about one billionaire every week, despite a major economic slowdown in the wake of the hastily declared and rashly managed nationwide lockdown (Bhargava 2021).

Unequal societies are badly governed – they do not have what it takes to rein in the exploitative and polluting models of extractive development that corporations and political-economic elite find beneficial and perpetuate. A careful reading of the

[1] I am grateful to Srilata Sircar for this formulation.

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

available scientific evidence would suggest that inequality, not poverty, is the biggest polluter (Oxfam International 2020).

Failure to remedy environmental degradation and stabilize the global climate system aggravates these injustices; yet not all environmental and climate action addresses injustices. Paradoxically, many types of interventions meant to mitigate the impacts of climate change are likely to further reinforce these pre-existing inequalities. As this volume goes to press, 1,500 families in central Assam's Nagaon district are fighting to regain control of 276 *bighas* (a varying measure of land area used in India and other parts of south Asia) of farmland forcibly acquired for a 15-MW (megawatt) solar plant being developed by Azure Power Forty Private Limited. According to a group of over 150 academics, activists, lawyers, students, filmmakers, and other concerned citizens, the land acquisition process in this case violates Assam's land laws as well as the residents' human rights (*The Hindu* 2021). Similar injustices are likely to repeat all over the country, as India plans to rely on the expansion of solar and wind power to achieve its intended nationally determined contributions (INDCs) to the Paris Climate Agreement. However, if not handled with the utmost care, this keenly anticipated renewable energy revolution could add significantly to India's long-standing and worsening land wars (Levien 2013).

To those focusing on radical climate action, the injustices resulting from such action may seem mere aberrations. Indeed, in the Global North, where debates surrounding climate justice have been around for longer, some scholars and activists equate radical climate action to climate justice (cf. Kashwan 2021). However, the climate crisis, climate denialism, and the dismal outcomes of international climate negotiations share the same roots: the influence of exploitative and extractive systems of global capitalism, which are propelled by a nexus of multilateral financial institutions and national political and economic elites. The power of this loosely organized, yet extremely nimble, web of transnational elite networks is rooted in histories of colonialism, imperialism, and neocolonialism (Bachrach and Baratz 1962). Activists and scholars focusing on global capitalism have paid inadequate attention to how such networks thrive on intersectional inequalities borne of the confluence of gender, caste, class, and religious identities within countries. To this day, these inequalities help forge social relations, institutional arrangements, and political structures that shape socioeconomic, environmental, and policy outcomes. Furthermore, the climate crisis greatly exacerbates these inequalities and injustices.

Climate Justice in India is the first comprehensive book-length effort to examine how the climate crisis and some of the proposed solutions are inextricably linked to social and economic justice in Indian society. In this volume, we push back against climate policy discussions that deprioritize questions of inequalities and injustice, as

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

if they can be addressed post facto. Some policymakers and policy experts assume that the agenda of climate justice has potentially negative consequences for India's international negotiating positions (Swarnakar 2019). However, such nationalism rings hollow. It is evident that no nation can thrive, internationally or locally, without ensuring the well-being of all of its people, environment, and ecology.

Analysing the policies and politics of climate action is the necessary first step to preventing vested interests from derailing meaningful progress in climate action and climate justice. Yet better data or improved analyses of how to 'balance' the considerations of climate action with those of climate justice are unlikely to be sufficient to bring about such a change. Decades of social science evidence suggests that meaningful institutional, political, and economic reforms that serve the interests of marginalized groups like Adivasis, Dalits, and women cannot be accomplished without formidable social and political mobilization (Kashwan 2017). With this in mind, we articulate a politically conscious approach to climate justice that draws on social scientific theories suited to an analysis of the socioeconomic and political realities of India. We take the histories of colonialism and the realities of neo-imperial capitalist capture seriously; we also avoid post-modernist abstractions that fail to address the role of specific actors and agencies in producing climate vulnerabilities at the global, national, and sub-national levels. Moreover, since the beneficiaries of the status quo pursue their agendas by taking over political and policy processes, we need a forceful engagement with these processes to reclaim power from extant regimes.

Through the chapters in this volume, we make five key contributions to the ongoing debates and nascent scholarship on climate justice in India. One, we advance debates on climate justice beyond the long-standing stalemate between questions of international climate justice and the grave domestic inequalities that climate change is likely to greatly exacerbate. For instance, we examine the contents of national- and state-level climate action plans, analyse the evolution of urban climate governance and investigate the relationship between economic inequality and state-level carbon emissions. Two, we bridge the ever-present gap between critical social science scholarship and largely technocratic, apolitical policy-oriented writings. We employ historically informed, empirically grounded, and conceptually rich social science analyses to inform policy and programmatic debates about climate justice in India. For example, in two chapters, we apply the concept of intersectionality to investigate how gender- and caste-based inequalities together influence access to drinking water and the outcomes of agroecological farming.

Three, we seek a carefully curated balance between conceptual richness and the sectoral and contextual specificity of the varied manifestations of climate injustice

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

in both rural and urban India. This includes discussions on inequalities in carbon emissions, energy justice, natural resource extraction, gender- and caste-based determinants of access to clean drinking water and agroecological farming, urban climate justice, climate movements, and analyses of national and state climate action plans using a climate justice lens. Four, our contributions are grounded in a deep understanding of the Indian context, but each chapter also speaks more broadly to themes prominent in debates on climate justice in other countries of the Global South. Five, the contributions to *Climate Justice in India* reflect a philosophy of theoretical, methodological, and epistemological pluralism.

In the next section, I offer information essential to understanding the historical and more recent causes of the climate crisis. The third section contains a broad framework for climate justice, which formed the basis of my editorial engagement with the volume's contributors. In this framework, I complement the key constituent elements of justice, as argued by justice theorists, with a focus on political and policy processes needed to bring about transformative change. Analyses of policies and policy processes include thinking through the workings of intersectional inequalities given India's social, economic, and political contexts. In the final section, I offer a broad overview of the major ongoing debates on climate justice and, accordingly, situate individual contributions to this volume.

