

# International Energy and Poverty

The emerging contours

Edited by Lakshman Guruswamy

with Elizabeth Neville

 **Routledge**  
Taylor & Francis Group  
LONDON AND NEW YORK

**earthscan**  
from Routledge

First published 2016  
by Routledge  
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

and by Routledge  
711 Third Avenue, New York, NY 10017

*Routledge is an imprint of the Taylor & Francis Group, an informa business*

© 2016 selection and editorial matter, Lakshman Guruswamy; individual chapters, the contributors

The right of the editor to be identified as the author of the editorial material, and of the authors for their individual chapters, has been asserted in accordance with sections 77 and 78 of the Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this book may be reprinted or reproduced or utilized in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publishers.

*Trademark notice:* Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

*British Library Cataloguing-in-Publication Data*

A catalogue record for this book is available from the British Library

*Library of Congress Cataloging-in-Publication Data*

International energy and poverty : the emerging contours / [edited by] Lakshman Guruswamy, with Elizabeth Neville.

pages cm

Includes bibliographical references and index.

1. Power resources--Economic aspects--Developing countries. 2. Energy development--Developing countries. 3. Poverty--Developing countries. 4. Economic development--Developing countries. I. Guruswamy,

Lakshman D., 1939-

HD9502.D442I585 2016

333.7909172'4--dc23

2015010686

ISBN: 978-1-138-79231-9 (hbk)

ISBN: 978-1-315-76220-3 (ebk)

Typeset in Goudy

by Saxon Graphics Ltd, Derby

## 8 Energy poverty and the environment

*Carmen G. Gonzalez*

### Introduction

Public debates over energy policy are increasingly dominated by the specter of climate change. According to the Intergovernmental Panel on Climate Change (IPCC), greenhouse gas emissions increased at a faster rate from 2000 to 2010 than over the three preceding decades, reaching the highest levels recorded in human history. In order to avoid irreversible climate disruption, greenhouse gas emissions in the year 2050 must be 40 to 70 percent lower than they were in 2010, and must decline to zero by the end of the century (IPCC 2014). Unless drastic measures are taken to curb our dangerous dependence on fossil fuels, severe disruption of the planet's climate is inevitable.

Caused overwhelmingly by high-consuming people in the world's most affluent countries (the global North), climate change will have a disproportionate impact on the people in poor and middle-income countries (the global South) who contributed least to the problem (Birol 2015; Gordon 2007). The near three billion people in Asia, Africa, and Latin America who face daily hardships due to lack of modern energy for cooking, heating, sanitation, lighting, transportation, and basic mechanical power (the Energy Poor) will be disparately burdened by the adverse environmental consequences of global climate disruption. Floods, droughts, rising sea levels, and more frequent and severe storms will exacerbate food and water insecurity and inflict disease, death, and dislocation (Birol 2015; Srinivasan et al. 2008).

Will efforts to reduce greenhouse gas emissions consign the Energy Poor to perpetual deprivation? Or can energy poverty be addressed in ways that mitigate climate change, fulfill the human rights of the world's Energy Poor, and promote the transition to sustainable energy?

In a world of striking economic inequality and looming ecological collapse, the prospects for collective action to address energy poverty appear dim. However, this chapter argues that tackling energy poverty presents a rare win-win solution to the challenges posed by climate change that can bridge the North-South divide and lay the groundwork for the eradication of energy poverty.

This chapter proceeds in four parts. First, it examines the colonial and post-colonial roots of North-South inequality. Second, it frames the North-South

divide over climate change through the concepts of climate debt and climate justice. Third, it argues that North–South collaboration to reduce black carbon emissions can effectively and inexpensively mitigate climate change, foster climate justice, and combat energy poverty. Finally, the chapter discusses several elements of a justice-based approach to climate change and energy poverty.

## **Colonial and post-colonial roots of North–South inequality**

European colonization of Asia, Africa, and the Americas paved the way for contemporary economic and social inequality by dispossessing indigenous peoples, enslaving millions of Africans, and importing indentured workers to toil for their colonial overlords in far-flung destinations. The colonial encounter also devastated the ecosystems of the colonized territories through logging, mineral extraction, and plantation agriculture (Ponting 1993; Gordon 1997).

Colonialism transformed subsistence economies into economic appendages of Europe that supplied raw materials for industrialization and purchased European manufactured products. The achievement of political independence by much of the global South in the nineteenth and twentieth centuries did not significantly alter its subordinate role in the international division of labor. Through its control over a significant portion of the planet's natural resources, the North was able to live beyond the constraints of its own resource base and achieve an unprecedented material standard of living. However, "[m]uch of the price of that achievement was paid by the population of the Third World in the form of exploitation, poverty, and human suffering" (Ponting 1993, 223).

In the aftermath of World War II, the United States assumed the leadership of the global North, and proceeded to reconstruct war-torn Europe and Japan and to establish the legal architecture for contemporary globalization (Sachs, 2010). Most of the global South was under colonial domination when the legal institutions that would govern the post-war economic order were created, and the South's role in the development of these institutions was negligible. The World Bank, the International Monetary Fund (IMF), and the 1947 General Agreement on Tariffs and Trade (GATT 1947) facilitated the North's ongoing exploitation of the South's natural resources by promoting the free flow of goods, services, and capital across national borders (Ponting 1993).

In the decades following World War II, decolonization movements in the global South succeeded in liberating most of Asia and Africa from colonial rule. Southern nations mobilized to create a more equitable international economic order by using their numerical superiority in the United Nations General Assembly to pass resolutions favorable to the global South (Rajamani 2006). Recognizing that Southern poverty was caused by Northern economic domination, they demanded enhanced participation in global governance, technology transfer, special trade preferences, the right to subsidize infant industries, debt forgiveness, the stabilization of export prices for Southern commodities, and the right to nationalize the foreign companies exploiting their natural resources (Gordon 2009; Gordon and Sylvester 2004). In short, Southern nations sought to redress

long-standing North–South economic inequality through special and differential treatment in international economic law (Ismail 2008).