Background: Colonial and post-colonial sources of climate vulnerability

The most common conceptualizations of climate justice speak of an uneven distribution of the costs and burdens of the ongoing climate crisis along axes of nationality, ethnicity, gender, sexuality, caste, and class, among others. These are the distributional aspects of climate justice. Other important dimensions of justice include procedural, recognitional, and reparational work. A systematic analysis of the historical, political, and economic contexts of the genesis and development of the ongoing climate crisis is indispensable to a nuanced understanding of the contemporary manifestations of injustice and the pursuit of climate justice.

Colonization, imperialism, and capitalism

Colonialism is the domination and subjugation of a people by another, most commonly the settler and non-settler European colonization of the Americas, Australia, and parts of Africa and Asia (Kohn and Reddy 2017). Colonial rule led to massive extractions of natural resources and the rampant exploitation of people

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

in the colonies to serve imperial expansion. The mobilization of the unpaid labour of colonized and enslaved people for the production of 'cheap nature' were central to 'the endless accumulation of capital' (Moore 2016, 79). Economist Utsa Patnaik estimates that between 1765 and 1938, the East India Company and the British Raj siphoned off at least £9.2 trillion ($44.6 trillion) worth of unaccounted wealth (Sreevatsan 2018). Patnaik also shows that the combined drain from Asia and the West Indies constituted about 6 per cent of Britain's gross domestic product (GDP) from 1780 to 1820, a crucial period in its industrial transition.

The processes of colonialism and capitalism shaped the political-economic system that emerged in the postcolonial era. This included the Bretton Woods Institutions, that is, the World Bank and the International Monetary Fund founded in 1944. Gross inequalities in international economic, trade, and financial systems enable the continued exploitation of resources and people on the periphery and fuel patterns of wasteful and profligate consumption in the Global North. These patterns of resource use drive the exploitation of the global atmospheric commons, which act as sinks for GHGs from industrially advanced countries (Bassey 2012). However, the legacies of colonization extend far beyond material exploitation. Colonialism deepened the feudal tendencies inherent in Indian society and weaved caste hierarchies into political and institutional structures. Such institutionalization of social and political hierarchies initiated processes of internal colonialism, in which large sections of populations within formerly colonized states were colonized by their own ruling elite, often acting in the name of 'development' (Calvert 2001, 51). More broadly, the present-day social, cultural, psychological, political, economic, and institutional effects of colonialism are equally important (O'Dowd and Heckenberg 2020).

Let me cite three examples to illustrate the contemporary effects of colonialism and the postcolonial politics of resource control. One, policies related to the management of natural resources that rely on forest–farm distinctions draw on caste–tribe differentiations that were present in precolonial India but solidified significantly under colonial rule. These distinctions supported resource extraction regimes that were crucial to the colonial project and continue to shape contemporary models of forest governance, regimes of forest rights, and the extraction of valuable minerals, which fuels domestic and global capitalism (Kashwan 2017). Two, the development of the ecologically fragile northeast India as the country's hydropower hub is a direct result of New Delhi's political dominance, long-standing patterns of uneven regional development, and a reliance on top-down models of development and governance in 'a racialized frontier region' (Gergan 2020, 1–2). Three, most Indian cities were designed with the dual goals of facilitating assorted trade and commerce and protecting the health and wealth of a small population of colonial elite, while

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

pushing the majority of urban populations to the margins. For example, colonial town planners, financiers, and property developers collectively secured Bombay as a space for commerce by categorizing different types of neighbourhoods as legitimate or illegitimate (Chhabria 2019). This helped 'delimit the city as a distinct object and progressively exclude laborers and migrants, who were forced into the so-called "slums"' (Chhabria 2019). The colonial-era patterns of class-driven differentiation are also evident in present-day Mumbai (Farooqui 1996; Bhide 2015).

These examples are meant to illustrate specific outcomes that are rooted in and reinforce well-entrenched social, economic, and political inequalities. The patterns of pervasive disparities common to settler colonial societies of the Americas are also present in India, such as in the discriminatory and subjugated incorporation of the states and peoples of northeastern India (Noni and Sanatomba 2015). Additionally, internal colonization also manifests via caste- and tribe-based inequalities in every sphere of the economy, society, and politics (Desai and Dubey 2011). Routine and generalized policies and programmes cannot address such deep-seated inequalities, which requires deeper engagement.

Caste-, tribe-, and ethnicity-based discrimination

Adivasi communities are distributed across regions rich in forests and other natural resources; this has made them targets of land grabs, resource grabs, and green grabs, that is, taking control of a territory in the name of environmental conservation (Kashwan, Kukreti, and Ranjan 2021). Similarly, Dalits and Muslims have been subjected to political and economic control by beneficiaries of the status quo, primarily people from the higher castes (Dey 2019). The pervasive nature of such inequalities is evident in the fact that Dalits, Adivasis, and Muslims are under-represented at the highest levels in nearly every sector of society, including the press, cinema, science, higher education, and political leadership. Some scholars argue that the emphasis in social science research on 'the binary of colonialism versus nationalism' is why Dalits and their questions have been missing from academic knowledge production in India (Rawat and Satyanarayana 2016, 9). The existence of internal colonialism and these deeply entrenched inequalities has grave implications for environmental and climate vulnerabilities.

Take, for example, the widely discussed topic of air pollution. It is well known that exposure to air pollution depends on class position – the poor are exposed to the worst forms of pollution for the longest duration in a 24-hour cycle (Wu et al. 2020). Yet 'class' is only one of the many dimensions of inequality and discrimination that is relevant to the production of vulnerabilities. Gender is another important

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

determinant of disadvantage. A study by the Council on Energy, Environment and Water (CEEW) shows that household heating and cooking accounted for 40 per cent of the pollution in Delhi in December 2020 and January 2021 (*Livemint* 2021). Indeed, the burden of household chores falls disproportionately on women, who experience the most direct impacts of indoor air pollution in both urban and rural settings.

The enormity of the problem becomes apparent when one accounts for the cross-cutting effects of caste, class, gender, and religion. Addressing such intersectional disadvantages requires broad interventions and transformative change in the social, cultural, economic, and political spheres. Climate crisis exacerbates the effects of pre-existing inequalities. Moreover, the pervasive nature of multiple inequalities blunts public demand for more egalitarian policies (Melo, Ng'ethe, and Manor 2012). Clearly, the pursuit of climate justice is a daunting challenge. However, attempts to narrow the definition of climate justice are unhelpful. Climate justice simply cannot be separated from broader and entrenched socioeconomic and political inequalities.

Climate justice: a conceptual framework

The vastness and complexity of the climate justice agenda necessitate the use and development of theories and insights from multiple disciplines. Of course, interdisciplinary and collaborative discussions and interventions among researchers, activists, and policymakers require all participants to be familiar with the basic tenets of justice theory and how these may be combined with insights from the social and natural sciences. In the absence of such engagement, as Lianghao Dai argues, we risk promoting fake interdisciplinary collaborations (Dai 2020).

In this section, for a more comprehensive understanding of climate justice and its manifestations, I introduce concepts foundational to justice theory. These include the three constituent elements of justice – distribution, procedural, and recognition – which justice theorists use frequently. Towards the end of this section, I discuss two additional aspects – restitution and reparation – that have entered climate justice debates relatively recently.

Distributional justice refers to the fair distribution of the costs and burdens of climate change and societal responses to it. As mentioned previously, climate change responses create opportunities for some, and costs and burdens for others. Carbon offset projects, in which industrial giants and multinational corporations 'compensate' for their emissions by funding forest conservation projects in the Global South, have led to the violent dispossession of indigenous and other forest-dependent people (Kashwan 2015; Ghosh 2020). Researchers refer to these and other

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

projects that seek to recompense for industrial emissions and consumerist lifestyles in the Global North as instances of carbon colonialism (Agarwal and Narain 1991). Procedural justice is about whether the groups most affected by climate change have adequate opportunities and the means to engage in the brainstorming, design, and implementation of climate policies and actions. Recent scholarship urges us to look beyond the distributional and procedural dimensions to examine whether marginalized groups are recognized as legitimate claimants and stakeholders in relevant political and policy processes, and if their experiences of the costs and risks of climate change inform the design of policies and programmes meant to advance climate action (Schlosberg and Collins 2014; Chu and Michael 2019).

Each of the three dimensions of climate justice can be applied to one or more of the following areas of climate change policy and research: climate mitigation, climate adaptation, and climate resilience. Climate mitigation includes actions aimed at reducing and eliminating GHG emissions. Climate adaptation refers to the measures intended to minimize the impacts of climate change, some of which may help reduce vulnerabilities to the future effects of climate change.

The failure of the international community and national government to ensure just climate mitigation and adaptation interventions means that ongoing climate change imposes unmitigated burdens and costs on poor and marginalized groups. Many of these impacts have been studied through the lens of climate resilience, which draws attention to anticipatory interventions meant to strengthen communities' abilities to withstand the effects of climate change (Kim, Marcouiller, and Woosnam 2018). However, in some cases, the concept of 'resilience' has been used to focus too narrowly on the actions and strategies of vulnerable communities, without accounting for the structural forces of colonialism, patriarchy, and casteism, which are responsible for communities' lack of resilience or high vulnerability (Cote and Nightingale 2012; Kashwan and Ribot 2021).

The intersection of the two analytical planes discussed here – three constituent elements of justice (distributional, procedural, and recognition) and three aspects of climate change (mitigation, adaptation, and resilience) – yields a useful scaffolding for understanding climate justice. While these dimensions are the mainstay of much past academic work and activism, recent debates recognize the importance of two other dimensions: restitution and reparation.

Restitution refers to the restoration of something – often lost or stolen – to its rightful owner. For example, lands and territories that settler colonial, national governments, or other dominant social groups took away from indigenous and other rural communities, thereby creating a class of dispossessed peasants. Rectifying these past injustices requires the restitution of 'access to land, territory, water,

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

forests, especially in light of the global land grabbing during the past decade' (Borras and Franco 2018, 1319). In the context of the climate crisis, philosophers argue that some actors, for example, fossil fuel corporations and the countries of the Global North, which are responsible for the climate crisis, owe restitution to those most affected by it (Gardiner 2011). This principle informs the demands of countries in the Global South, that industrially advanced countries pay for the loss and damages linked to the climate crisis. Indeed, such demands could also be applied within national borders. In India, this relates most directly to the restitution of land, forest, and other resource rights to Dalits and Adivasis, who suffer high rates of landlessness and criminalization of resource use because of state control of resources.

Demands for the protection of resource rights and restitution of lost lands are codified in acts of Parliament, such as the Panchayat (Extension to Scheduled Areas) Act (PESA), 1996, and the Forest Rights Act, 2006 (FRA). However, the state has failed to implement these laws because they threaten the undue advantage that powerful actors in the state and society enjoy in the status quo. For example, as of May 2021, 40 per cent of states had not formulated the rules necessary for the implementation of PESA (Pandey 2021). Unfortunately, the lingering effects of the caste–tribe dichotomy and instrumental use of the narratives of Adivasi rights towards forest protection have led to a neglect of Dalit land restitution (Prasant and Kapoor 2010). Moreover, Dalits have also been victims of the enclosure of village commons by forest departments throughout the country (see Table 3.1 in Kashwan 2017, 58). Such appropriation and continued occupation of village commons violate the United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP), adopted by the UN General Assembly in October 2018 (Kashwan, Kukreti, and Ranjan 2021).

The provisions of UNDROP apply to Dalits and other landless rural workers too. Unfortunately, domestic debates about land reform and redistribution to Dalits have never really taken off because of mainstream Hindu society's delegitimization of Dalits as agriculturalists (Rawat 2011). The marginalizing and invisibilizing of Dalit land claims continue in neoliberalized India today; some even argue that land dispossession exacted in service of 'new economy projects may be liberating for Dalits' (cf. Agarwal and Levien 2020, 696). The promise that neoliberal economic reform will bring prosperity to the poor is yet to be fulfilled, in part because these reforms have never really articulated and incorporated the interests of poor people. On the contrary, the corporate control of the economy and free flow of speculative global finance have led to the selective withering of the welfare state and the militarization of the state's appropriation of land and natural resources (Ram 2012; Agarwal and Levien 2020).