The debt crisis of the 1980s brought these efforts to a grinding halt and enabled the Bretton Woods Institutions (the IMF and the World Bank) to impose on Southern nations the free market economic model known as the Washington Consensus. In exchange for debt repayment assistance from the IMF and the World Bank, debtor nations in the global South were compelled to adopt a one-size-fits-all economic model consisting of trade liberalization, deregulation, privatization of publicly owned enterprises, elimination of social safety nets, and the intensification of primary commodity exports to service the foreign debt (Gordon 2009). The lifting of Southern agricultural tariffs and abolition of agricultural support rendered small farmers destitute by placing them in direct competition with highly subsidized Northern farmers. The opening of Southern markets to Northern manufactured products jeopardized nascent industries. The result was massive impoverishment in the global South and an eruption of “IMF riots” in numerous Southern countries (Gonzalez 2004).

The export-driven economic reforms mandated by the IMF and the World Bank reinforced the South’s economically disadvantageous dependence on the export of primary commodities. This economic specialization is detrimental to the global South due to the declining terms of trade for primary products relative to manufactured goods – a phenomenon first described by economists Raul Prebisch and Hans Singer and confirmed by subsequent empirical studies (Cypher 2009). Indeed, these free market economic reforms facilitated the North’s over-consumption of the planet’s natural resources by increasing the supply and lowering the price of timber, minerals, and agricultural products (Martinez-Alier 2002).

The North’s economic policies exacted an enormous environmental toll. Much of the environmental degradation in the global South can be traced to export-oriented production rather than domestic consumption (Rees and Westra 2003). Impoverished and desperate for foreign capital, many Southern nations have become dumping grounds for hazardous wastes from the global North, havens for polluting industries (including the environmentally devastating petroleum industry that supplies the North’s voracious appetite for fossil fuels), and targets for large-scale acquisitions of agricultural lands (the so-called “land grabs”) by investors from Northern and middle-income Southern states (Pellow 2007; Black 2010; Cotula 2013). The North’s economic policies also produced global environmental problems that will affect present as well as future generations, such as climate change and ozone depletion.

The World Trade Organization (WTO) agreements, which succeeded the 1947 GATT, exacerbated Southern poverty by systematically favoring Northern states. First, the WTO failed to remove the Northern agricultural subsidies that impoverished Southern farmers (Gonzalez 2002). Second, the WTO impeded the efforts of Southern states to industrialize and diversify their economies (Gordon 2009). The WTO restricted the ability of Southern countries to use tariffs and subsidies to promote potentially dynamic new industries; required

Southern countries to dismantle the import barriers that protected nascent Southern industries from technologically superior Northern competitors; and imposed onerous new obligations in the areas of intellectual property, investment, and services (García 2004; Lee 2006). Economic historians have long recognized that the United States, Japan, Germany, the United Kingdom, South Korea, and Taiwan prospered on the basis of protectionism and only preached free trade after their industries were powerful enough to compete on global markets. International economic law constrains the ability of Southern states to deploy the very policies that contributed to Northern prosperity (Amsden 2009; Chang 2008; Reinert 2007; Chang 2002).

Scholars, activists, and Southern governments have argued that the global North owes an ecological debt to the global South for widespread poverty and environmental degradation resulting from centuries of economic exploitation (McLaren 2003). Climate change and other environmental ills must be understood through the prism of North–South inequality. The plight of the Energy Poor is likewise a product of an international economic order that systematically marginalizes vast segments of humanity. The following section examines the concepts that have been developed in the context of climate change to address environmental inequities between the global North and the global South as well as within nations.

### **Climate debt, climate justice, and the North–South divide**

The North–South conflicts over climate change have frequently been articulated in the language of climate debt and climate justice. This section examines these two distinct, but interrelated concepts, and the ethical and legal duties that they impose.

#### ***Climate debt***

Climate debt is a term coined in the global South to describe the imbalance between those who suffer and die from climate change and those who bear primary responsibility for the problem. Climate debt theory posits that the costs of climate change mitigation and adaptation should be borne by those who contributed most to the climate crisis. In other words, climate debt is an example of the polluter pays principle, requiring the global North to internalize the consequences of its own emissions (Paredis et al. 2008).

The global North industrialized rapidly and cheaply by exploiting the South's natural resources and by utilizing more than its fair share of the atmosphere to deposit its greenhouse gas emissions. Between 1880 and 1990, the global North generated 84 percent of the planet's fossil fuel-based carbon dioxide emissions and 75 percent of deforestation-related carbon dioxide emissions (Mickleston 2005). While China recently surpassed the United States as the world's top *current* carbon dioxide emitter, the per capita emissions of the global North continue to dwarf those of the South (Worldwatch Institute 2009). According to

the World Bank, the average US citizen consumes 3.5 times more energy than a typical person in China and over ten times more than a resident of India. Even major oil-producing nations, such as Nigeria, Iran, and Venezuela, maintain levels of energy consumption far below US averages (World Bank 2011).

In short, the North has incurred a climate debt to the South for its historic and current contribution to climate change and for its prodigious carbon footprint (Mickelson 2005; McLaren 2003; Simms 2009). Indeed, the preamble to the United Nations Framework Convention on Climate Change (UNFCCC) implicitly recognizes this climate debt by observing

that the largest share of historical and current global emissions has originated in developed countries, that per capita emissions in developing countries are still relatively low and that the share of global emissions originating in developing countries will grow to meet their social and developmental needs.

(UNFCCC 1992, preamble)

Article 3(1) of the UNFCCC requires the global North to take the lead on efforts to combat climate change (UNFCCC 1992). The Kyoto Protocol institutionalizes this approach by imposing binding emission reduction obligations only on Northern countries (Kyoto Protocol 1997). In so doing, the UNFCCC and the Kyoto Protocol adopt the principle of common but differentiated responsibility, which imposes asymmetrical obligations on the North and the South in light of their relative contribution to environmental problems, their financial and technical resources, and their economic and ecological vulnerability (Stone 2004). This principle is discussed more fully in later in this chapter.