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

All of these outcomes are because of the multiple and concentrated disadvantages that Dalits, Adivasis, the northeast tribes, and Muslims face in a neoliberalized India. These groups lack representation in the public sphere–they are unable to shape public agendas, they are excluded from political and policy processes, and they lead precarious lives because of their high income and wealth poverty. The neoliberal reset of the welfare state, and capture of the political agenda by advocates of global capitalism in India and elsewhere, work through these debilitating inequalities and exclusions (Kashwan, MacLean, and García-López 2019). This is why there is little sustained and informed public debate on the alarming levels of pollution in Indian cities, the dangerously high fluoride content of drinking water in many parts of the country, and extreme disparities in access to safe sanitation (Chaudhuri and Roy 2017). These background conditions make a huge percentage of India's population highly vulnerable to climate shocks and stresses. COVID-19 exposed the glaring forms of exclusion and marginalization that the urban poor, especially migrant workers, face (Suresh, James, and Balraju 2020). Advocates of climate justice need to grapple with these long-standing inequalities present in every nook and cranny of India's vast and complex rural and urban geographies.

Overview of the chapters and their debates

India is a land of competing inequalities; it presents a challenge to researchers of inequality and justice. If the devastating images of COVID-19 are any indication, urban India is likely to be a climate justice hotspot in the near future. The UN estimates that between 2018 and 2050, India will have 416 million new urban dwellers (UN-DESA 2018). Such rapid urbanization will put significant pressure on rural and forested areas, which are the sources of natural resources needed for urban infrastructure development and the sustenance of large urban populations.

The nature of urban growth and manner of urban climate mitigation and adaption planning and execution have significant implications for urban climate justice (Shi et al. 2016). Eric Chu and Kavya Michael take on this challenging topic in Chapter 2; they analyse ongoing interventions related to urban climate adaptation, risk reduction, and resilience-building actions. However, instead of adopting a narrow programmatic focus, they situate these developments within the country's recent history of neoliberal economic transformation and long-standing socioeconomic inequalities. Although Indian leaders identify local development priorities as the main entry point for climate mitigation and adaptation in India's cities, market actors often assume control of these opportunities to the exclusion of the majority of urban populations (Khosla and Bhardwaj 2019).

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

An equally important area of focus is the much-anticipated transition to renewable energy, which has prompted a vigorous scholarly and policy debate on energy justice in the Global North (Sovacool et al. 2017). Yet there has been little work on this transition in the Indian context (Yenneti and Day 2015). In Chapter 3, K. Rahul and Parth Bhatia fill this gap by exploring the benefits and challenges of adopting energy democracy and energy justice. They look at three types of renewable energy developments in India: large-scale renewable energy projects, solar pump sets, and energy access programmes. In India, however, the framework for a just transition has been criticized from the perspective of the context and vulnerabilities of workers employed in mining and various other operations of the fossil fuel industry (Roy, Kuruvilla, and Bhardwaj 2019). Still, the majority of people employed in the sector work under exploitative and environmentally hazardous conditions that are common to India's coal industry (Lahiri-Dutt 2016).

Recent work has enhanced our understanding of the political economy of India's extractive regime (Adhikari and Chhotray 2020). In Chapter 4, Vasudha Chhotray builds on her field research in Jharkhand and Chhattisgarh to expand the scope of just transition research beyond labour; she situates it within broader political and economic systems with high levels of inequalities. Chhotray also highlights the multifaceted spaces that social and climate justice activists could mobilize for a just transition.

Ensuring justice in the ongoing transition is not easy, especially because of the pervasive changes in the economy and politics. Haimanti Bhattacharya offers one example of a major pervasive change in Chapter 5. Based on her recent and ongoing research, Bhattacharya shows that the relationship between carbon emissions from fossil fuels and inequality in consumption expenditure at the state level has undergone a major transformation since the onset of the economic reforms in 1991. Bhattacharya's findings reinforce the proposal other scholars have made in favour of a carbon tax, based on household consumption, and that such taxes should be utilized to pursue broad-based goals of energy and transportation justice (Azad and Chakraborty 2020). Similar policies in other sectors of the economy should be the focus of India's climate strategy. Unfortunately, such a policy focus is missing from India's national and state climate action plans, as Arpitha Kodiveri and Rishiraj show in Chapter 6. They review India's national and state climate action agendas to determine if and how they incorporate concerns of climate justice.

Despite India being among the most vulnerable countries, the Indian Parliament has not even debated, let alone enacted, a climate change law. Instead, India's climate change responses are governed by various executive orders and ad-hoc climate action plans; this is a cause for concern. Quite tellingly, the country's first climate change

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

bill was a private member's bill that influential Bharatiya Janata Party leader Jayant Sinha introduced in March 2021. This bill seeks to provide a framework 'by which India can develop and implement clear and stable climate change policies' under the Paris Climate Agreement (Farand 2021). This is an intriguing proposal coming from a member of parliament (MP), who represents the coal-producing Hazaribagh district in Jharkhand; this illustrates the complexity of politics over climate strategy. The justice implications of these developments are quite significant. Emissions from the ongoing burning of fossil fuels and profligate consumption by a rapidly growing Indian elite class must then be offset by planting forests, modifying agriculture and other land-use patterns, or resorting to other carbon dioxide removal techniques. Net-zero plans essentially transfer the burdens of climate action between different sectors of the economy, for example, when industrial emissions are sought to be offset by planting trees in village commons (Skelton et al. 2020). In essence, the nascent plans for India's climate response are rife with potential for domestic injustices of numerous types.

None of this is new. As I show in Chapter 7, many of India's climate activists have been warning of these possibilities since the early years of the new millennium. That said, I argue that a fuller appreciation of the complex challenge of social mobilization for climate justice requires a deeper understanding of the history of environmental movements and the debate on the varieties of environmentalisms in India. To this end, I investigate three of the most successful environmental movements in India and highlight the implications of the multi-scalar nature of both environmental and climate movements and their engagements with mainstream political spaces. These analyses shed light on the trajectories of arguments about international and domestic climate justice in India, and the promise of India's nascent climate youth movements. However, it is important to grapple with myriad ways in which social inequalities shape Indian environmental movements (Sharma 2012).

In Chapter 8, Srilata Sirkar poses the unspoken caste question in India's environmental and climate debates. Echoing similar demands about attending to questions of racial justice in the United States and building on recent work conducted in India, Sirkar asserts that caste justice is climate justice. She makes a strong case that India's climate movement needs to be an anti-caste one (Ranganathan 2022). Normative visions of the type Sirkar articulates offer important points of departure for redrawing policies, programmes, and strategies that are necessary for realizing climate justice.

Until this volume, there has been a notable and near-total silence on caste and the impact that climate change may have on Dalits in India (Onta and Resurreccion 2011). However, gender has been the focus of quite a bit of research on climate

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

adaptation recently (Rao et al. 2019). The last two chapters conduct explicitly intersectional analyses of the joint effects of gender- and caste-based inequalities on access to safe drinking water, agriculture, and, more broadly, climate action. In Chapter 9, Vaishnavi Behl and I explore how the intersections of gender-, caste-, and class-based inequalities shape access to clean drinking water in the Garhwal Himalayas and Gujarat. Intersectional injustices also permeate climate adaptation and resilience interventions implemented by multilateral donor agencies and well-known non-governmental organizations (NGOs). We point to the intractable nature of caste and gender inequalities and the limitations of addressing them through programmatic interventions, for example, in the much talked about UN Sustainable Development Goals (Patnaik and Jha 2020). These debates invite climate justice scholars and activists to engage with questions of transformative societal change (Rao and Kelleher 2005; Nightingale et al. 2020).

In Chapter 10, Ashlesha Khadse and Kavita Srinivasan apply the lens of intersectional agrarian justice to analyse ongoing policy and programmatic initiatives meant to promote agroecology, with an emphasis on securing women farmers' land rights (Borras and Franco 2018). These authors apply the framework of intersectional agrarian justice to investigate state-level policies and programmes in Tamil Nadu and Kerala, including the role of women's organizations. Moreover, they use intersectionality to explain what policy and programmatic interventions are likely to work best. In the end, they argue in favour of a hybrid approach that integrates the goal of securing women's land rights with the state effort of promoting agroecology interventions – each is indispensable to advancing intersectional agrarian justice. Their research calls attention to themes of agrarian climate justice and food sovereignty (Agarwal 2018).

In the concluding Chapter 11, Eric Chu and I summarize the key insights from the volume to facilitate broader conversations on climate justice in India and beyond. We reflect on the importance of unifying the diverse voices of academics and social activists engaged in researching various sectoral manifestations of climate governance and climate justice in India. Looking ahead, we outline an engaged research and scholarship agenda that advances academic debate while contributing to the praxis of climate justice. We join others before us in calling for a move beyond the old debates about international versus domestic climate justice to examine the complex intersections of international and sub-national policies, programmes, and resource mobilizations that shape the outcomes of climate action and climate justice (Schlosberg and Collins 2014; Routledge, Cumbers, and Driscoll Derickson 2018; Dubash 2019). Furthermore, we argue for an increased focus on domestic political engagements, accompanied by support and mobilization of transnational

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

human rights and climate justice networks (Kashwan, Kukreti, and Ranjan 2021). Ultimately, though, social mobilizations and political engagements within India are likely to be the major determinants of climate action and climate justice.

References

Adhikari, A., and V. Chhotray. 2020.'The Political Construction of Extractive Regimes in Two Newly Created Indian States: A Comparative Analysis of Jharkhand and Chattisgarh'. *Development and Change* 51 (3): 843–873.

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

Agarwal, B. 2018.'Can Group Farms Outperform Individual Family Farms? Empirical Insights from India'. *World Development* 108: 57–73.

Agarwal, S., and M. Levien. 2019. 'Dalits and Dispossession: A Comparison'. *Journal of Contemporary Asia* 50 (5): 696–722.

Ahmed, S., and E. Fajber. 2009. 'Engendering Adaptation to Climate Variability in Gujarat, India'. *Gender and Development* 17 (1): 33–50.

Azad, R., and S. Chakraborty. 2020. 'Green Growth and the Right to Energy in India'. *Energy Policy* 141 (June). https://doi.org/10.1016/j.enpol.2020.111456.

Bachrach, P., and M. S. Baratz. 1962. 'Two Faces of Power'. *American Political Science Review* 56(4): 947–952.

Bassey, N. 2012. *To Cook a Continent: Destructive Extraction and the Climate Crisis in Africa*. Oxford, UK: Fahamu/Pambazuka.

Bhargava, Y. 2021. 'In 2020, World Added 3 Billionaires Every Two Days, India Added One Every Week.' *The Hindu*, 2 March. https://www.thehindu.com/news/national/india-adds-40-billionaires-in-pandemic-year-adani-ambani-see-rise-in-wealth-report/article33970268.ece (accessed 24 December 2021).

Bhide, A. 2015. *City Produced: Urban Development, Violence, and Spatial Justice in Mumbai*. Mumbai: Centre for Urban Policy and Governance, TISS. http://hdl.handle.net/10625/56490.

Borras, S. M., Jr, and J. C. Franco. 2018. 'The Challenge of Locating Land-based Climate Change Mitigation and Adaptation Politics within a Social Justice Perspective: Towards an Idea of Agrarian Climate Justice'. *Third World Quarterly* 39(7): 1308–1325.

Calvert, P. 2001. 'Internal Colonisation, Development and Environment'. *Third World Quarterly* 22: 51–63.

Chakravarty, S., and M. V. Ramana. 2011. 'The Hiding behind the Poor Debate: A Synthetic Overview'. *In Handbook of Climate Change and India: Development, Politics and Governance*, edited by N. K. Dubash. New Delhi: Oxford University Press, 218–229.

Chaudhuri, D., and P. Ghosh. 2021. 'Why Inequality Is India's Worst Enemy'. *Down to Earth*, 5 March. https://www.downtoearth.org.in/blog/economy/why-inequality-is-india-s-worst-enemy-75778 (accessed 24 December 2021).

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

Chaudhuri, S., and M. Roy. 2017. 'Rural–Urban Spatial Inequality in Water and Sanitation Facilities in India: A Cross-sectional Study from Household to National Level'. *Applied Geography* 85: 27–38.

Chhabria, S. 2019. *Making the Modern Slum: The Power of Capital in Colonial Bombay*. Seattle: University of Washington Press.

Chu, E., and K. Michael. 2019. 'Recognition in Urban Climate Justice: Marginality and Exclusion of Migrants in Indian Cities'. Environment and Urbanization 31 (1): 139–156.