### *Climate justice*

The demand for climate justice has its origins in the theory and practice of the environmental justice movement, which arose in the United States in the 1980s as a grassroots response to the concentration of polluting industry and abandoned hazardous waste sites in low-income communities and communities of color (Cole and Foster 2001; Mickelson 2009). Environmental justice scholars and activists underscored four distinct but interrelated dimensions of environmental injustice. They alleged distributive injustice in the form of inadequate access to environmental amenities (such as parks and open space) and disparate exposure to environmental hazards (such as toxic wastes); procedural unfairness due to the exclusion of socially and economically marginalized communities from governmental decision-making; corrective injustice in the form of inadequate enforcement of the environmental laws; and social injustice because environmental degradation is inextricably intertwined with broader social ills, such as poverty and racism (Kuehn 2000).

The discourse of environmental justice has been adopted by a variety of environmental social justice movements in both the global North and the

global South, and has spawned transnational environmental justice networks dedicated to specific issues, including food justice, water justice, energy justice, and climate justice. The language of environmental justice is morally compelling, and has enhanced the visibility of marginalized communities by giving voice to their struggles and facilitating transnational alliances (Walker 2012; Schlosberg 2013).

Environmental justice also has an important North–South dimension. The primary cause of global environmental degradation is the over-consumption of the planet's finite resources by a transnational global elite located in the global North and in the urban centers of the global South (Sachs and Santarius 2007; Rees and Westra 2003). However, the consequences of unsustainable economic activity are borne disproportionately by the planet's most vulnerable communities, including racial and ethnic minorities, indigenous peoples, and the poor (Rees and Westra 2003).

Drawing upon the four dimensions of environmental injustice discussed above, this chapter adopts a four-part definition of climate justice consisting of distributive justice, procedural justice, corrective justice, and social justice. Climate change raises issues of distributive justice because the global North is responsible for the vast majority of historic greenhouse gas emissions, maintains an average per capita carbon footprint far above that of Southern nations, and reaps the benefits of a consumption-driven, fossil fuel-based development model while externalizing the social and environmental costs (Mickelson 2005). By contrast, Southern states and marginalized communities in both the North and the South bear a disproportionate share of the consequences of climate change due to their vulnerable geographic locations and limited resources for adaptation and disaster response (Anand 2004; United Nations 2012). Climate change raises issues of procedural justice because the North dominates the institutions of global economic and environmental governance, including the IMF, the World Bank, the WTO, and multilateral environmental treaty negotiations. Southern perspectives and priorities are frequently marginalized (Anand 2004; Hossay 2006; Peet 2009). Climate change also raises issues of corrective justice. From the indigenous communities devastated by climate change to the small island states facing imminent extinction, the nations and communities most burdened by climate change have been unable to obtain compensation for climate change-induced harms or cessation of the harmful conduct (Burkett 2009; Tsosie 2007). Finally, climate change raises issues of broader social injustice because it is intimately connected with the North–South power imbalances that perpetuate economic inequality and enable the North to consume a disproportionate share of the planet's resources (Roberts and Parks 2008).

The climate change negotiations are difficult, complex, and multi-faceted. However, they will likely flounder unless the North is willing to seriously grapple with climate debt and climate justice. Southern nations have frequently voiced frustration with Northern intransigence, describing the climate change negotiations as “rich nations telling the South what is and is not going to happen” (Gordon 2007, 1622). The growing clout of BASIC nations (Brazil, South



Africa, India, and China) has only complicated the negotiations by revealing the tensions between the economic and environmental priorities of countries like China and India and those of more ecologically vulnerable countries, such as the small island states (Happaerts and Bruyninckx 2013).

One way to bridge the divisions and foster collaboration is to offer an inexpensive and effective method of mitigating climate change that also hastens the transition to renewable energy in the South and provides energy to the world's nearly three billion Energy Poor. The following section discusses energy poverty as the missing link in the climate change negotiations.

### **Energy poverty and climate change: the missing link**

Energy poverty is concentrated in the Least Developed Countries (LDCs), the nations singled out by the United Nations (UN) for their low income, high vulnerability to economic and environmental shocks, and small and geographically remote economies. The Energy Poor also reside in middle-income Southern nations, such as China, Brazil, and India, where their plight is often obscured by the rapidly increasing consumption levels of the middle class and the elite. Indeed, Guruswamy persuasively argues that it is a mistake to identify the Energy Poor with the state in which they reside because the Energy Poor are not stakeholders in the political process and are generally ignored by their own governments and by the international community (Guruswamy 2010).

Energy poverty is a form of transnational environmental injustice that exhibits the four distinct aspects of environmental injustice discussed above. First, the Energy Poor experience distributional injustice because they are denied equitable access to the clean and affordable energy necessary for a dignified existence. Ironically, many of the Energy Poor reside in energy-rich countries whose lucrative petroleum exports line the pockets of transnational corporations and kleptocratic national elites (Soares 2007). For example, 80 percent of Africa's petroleum is exported (much of it to service the foreign debt) while the Energy Poor make do with dried animal dung, wood, and other locally available fuels (Nelson 2004). Second, the Energy Poor experience procedural injustice because they are politically marginalized and do not have the opportunity to participate in governmental decision-making regarding energy policy (Guruswamy 2010). Third, the Energy Poor are subject to corrective injustice because they generally have no remedy in domestic or international tribunals to secure access to clean and affordable energy. Indeed, conflicts between transnational oil corporations and local communities have occasionally turned violent because the Energy Poor often bear the human health and environmental costs of oil drilling with limited or no access to its economic benefits (Soares 2007). Finally, energy poverty is inextricably intertwined with a host of other social ills, including economic inequality, gender bias, child labor, and lack of access to health care and education.

The climate change negotiations represent a unique opportunity for Northern countries to repay the climate debt and foster climate and energy justice by

financing the provision of clean, renewable energy to the world's Energy Poor. Regrettably, the climate change negotiations have given short shrift to energy poverty because the Energy Poor emit minimal greenhouse gases. For example, the Copenhagen Accord acknowledges the importance of ensuring that low emitting countries "continue to develop on a low emission pathway" (United Nations Climate Change Conference 2009, Art.7), but fails to allocate funding to fulfill this objective. This omission is regrettable because the UNFCCC's preamble explicitly recognizes the need to increase energy consumption in the global South "for the achievement of sustained economic growth and the eradication of poverty" (UNFCCC 1992, preamble).