CNBC TV18. 2021. 'Climate Summit 2021: From PM Modi to US President Biden, Here's What World Leaders Pledged on This World Earth Day'. 23 April. https://www.cnbctv18.com/world/climate-summit-2021-from-pm-modi-to-us-president-biden-heres-what-world-leaders-pledged-on-this-world-earth-day-9034821.htm (accessed 24 December 2021).

Coffey, D., P. Hathi, N. Khurana, and A. Thorat. 2018. 'Explicit Prejudice: Evidence from a New Survey'. *Economic and Political Weekly* 53(1): 46–54.

Cote, M., and A. J. Nightingale. 2012. 'Resilience Thinking Meets Social Theory Situating Social Change in Socio-Ecological Systems (Ses) Research'. *Progress in Human Geography* 36 (4): 475–489.

Dai, L. 2020. 'What Are Fake Interdisciplinary Collaborations and Why Do They Occur?' *Nature Index*. https://www.natureindex.com/news-blog/what-are-fake-interdisciplinary-collaborations-and-why-do-they-occur (accessed 5 March 2022).

Desai, S., and A. Dubey. 2011. 'Caste in 21st Century India: Competing Narratives'. *Economic and Political Weekly* 46: 40–49.

Dey, D. 2019. 'India: The Context of Its Current Internal Colonialism'. *In Shifting Forms of Continental Colonialism*, edited by D. Schorkowitz, J. R. Chávez, and I. W. Schröder. Springer, 249–272.

Dubash, N. K. 2019. *India in a Warming World: Integrating Climate Change and Development*. New Delhi: Oxford University Press.

Farand, C. 2021. 'Indian Lawmaker Submits Private Bill to Achieve Net Zero Emissions By 2050'. *Climate Home News*. 18 March. https://www.climatechangenews.com/2021/03/18/indian-lawmaker-submits-private-bill-achieve-net-zero-emissions-2050/ (accessed 24 December 2021).

Farooqui, A. 1996. 'Urban Development in a Colonial Situation: Early Nineteenth Century Bombay'. *Economic and Political Weekly* 31: 2746–2759.

Gardiner, S. M. 2011. 'Climate Justice'. In *The Oxford Handbook of Climate Change and Society*, edited by J. S. Dryzek, R. B. Norgaard, and D. Schlosberg. New York, Oxford University Press, 309–322.

Gergan, M. D. 2020. 'Disastrous Hydropower, Uneven Regional Development, and Decolonization in India's Eastern Himalayan Borderlands'. *Political Geography* 80 (June). https://doi.org/10.1016/j.polgeo.2020.102175.

Ghosh, S. 2020. 'Moving Away from State and Capital: Climate Change, Hegemony and Resistance in Indian Forests'. In *Climate Justice and Community Renewal*, edited by Brian Tokar and Tamra Gilbertson. Abingdon, Oxon; New York, NY: Routledge, 51–69.

Ghoshal, D., and K. Das. 2021. 'EXCLUSIVE: Scientists Say India Government Ignored Warnings Amid Coronavirus Surge'. Reuters, 1 May. https://www.reuters.com/world/

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

asia-pacific/exclusive-scientists-say-india-government-ignored-warnings-amid-coronavirus-2021-05-01/ (accessed 24 December 2021).

Kashwan, P. 2015. 'Forest Policy, Institutions, and REDD+ in India, Tanzania, and Mexico'. *Global Environmental Politics* 15(3): 95–117.

———. 2017. *Democracy in the Woods: Environmental Conservation and Social Justice in India, Tanzania, and Mexico, Studies in Comparative Energy and Environmental Politics*. New York: Oxford University Press.

Kashwan, P., and J. Ribot. 2021. 'Violent Silence: The Erasure of History and Justice in Global Climate Policy'. *Current History* 120: 326–331.

Kashwan, P., I. Kukreti, and R. Ranjan. 2021. 'The UN Declaration on the Rights of Peasants, National Policies, and Forestland Rights of India's Adivasis'. *International Journal of Human Rights* 25 (7): 1184–1209.

Kashwan, P., L. M. MacLean, and G. A. García-López. 2019. 'Rethinking Power and Institutions in the Shadows of Neoliberalism (An Introduction to a Special Issue of *World Development*)'. *World Development* 120: 133–146.

Kaur, Banjot. 2019. 'Minister Claims No Data for Pollution-Related Deaths in India, Studies Say Otherwise'. *Down To Earth*, 4 January. https://www.downtoearth.org.in/news/environment/minister-claims-no-data-for-pollution-related-deaths-in-india-studies-say-otherwise-62706 (accessed 24 December 2021).

Kim, H., D. W. Marcouiller, and K. M. Woosnam. 2018. 'Rescaling Social Dynamics in Climate Change: The Implications of Cumulative Exposure, Climate Justice, and Community Resilience'. *Geoforum* 96: 129–140.

Khosla, R., and A. Bhardwaj. 2019. 'Urbanization in the Time of Climate Change: Examining the Response of Indian Cities'. *WIREs: Climate Change* 10(1). https://doi.org/10.1002/wcc.560.

Kohn, M., and K. Reddy. 2006. 'Colonialism'. *The Stanford Encyclopedia of Philosophy*. Fall 2017 edition. https://plato.stanford.edu/entries/colonialism/ (accessed 24 December 2021).

Kumar, R. 2020. 'On an Average, India Reported 10 Cases of Rape of Dalit Women Daily in 2019, NCRB Data Shows'. News18, 3 October. https://www.news18.com/news/india/on-an-average-india-reported-10-cases-of-rape-of-dalit-women-daily-in-2019-ncrb-data-shows-2930179.html (accessed 24 December 2021).

Kumar, S. 2021. 'Threatened by Fire and Displacement, People of Jharia Dig in Their Heels'. *India Today*, 30 June. https://www.indiatoday.in/india/story/threatened-by-and-displacement-people-of-jharia-dig-in-their-heels-1821090-2021-06-30 (accessed 24 December 2021).

Lahiri-Dutt, K. 2016. *The Coal Nation: Histories, Ecologies and Politics of Coal in India*: New York: Routledge.

Lee, Y. N. 2021. 'Covid Pandemic Pushes 75 Million More People into Poverty in India, Study Shows.' CNBC, 19 March. https://www.cnbc.com/2021/03/19/covid-pandemic-pushes-75-million-more-people-into-poverty-in-india-study.html (accessed 24 December 2021).

Levien, M. 2013. 'The Politics of Dispossession Theorizing India's "Land Wars"'. *Politics and Society* 41(3): 351–394.

Melo, M. A, N. Ng'ethe, and J. Manor. 2012. *Against the Odds: Politicians, Institutions and the Struggle against Poverty*. New York: Columbia University Press.

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

Moore, J. W., ed. 2016. *Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism*. Oakland, CA: PM Press.

Nagaraj, A. 2020. 'India's Low-caste Women Raped to Keep Them "In Their Place"'. Reuters. 25 November. https://www.reuters.com/article/us-india-rape-caste/indias-low-caste-women-raped-to-keep-them-in-their-place-idUSKBN28509J (accessed 24 December 2021).

Nightingale, A. J., S. Eriksen, M. Taylor, T. Forsyth, M. Pelling, A. Newsham, et al. 2020. 'Beyond Technical Fixes: Climate Solutions and the Great Derangement'. *Climate and Development* 12 (4): 343–352.

Noni, A. and K. Sanatomba. 2015. *Colonialism and Resistance: Society and State in Manipur*. New York: Routledge.

O'Dowd, M. F., and R. Heckenberg. 2020. 'Explainer: What Is Decolonisation?' *The Conversation*, 23 June. https://theconversation.com/explainer-what-is-decolonisation-131455 (accessed 24 December 2021).

Onta, N., and B. P. Resurreccion. 2011. 'The Role of Gender and Caste in Climate Adaptation Strategies in Nepal'. *Mountain Research and Development* 31 (4): 351–356.

OXFAM. 2020. 'Carbon Emissions of Richest 1 Percent More Than Double the Emissions of the Poorest Half of Humanity'. OXFAM International, 21 September. https://www.oxfam.org/en/press-releases/carbon-emissions-richest-1-percent-more-double-emissions-poorest-half-humanity (accessed 24 December 2021).

Pandey, K. 2021. '25 Years on, Many Indian States Haven't Implemented a Law That Empowers Adivasi Communities'. *Scroll.in*, 22 March. https://scroll.in/article/988729/25-years-on-many-indian-states-havent-implemented-the-law-that-empowers-adivasi-communities (accessed 24 December 2021).

Patnaik, S, and S. Jha. 2020. 'Caste, Class and Gender in Determining Access to Energy: A Critical Review of LPG Adoption in India'. *Energy Research and Social Science* 67. https://doi.org/10.1016/j.erss.2020.101530.

PIB Delhi. 2020. 'Coal India Limited to Produce 710 MT Coal in Current Financial Year: Shri Pralhad Joshi'. Press Information Bureau, Government of India, 23 April. https://pib.gov.in/PressReleasePage.aspx?PRID=1617419 (accessed 24 December 2021).

PNS. 2021. 'CCL Registers Highest Ever Coal Rake Dispatch on Single Day'. *The Pioneer*, 28 March. https://www.dailypioneer.com/2021/state-editions/ccl-registers-highest-ever-coal-rake--dispatch-on-single-day.html (accessed 24 December 2021).

Prasant, K., and D. Kapoor. 2010. 'Learning and Knowledge Production in Dalit Social Movements in Rural India'. In *Learning from the Ground Up: Global Perspectives on Social Movements and Knowledge Production*, edited by A. Choudry and D. Kapoor. New York, Palgrave, 193–210.

Rahi, A. 2019. 'AP PHOTOS: Indian Coal Mines Still Burning after a Century'. *Seattle Times*, 9 November. https://www.seattletimes.com/nation-world/nation/ap-photos-indian-coal-mines-still-burning-after-a-century/ (accessed 24 December 2021).

Ram, R. 2012. 'Reading Neoliberal Market Economy with Jawaharlal Nehru: Dalits and the Dilemma of Social Democracy in India'. *South Asian Survey* 19 (2): 221–241.

Ranganathan, M. 2022. 'Caste, Racialization, and the Making of Environmental Unfreedoms in Urban India'. Ethnic *and Racial Studies* 45 (2): 257–277.

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

Rao, A., and D. Kelleher. 2005. 'Is There Life after Gender Mainstreaming?' *Gender and Development* 13 (2): 57–69.

Rao, N., E. T. Lawson, W. N. Raditloaneng, D. Solomon, and M. N. Angula. 2019. 'Gendered Vulnerabilities to Climate Change: Insights from the Semi-arid Regions of Africa and Asia'. *Climate and Development* 11 (1): 14–26.

Rawat, R. S. 2011. *Reconsidering Untouchability: Chamars and Dalit History in North India*. Bloomington, IN: Indiana University Press.

Rawat, R. S. and K. Satyanarayana. 2016. *Dalit Studies*. Durham, NC: Duke University Press.

Reuters Staff. 2018. 'Why India Is Most at Risk from Climate Change'. World Economic Forum, 21 March. https://www.weforum.org/agenda/2018/03/india-most-vulnerable-country-to-climate-change (accessed 24 December 2021).

Ritchie, H. 2019. 'Who Has Contributed Most to Global CO2 Emissions?' *Our World in Data*, 1 October. https://ourworldindata.org/contributed-most-global-co2 (accessed 24 December 2021).

Routledge, P., A. Cumbers, and K. D. Derickson. 2018. 'States of Just Transition: Realising Climate Justice through and against the State'. *Geoforum* 88: 78–86.

Roy, A. 2020. 'The Pandemic Is a Portal'. *Financial Times*, 3 April. https://www.ft.com/content/10d8f5e8-74eb-11ea-95fe-fcd274e920ca (accessed 24 December 2021).

Roy, A., Benny Kuruvilla, and Ankit Bhardwaj. 2019. 'Energy and Climate Change: A Just Transition for Indian Labour.' *In India in a Warming World: Integrating Climate Change and Development*, edited by Dubash Navroz. New Delhi: Oxford University Press, 284–300.

Schlosberg, D., and L. B. Collins. 2014. 'From Environmental to Climate Justice: Climate Change and the Discourse of Environmental Justice'. *Wiley Interdisciplinary Reviews: Climate Change* 5: 359–374.