The lack of attention to energy poverty in the climate change negotiations is puzzling for at least four reasons. First, energy poverty poses an enormous threat to human health. According to the World Health Organization, reliance on biomass for cooking and heating results in over four million premature deaths per year from respiratory, cardiovascular, and other ailments caused by exposure to indoor air pollution. Most of the victims are women and children (WHO 2014).

Second, the black carbon emitted by the combustion of biomass constitutes the second most significant contributor to climate change after carbon dioxide. Black carbon, when it is airborne, warms the planet by absorbing solar radiation more effectively than other greenhouse gases, such as tropospheric ozone and methane (Ramanathan and Carmichael 2008; Bond et al. 2013). When black carbon is deposited on snow and ice in the Arctic and Antarctic regions, it lowers their ability to reflect solar radiation and thereby accelerates melting and consequent sea level rise (Jacobson and Streets 2009).

Third, dependence on biomass for energy is a significant contributor to deforestation. Deforestation produces soil erosion and deprives local communities of other valuable ecosystem services, including flood control, drought resistance, regulation of rainfall, habitat for biodiversity, and enhancement of water quality. Deforestation also destroys valuable carbon sinks, and the burning of biomass emits greenhouse gases (Myers 1997).

Finally, the lack of attention to black carbon in the climate negotiations is perplexing because the cost of reducing black carbon emissions is minimal relative to other greenhouse gases and because the benefits are potentially enormous (Guruswamy 2010). Whereas carbon dioxide can reside in the atmosphere for 50 to 200 years, black carbon dissipates in as little as one week if existing emissions cease (Ramanathan and Carmichael 2008). In other words, "helping to move one-third of the global population away from biomass burning will have the effect of reducing global warming more efficiently than merely reducing carbon dioxide emissions" (Guruswamy 2010, 246).

In short, addressing energy poverty represents a win-win proposition in the climate change negotiations – an inexpensive mitigation strategy that enhances the well-being of the Energy Poor while avoiding environmental "tipping points" by producing immediate emissions reductions. Although providing modern electrical energy to the Energy Poor would be an expensive decades-long undertaking, numerous appropriate sustainable energy technologies (ASETs) are

presently available. These include decentralized electricity generating systems based on solar, wind, and local biodiesel; efficient cook-stoves; and solar thermal heating. Decentralized electricity generation is particularly appropriate because the majority of the world's Energy Poor reside in sparsely populated rural areas of the global South, where extension of the existing electric grid would be cost-prohibitive (Guruswamy 2011). Decentralized renewable energy-based systems can provide the Energy Poor with electrical power without tying them to existing fossil fuel-based energy systems that are cumbersome, expensive, polluting, and vulnerable to capture by corrupt national elites. ASETs thereby promote democracy, self-determination, and local control in addition to mitigating climate change, providing energy to the nearly three billion Energy Poor, and hastening the global South's transition to sustainable energy.

### **A justice-centered approach to climate change and energy poverty**

A justice-centered approach to climate change and energy poverty entails respect for environmental human rights, the re-invigoration of common but differentiated responsibility in international environmental law, and greater attention to corporate accountability. It also calls for a bold and visionary reconceptualization of the dominant economic paradigm to reduce material disparities while respecting the planet's biophysical limits. The remainder of this chapter discusses these guiding principles and their relation to climate and energy justice.

#### ***Environmental human rights***

Climate justice, like environmental justice more broadly, is grounded in human rights, including the rights to life, health, and cultural integrity, the right to a safe and healthy environment, the right to be free from race and sex discrimination, and the right to information, participation, and access to justice (Gonzalez 2013). In January 2009, the United Nations Human Rights Council published a report detailing the human rights implications of climate change. The report concluded that climate change poses direct and indirect threats to the rights to life, food, water, health, housing, and self-determination, and that its effects "will be felt more acutely by those segments of the population who are already in vulnerable situations due to factors such as gender, poverty, age, minority status, and disability" (United Nations High Commissioner for Human Rights 2009).

Chapter 5 of this volume raises the question of whether there is a right to energy, and the present chapter argues that there is such a right. Although most human rights treaties do not contain explicit environmental provisions, global and regional human rights tribunals have allowed individuals and communities affected by environmental degradation to bring claims against their governments based on human rights violations caused by inadequate environmental protection (Knox 2009). These tribunals have concluded that failure to protect the environment may violate the rights to life, health, property, privacy and family life, an adequate standard of living, and the

collective rights of indigenous peoples to their ancestral lands and resources (Boyle 2007; Shelton 2009). For example, in *López Ostra v. Spain* (1994) and *Guerra v. Italy* (1998), the European Court of Human Rights found that failure to regulate industrial air pollution violated local residents' right to respect for privacy, family life, and home guaranteed by the European Convention on Human Rights. In *Yanomani v. Brazil* (1985), the Inter-American Commission on Human Rights determined that the government's decision to construct a highway through Yanomani territory and to authorize the exploitation of the territory's resources constituted a violation of the Yanomani's rights to life, health, liberty, personal security, and residence and movement under the American Declaration of the Rights and Duties of Man. In *Mayagna (Sumo) Awas Tingni Community v. Nicaragua* (2001), the Inter-American Court of Human Rights held that the government violated the collective property rights of indigenous peoples under the American Convention on Human Rights when it granted a logging concession on their ancestral lands to a private company. Human rights tribunals have emphasized that states have an obligation to refrain from directly violating human rights as well as a duty to protect these rights by regulating the conduct of private parties such as corporations (Knox 2009). In *Öneryıldız v. Turkey* (2004), for example, the European Court of Human Rights determined that the government's inadequate regulation of a waste disposal operation in an urban area violated the right to life and property under the European Convention on Human Rights.

While no human rights tribunal has yet concluded that failure to provide access to energy constitutes a human rights violation, energy is essential for cooking, lighting, heating, refrigeration, sanitation, health care, and the pumping of clean water for drinking, bathing, and crop irrigation. The environmental precedents referenced above can be used to argue that access to energy is implicit in a variety of existing human rights obligations, including the rights to life, health, food, water, and an adequate standard of living (Bradbrook et al. 2008). In addition, the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) explicitly obligates states parties to ensure that rural women "enjoy adequate living conditions, particularly in relation to housing, sanitation, electricity, and water supply, transport and communication" (CEDAW 1979, Art. 14[2][h]).

Grounding demands for energy justice in the language of human rights creates legal rather than simply moral obligations to address energy poverty. It also provides the opportunity to exert pressure on states through the UN human rights institutions. For example, the appointment of a Special Rapporteur on the right to energy as well as the development of guidelines by the UN Commission on Economic, Social and Cultural Rights to implement this right could elevate the profile of energy poverty in both domestic and international fora – including the climate change negotiations. Recognition of the human right to energy could also encourage funding agencies (such as the World Bank) to prioritize renewable energy projects designed to benefit the Energy Poor (Bradbrook et al. 2008). An additional benefit of a human rights approach is its potential to trump other

norms of international law (Anton and Shelton 2011). For example, in order to combat energy poverty and facilitate the South's transition to renewable energy, it is essential that conflicts between the North's intellectual property rights and the human rights of the Energy Poor be resolved in favor of the latter. If the clean energy technologies of Northern countries (and of Southern clean energy leaders like China) are unaffordable due to patent protection, then efforts to address climate change and eradicate energy poverty may be jeopardized (Kapur 2011). Finally, the ability of aggrieved individuals and communities to bring human rights claims in domestic or international tribunals can shine a spotlight on corrupt and unresponsive governments (and their corporate collaborators) and create political mobilization for change.

### *Re-invigoration of common but differentiated responsibility*

A justice-centered approach to energy poverty requires recognition and redress of North–South economic and political inequality arising from the colonial and post-colonial practices described in the first part of this chapter. International environmental law has developed an important principle designed to mitigate North–South inequality – the principle of common but differentiated responsibility. Principle 7 of the Rio Declaration on Environment and Development articulates this principle as follows:

In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.

(UN Conference on Environment and Development 1992)

The UNFCCC explicitly adopts this principle in Article 3 (1), which provides that the “Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities” (UNFCCC 1992, Art. 3[1]). The principle of common but differentiated responsibility has been included in several additional environmental treaties, including the Vienna Convention for the Protection of the Ozone Layer, the Montreal Protocol on Substances that Deplete the Ozone Layer, the Convention on Biological Diversity, the United Nations Convention on the Law of the Sea, and the Kyoto Protocol (Gonzalez 2007).

Regrettably, the principle of common but differentiated responsibility remains controversial. The United States, in particular, has refused to accept moral or legal responsibility for its historic contribution to climate change and other environmental problems. In addition to rejecting the Kyoto Protocol, the United States went so far as to submit an interpretive statement on Principle 7 of the Rio

Declaration disclaiming any legal responsibility for historic acts of environmental degradation (Kovar 1993).

One of the primary reasons for the impasse in the climate change negotiations is the North's refusal to take responsibility for the colonial and post-colonial practices that enabled Northern states to industrialize and prosper at the expense of the planet's most vulnerable human beings. As Rajamani (2006) points out, this refusal to be held accountable

seeks to wipe the colonial past from our collective memories and start afresh, as if past patterns of exploitation have little bearing on current inequities, and the efforts of developing countries to raise them time and again are no more than special pleading.

The realization of climate justice and energy justice through the negotiation of a successor to the Kyoto Protocol requires accountability for past wrongs and re-invigoration of the principle of common but differentiated responsibility. The world's high-consuming societies must radically reduce their greenhouse gas emissions in order to create the environmental space necessary for Southern nations to eliminate energy poverty. These high-consuming Northern countries must also finance climate change mitigation and adaptation in the global South. However, middle-income Southern countries (like China and India) do bear responsibility for their contributions to climate change and must contribute their fair share to collective solutions. The successor to the Kyoto Protocol should impose differential responsibilities on nations rather than exempting Southern countries from binding greenhouse gas reduction obligations. Criteria for such differentiation should include past, current, and projected future greenhouse gas emissions – as well as vulnerability and capacity to contribute to collaborative efforts to combat climate change. Above all, North–South and South–South conflicts in the climate change negotiations must not obscure the environmental and human rights benefits of rapid action to mitigate climate change by providing ASETs to the Energy Poor. One important vehicle for incorporating energy access into the climate regime is the Green Climate Fund discussed in Chapter 13 of this volume.

### ***Corporate accountability***

From the oil drilling operation of Chevron/Texaco in Ecuador to those of Royal Dutch Shell in the Niger Delta, transnational corporations engaged in extractive industries are notorious for their human rights abuses and their destruction of local environments – including those of the Energy Poor (Soares 2007; Stephens 2002). Far from protecting their citizens, post-colonial states, eager to secure foreign investment, often strive to create a friendly environment for these corporations by entering into one-sided trade and investment agreements that protect the property rights of the foreign investor and restrict the ability of Southern states to regulate in the public interest (Simons 2012; Sornarajah

2006). In addition to the local harm inflicted by these corporations, recent reports indicate that 50 corporations (primarily oil companies) and 40 government-controlled enterprises are responsible for 63 percent of anthropogenic greenhouse gas emissions from the Industrial Revolution through 2010 (Goldenberg 2013).

A justice-based approach to energy poverty requires creative use of international and domestic law to regulate the conduct of the fossil fuel industry both at home and abroad. Currently, the geographic separation between the country of incorporation (the home state) and the country where extractive activities take place (the host state) may allow corporations to escape moral condemnation from shareholders and the public in the home state for human rights and environmental abuses in their overseas operations. Furthermore, if these operations are conducted in the host state through a local subsidiary, then the legal distinction between the parent company in the home state and the subsidiary in the host state may make it difficult for the legal system to impose liability for the acts of the subsidiary on the parent company and its shareholders despite the profits that they derive from this conduct. Under well-settled corporate law principles, the subsidiary is deemed a separate legal person, and the parent company is not generally liable for the actions of its subsidiaries. In addition, the doctrine of state responsibility generally does not attribute the conduct of private corporations to the states in which they are incorporated or the state in which they conduct their operations (De Jonge 2011).