Sharma, M. 2012. 'Dalits and Indian Environmental Politics'. *Economic and Political Weekly* 47 (23): 46–52.

Shi, L., E. Chu, I. Anguelovski, A. Aylett, J. Debats, K. Goh, T. Schenk, K. C. Seto, D. Dodman, and D. Roberts. 2016. 'Roadmap towards Justice in Urban Climate Adaptation Research'. *Nature Climate Change* 6: 131.

Singh, R. K. 2021. 'Coal India Asks Government for Vaccines after Nearly 400 Covid Deaths'. *Bloomberg*, 8 June. https://www.bloomberg.com/news/articles/2021-06-08/top-coal-miner-seeks-more-vaccines-to-stem-india-covid-deaths (accessed 24 December 2021).

Skelton, A. et al. 2020. '10 Myths about Net Zero Targets and Carbon Offsetting, Busted'. *Climate Home News*, 11 December. https://www.climatechangenews.com/2020/12/11/10-myths-net-zero-targets-carbon-offsetting-busted/ (accessed 24 December 2021).

Sovacool, B. K., M. Burke, L. Baker, C. K. Kotikalapudi, and H. Wlokas. 2017. 'New Frontiers and Conceptual Frameworks for Energy Justice'. *Energy Policy* 105: 677–691.

Special Correspondent. 2021. 'Assam Solar Plant: Return Land, Withdraw Forces, Say Activists'. *The Hindu*, 12 May. https://www.thehindu.com/news/national/other-states/controversial-solar-plant-demand-to-withdraw-force-from-assam-farmers-land/article34540215.ece (accessed 24 December 2021).

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

Sreevatsan, A. 2018. 'British Raj Siphoned Out $45 Trillion from India: Utsa Patnaik'. *Livemint*, 21 November. https://www.livemint.com/Companies/HNZA71LNVNNVXQ1eaIKu6M/British-Raj-siphoned-out-45-trillion-from-India-Utsa-Patna.html (accessed 24 December 2021).

Staff Writer. 2021.' Delhi: Household Cooking Responsible for 40% of Pollution'. *Livemint*, 17 June. https://www.livemint.com/news/india/delhi-household-cooking-responsible-for-40-of-pollution-11623946808713.html (accessed 24 December 2021).

Suresh, R., J. James, and R. S. J. Balraju. 2020. 'Migrant Workers at Crossroads: The Covid-19 Pandemic and the Migrant Experience in India'. *Social Work in Public Health* 35 (7): 633–643.

Swarnakar, P. 2019. 'Climate Change, Civil Society, and Social Movement in India'. In *India in a Warming World: Integrating Climate Change and Development*, edited by N. K. Dubash. New Delhi: Oxford University Press, 253–272.

Tripathi, S. 2021. 'The Poem That's Channelling India's Anger about the Pandemic'. *The Guardian*, 28 May. https://www.theguardian.com/commentisfree/2021/may/28/poem-india-pandemic-gujarati-covid-narendra-modi (accessed 24 December 2021).

UN-DESA. 2018. '68% of the World Population Projected to Live in Urban Areas by 2050, Says UN'. United Nation Department of Economic and Social Affairs, 16 May. https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html (accessed 24 December 2021).

Varadhan, S. 2020. 'PM Modi Opens Coal Mining to Private Sector'. Reuters, 18 June. https://www.reuters.com/article/india-coal/pm-modi-opens-coal-mining-to-private-sector-idINKBN23P1KW (accessed 24 December 2021).

Vohra, K., A. Vodonos, J. Schwartz, E. A. Marais, M. P. Sulprizio, and L. J. Mickley. 2021. 'Global Mortality from Outdoor Fine Particle Pollution Generated by Fossil Fuel Combustion: Results from Geos-Chem'. *Environmental Research* 195 (April). https://doi.org/10.1016/j.envres.2021.110754.

Wu, J., D. Watkins, J. Williams, S. Venugopal Bhagat, H. Kumar, and J. Gettleman. 2020. 'Who Gets to Breathe Clean Air in New Delhi?' *New York Times*, 17 December. https://www.nytimes.com/interactive/2020/12/17/world/asia/india-pollution-inequality.html (accessed 24 December 2021).

Yenneti, K., and R. Day. 2015. 'Procedural (In)justice in the Implementation of Solar Energy: The Case of Charanaka Solar Park, Gujarat, India'. *Energy Policy* 86: 664–673.

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press

ग्लोबल वॉर्मिंग

सुना है पृथ्वी पहले से ज़्यादा
गर्म हो रही है

धीरे धीरे यह गरमाहट
पृथ्वी के अक्ष को कुछ इस तरह
बदल रही है
कि
अपने अक्ष पर घूमने की
उसकी गति और तरीक़े
दोनों बदल सकते हैं

ऐसे में पृथ्वी का स्त्रीलिंग होना
क्या एक महज़ संयोग है ?

—संवेदना
१० अप्रैल '२०१६
मुंबई

Global Warming

The word is that the Earth
    is warming by the day
And this warming is
    gradually
changing the Earth's axis
so much so
    that it may change
its speed, its ways
Is it a mere coincidence
    that the Earth is thought of as a woman?
—*Translated by Veena Chhotray*

Samvedna Rawat's poem evokes a powerful sense of connection between women and the planet earth. By exploiting and degrading the planet's resources, we have debilitated planetary systems and thrust both the planet and marginalized groups into a crisis, not of their own making. However, the powerless—in this case, both planet earth and women—have a way of shaking things up. It is instructive that the poet does not use the frame of 'Mother Earth', which has often been used to paint an essentialized and apolitical understanding of planet Earth. Instead, the poem hints at the potential for healing rooted in the anger and power of the oppressed—just as Paulo Freire articulated in the *Pedagogy of the Oppressed*: 'It is only the oppressed who, by freeing themselves, can free their oppressors. The latter, as an oppressive class, can free neither others nor themselves.' The soul-melting heat of oppression is felt most intensely at the intersection of many cross-cutting identities and histories. So would the most potent paths toward healing and emancipation—of both the planet and its oppressed people.

https://doi.org/10.1017/9781009171908.002 Published online by Cambridge University Press