While a discussion of the legal strategies to achieve corporate accountability (and the limitations of these strategies) is beyond the scope of this chapter, the relevant insight is that international and domestic law have been deployed in a variety of ways from the colonial era to the present to limit the ability of states to regulate corporate misconduct – particularly corporate misconduct that takes place abroad (Simons 2012; Simons and Macklin 2014). There are a variety of strategies that might be pursued to achieve corporate accountability, including strengthening the environmental enforcement capacity of Southern countries, holding Northern countries liable for failure to regulate the extraterritorial conduct of their corporations, allowing victims of human rights and environmental abuses to sue in the home country of these corporations, and developing treaties requiring the imposition of standards of conduct on these corporations. In June 2014, the United Nations Human Rights Council (2014) voted to convene a working group to develop a legally binding instrument to impose human rights obligations on corporations. While the feasibility of this approach is questionable given the opposition of Northern countries, it is important to recognize and address the role of corporate actors in the perpetuation of the fossil fuel economy, including human rights and environmental abuses during the extraction process.

### *Re-conceptualizing development*

Climate change is merely one symptom of a deeper structural problem: an economic development model premised on the myth of unlimited economic

growth. From the post-World War II era to the present, Northern aid, trade, and financial institutions have promoted the growth-at-any-cost economic model as the solution to global poverty and inequality (Sachs and Santarius 2007). By externalizing the environmental and social costs of economic activity, this model has destroyed ecosystems, depleted natural resources, and inflicted unspeakable violence on poor communities in both the North and the South (Rees and Westra 2003). The world's most affluent countries (the US, the European Union, and Japan) and its rising economic powers (Brazil, Russia, India, and China) currently account for nearly 70 percent of global greenhouse gas emissions, and these emissions are rising (Gonzalez 2013). If all countries of the world pursue the growth-at-any-cost economic model, the result will be catastrophic.

If we are to enhance the living standards of the Energy Poor without exceeding ecological limits, it is essential to develop a different paradigm of economic development that places human well-being and the health and resilience of the planet's ecosystems at its center rather than relying on gross domestic product (GDP) as a proxy for human flourishing. This will require coordination with finance, energy, land use, public health, trade, investment, and other areas of law and policy to facilitate the transition to a low carbon, climate resilient, equitable model of development. A powerful justice narrative, coupled with scientific, technical, and legal arguments, can help generate the political will necessary to make this transition a reality.

## Closing

Climate change and energy poverty present daunting moral challenges at the intersection of human rights and the environment. A justice-centered approach to energy poverty and climate change must recognize the historic roots of these challenges and seize opportunities to bridge the North-South divide. The burning of biomass for cooking and heating produces black carbon, the second largest contributor to climate change after carbon dioxide. Energy poverty destroys forests, ravages local ecosystems, and denies billions of people the right to life, health, food, water, and an adequate standard of living. The modest sums required to provide ASETs to the Energy Poor can foster North-South collaboration, achieve immediate reductions in greenhouse gas emissions, fulfill the human rights of the Energy Poor, and promote the transition to sustainable energy. The world's high-consuming societies must ultimately reduce their greenhouse gas emissions in order to enable Southern countries to elevate the living standards of the poor and marginalized. They must also finance climate change mitigation and adaptation in the global South and transfer renewable energy technology. However, taking action to mitigate black carbon emissions by providing ASETs to the Energy Poor would produce an immediate decline in one highly potent but short-lived greenhouse gas (black carbon), thereby providing a short reprieve from climate catastrophe and an opportunity to hammer out and implement long-term solutions to the problems of climate change and energy poverty.



## References

- Amsden, Alice. 2009. *The Developing World's Journey through Heaven and Hell*. Cambridge: MIT Press.
- Anand, Ruchi. 2004. *International Environmental Justice: A North-South Dimension*. Burlington: Ashgate.
- Anton, Donald and Dinah Shelton. 2011. *Environmental Protection and Human Rights*. Cambridge: Cambridge University Press.
- Birol, Fatih. 2015. "Achieving Energy for All Will Not Cost the Earth." In *Energy Poverty: Global Challenges and Local Solutions*, ed. Antoine Halff, Benjamin Sovacool, and Jon Rozhon, 11–20. Oxford: Oxford University Press.
- Black, Brian C. 2010. *Crude Reality: Petroleum in World History*. Lanham: Rowman & Littlefield.
- Bond, Tammy C., et al. 2013. "Bounding the Role of Black Carbon in the Climate System: A Scientific Assessment." *Journal of Geophysical Research: Atmosphere*, 118 (11): 5380–5552.
- Boyle, Alan. 2007. "Human Rights or Environmental Rights? A Reassessment." *Fordham Environmental Law Review* 18: 471–511.
- Bradbrook, Adrian J., Judirh G. Gardam, and Monique Cormier 2008. "A Human Dimension to the Energy Debate: Access to Modern Energy Services." *Journal of Energy and Natural Resources* 26(4): 526–551.
- Burkett, Maxine. 2009. "Climate Reparations." *Melbourne Journal of International Law* 29 (10): 516–535.
- Chang, Ha-Joon. 2002. *Kicking Away the Ladder: Development Strategy in Historical Perspective*. London: Anthem Press.
- Chang, Ha-Joon. 2008. *Good Samaritans: The Myth of Free Trade and the Secret History of Capitalism*. New York: Bloomsbury Press.
- Cole, Luke and Sheila Foster. 2001. *From the Ground Up: Environmental Racism and the Rise of the Environmental Justice Movement*. New York: New York University Press.
- Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW). 1979. UNGA Res. 34/180, 34 U.N. GAOR Supp. (No. 46) at 193, U.N. Doc. A/34/46.
- Cotula, Lorenzo. 2013. *The Great African Land Grab? Agricultural Investments and the Global Food System*. London: Zed Books.
- Cypher, James M. 2009. *The Process of Economic Development*. New York: Routledge.
- De Jonge, Alice. 2011. *Transnational Corporations and International Law: Accountability in the Global Business Environment*. Cheltenham: Edward Elgar.
- Garcia, Frank J. 2004. "Beyond Special and Differential Treatment." *Boston College International and Comparative Law Review* 27: 291–317.
- Goldenberg, Suzanne. 2013. "Just 90 Companies Caused Two Thirds of Man-made Global Warming Emissions." *The Guardian*, November 20. [www.academia.edu/6448836/TNCs\\_and\\_Environmental\\_Pollution](http://www.academia.edu/6448836/TNCs_and_Environmental_Pollution). Accessed December 15, 2014.
- Gonzalez, Carmen G. 2002. "Institutionalizing Inequality: The WTO, Agriculture, and Developing Countries." *Columbia Journal of Environmental Law* 27: 433–490.
- Gonzalez, Carmen G. 2004. "Trade Liberalization, Food Security, and the Environment: The Neoliberal Threat to Sustainable Rural Development." *Transnational Law & Contemporary Problems* 14: 419–498.

- Gonzalez, Carmen. 2007. "Genetically Modified Organisms and Justice: The International Environmental Justice Implications of Biotechnology." *Georgetown International Environmental Law Review* 19: 584–608.
- Gonzalez, Carmen. 2013. "Environmental Justice and International Environmental Law." In *Routledge Handbook of International Environmental Law*, ed. Shawkat Alam, Md Jahid Hossain Bhuiyan, Tareq M.R. Chowdhury, and Erika J. Techera, 77–97. Abingdon: Routledge.
- Gordon, Ruth. 1997. "Saving Failed States: Sometimes a Neocolonialist Notion." *American University Journal of International Law and Policy* 12 (6): 904–971.
- Gordon, Ruth. 2007. "Climate Change and the Poorest Nations: Further Reflections on Global Inequality." *University of Colorado Law Review* 78: 1559–1623.
- Gordon, Ruth. 2009. "The Dawn of a New, New International Economic Order?" *Law and Contemporary Problems*. 72: 131–162.
- Gordon, Ruth E. and Jon Sylvester. 2004. "Deconstructing Development." *Wisconsin International Law Journal*. 22 (1): 1–86.
- Guerra v. Italy*, European Court of Human Rights, Application No. 14967/89, Reports of Judgments and Decisions 1998-I (February 19, 1998).
- Guruswamy, Lakshman. 2010. "Energy Justice and Sustainable Development." *Colorado Journal of International Environmental Law* 21: 231–275.
- Guruswamy, Lakshman. 2011. "Energy Poverty." *Annual Review of Environmental Resources* 36: 139–161.
- Happaerts, Sanders and Hans Bruyninckx. 2013. "Rising Powers in Global Climate Governance: Negotiating in the New World Order." Leuven Centre for Global Governance Studies Working Paper No. 124.
- Hossay, Patrick. 2006. *Unsustainable: A Primer for Global Environmental and Social Justice*. New York: Zed Books.
- Intergovernmental Panel on Climate Change (IPCC). 2014. *Climate Change 2014: Mitigation of Climate Change* (Working Group III Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change). Cambridge: Cambridge University Press.
- Ismail, Faizel. 2008. "Rediscovering the Role of Developing Countries in GATT before the Doha Round." *Law and Development Review* 1: 49–72.
- Jacobson, Mark Z. and David G. Streets. 2009. "Influence of Future Anthropogenic Emissions on Climate, Natural Emissions, and Air Quality." *Journal of Geophysical Research: Atmospheres* (1984–2012). 114: 1–21.
- Kapur, Kavita. 2011. "Climate Change, Intellectual Property, and the Scope of Human Rights Obligations." *Sustainable Development Law and Policy* 11: 58–97.
- Knox, John H. 2009. "Climate Change and Human Rights Law." *Virginia Journal of International Law*. 50 (1): 163–218.
- Kovar, Jeffrey D. 1993. "A Short Guide to the Rio Declaration." *University of Colorado Journal of International Environmental Law and Policy* 4 (1): 119–140.
- Kuehn, Robert R. 2000. "A Taxonomy of Environmental Justice." *Environmental Law Reporter* 30: 10681–10703.
- Kyoto Protocol to the United Nations Framework Convention on Climate Change. 1997. 2303 UNTS 148; reprinted in 37 ILM 32 (1998).
- Lee, Yong Shik. 2006. *Reclaiming Development in the New World Trading System*. Cambridge: Cambridge University Press.
- López Ostra v. Spain*, European Court of Human Rights, Application No. 16798/90 Series A no. 303-C (December 9, 1994).

- Martinez-Alier, Juan. 2002. *The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation*. Cheltenham: Edward Elgar.
- Mayagna (Sumo) Awas Tingni Community v Nicaragua, Inter-American Court of Human Rights, (ser.C) No. 79 (August 31, 2001).
- McLaren, Duncan. 2003. "Environmental Space, Equity and the Ecological Debt." In *Just Sustainabilities: Development in an Unequal World*, ed. Julian Agyeman, Robert D. Bullard, and Bob Evans, 19–37. Cambridge: MIT Press.
- Mickelson, Karin. 2005. "Leading Towards a Level Playing Field, Repaying Ecological Debt, or Making Environmental Space: Three Stories about International Environmental Cooperation." *Osgoode Hall Law Journal* 43 (1–2): 137–170.
- Mickelson, Karin. 2009. "Beyond a Politics of the Possible? South-North Relations and Climate Change." *Melbourne Journal of International Law* 10 (2): 1–13.
- Myers, Norman. 1997. "The World's Forests and Their Ecosystem Services." In *Nature's Services: Societal Dependence on Natural Ecosystems*, ed. Gretchen C. Daily, 215–235. Washington, DC: Island Press.
- Nelson, Patricia. 2004. "An African Dimension to the Clean Development Mechanism: Finding a Path to Sustainable Development in the Energy Sector." *Denver Journal of International Law and Policy* 32: 615–652.
- Öneryildiz v. Turkey, European Court of Human Rights, Application No. 48389/99, ECHR 2004-XII (November 30, 2004).
- Paredis, Erik, Gert Goeminne, Wouter Vanhove, Frank Maes, and Jesse Lambrecht. 2008. *The Concept of Ecological Debt: Its Meaning and Applicability in International Policy*. Rosemead: Academia Scientific.
- Peet, Richard. 2009. *Unholy Trinity: the IMF, World Bank and WTO*. London: Zed Books.
- Pellow, David Naguib. 2007. *Resisting Global Toxics: Transnational Movements for Environmental Justice*. Cambridge: MIT Press.
- Ponting, Clive. 1993. *A Green History of the World: The Environment and the Collapse of Great Civilizations*. New York: Penguin Books.
- Rajamani, Lavanya. 2006. *Differential Treatment in International Environmental Law*. New York: Oxford University Press.
- Ramanathan, V. and G. Carmichael. 2008. "Global and Regional Climate Changes Due to Black Carbon." *Nature Geoscience* 1: 221–227.
- Rees, William E. and Laura Westra. 2003. "When Consumption Does Violence: Can There be Sustainability and Environmental Justice in a Resource-Limited World?" In *Just Sustainabilities: Development in an Unequal World*, ed. Julian Agyeman, Robert D. Bullard, and Bob Evans, 99–124. Cambridge: MIT Press.
- Reinert, Eric. 2007. *How Rich Countries Got Rich ... and Why Poor Countries Stay Poor*. New York: Carroll and Graf.
- Roberts, J. Timmons and Bradley Parks. 2008. *A Climate of Injustice: Global Inequality, North South Politics, and Climate Policy*. Cambridge: MIT Press.
- Sachs, Wolfgang. 2010. "Environment." In *The Development Dictionary: A Guide to Knowledge as Power*, ed. Wolfgang Sachs, 24–37. New York: Zed Books.
- Sachs, Wolfgang and Tilman Santarius. 2007. *Fair Future: Resource Conflicts, Security and Global Justice*. London: Zed Books.
- Schlosberg, David. 2013. "Theorizing Environmental Justice: The Expanding Sphere of Discourse." *Environmental Politics* 22 (1): 37–55.
- Shelton, Dinah. 2009. "Environmental Rights and Brazil's Obligations in the Inter-American Human Rights System." *George Washington International Law Review* 40 (3): 733–777.

- Simms, Andrew. 2009. *Ecological Debt, Second Edition: Global Warming and the Wealth of Nations*. London: Pluto Press.
- Simons, Penelope C. 2012. "International Law's Invisible Hand and the Future of Corporate Accountability for Violations of Human Rights." *Journal of Human Rights and the Environment* 3 (1): 5–43.
- Simons, Penelope and Audrey Macklin. 2014. *The Governance Gap: Extractive Industries, Human Rights, and the Home State Advantage*. Abingdon: Routledge.
- Soares, Ricardo de Oliveira. 2007. *Oil and Politics in the Gulf of Guinea*. New York: Columbia University Press.
- Sornarajah, M. 2006. "Power and Justice: Third World Resistance in International Law." *Singapore Year Book of International Law* 10: 19–57.
- Srinivasan, U. Thara, Susan P. Carey, Eric Hallstein, Paul A.T. Higgins, Amber C. Kerr, Laura E. Koteen, Adam B. Smith, Reg Watson, John Harte, and Richard B. Norgaard. 2008. "The Debt of Nations and the Distribution of Ecological Impacts from Human Activities." *Proceedings of the National Academy of Science* 105 (5): 1768–1773.
- Stephens, Beth. 2002. "The Amoral of Profit: Transnational Corporations and Human Rights." *Berkeley Journal of International Law* 20 (1): 45–90.
- Stone, Christopher D. 2004. "Common but Differentiated Responsibilities in International Law." *American Journal of International Law* 98 (2): 276–301.
- Tsosie, Rebecca. 2007. "Indigenous Peoples and Environmental Justice: The Impact of Climate Change." *University of Colorado Law Review* 78 (4): 1625–1677.
- United Nations. 2012. *Resilient People, Resilient Planet: A Future Worth Choosing*. [http://uscib.org/docs/GSPReportOverview\\_A4%20size.pdf](http://uscib.org/docs/GSPReportOverview_A4%20size.pdf). Accessed December 15, 2014.
- United Nations Climate Change Conference, Dec. 7–18, 2009, Copenhagen Accord, UN Doc. FCCC/CP/2009/L.7 (Dec. 18, 2009) (Copenhagen Accord).
- United Nations Conference on Environment and Development. 1992. Rio Declaration on Environment and Development, UN Doc. A/CONF.152/26 (vol. I) reprinted in 31 ILM 874, Principle 7.
- United Nations Framework Convention on Climate Change (UNFCCC). 1992. Concluded at Rio de Janeiro, 9 May 1992. 1771 UNTS 107, reprinted in 31 ILM 849 (1992).
- United Nations General Assembly, Human Rights Council. 2014. *Elaboration of an International Legally Binding Instrument on Transnational Corporations and Other Business Enterprises with respect to Human Rights*, UN Doc. A/HRC/26/L.22/Rev.1 (June 25). Accessed March 4, 2015. <http://undocs.org/A/HRC/26/L.22/Rev.1>.
- United Nations High Commissioner for Human Rights. UN Doc. A/HRC/10/61. 2009. *Report on the Relationship between Climate Change and Human Rights*. [www.ohchr.org/Documents/Press/AnalyticalStudy.pdf](http://www.ohchr.org/Documents/Press/AnalyticalStudy.pdf). Accessed December 15, 2014.
- Walker, Gordon. 2012. *Environmental Justice: Concepts, Evidence, and Politics*. Abingdon: Routledge.
- World Bank. 2011. *Energy Use (kg of oil equivalent per capita)*. <http://data.worldbank.org/indicator/EG.USE.PCAP.KG.OE>. Accessed December 15, 2014.
- World Health Organization (WHO). 2014. *Household Air Pollution and Health*, Factsheet No. 292. [www.who.int/mediacentre/factsheets/fs292/en/](http://www.who.int/mediacentre/factsheets/fs292/en/). Accessed December 15, 2014.
- Worldwatch Institute. 2009. *State of the World: Into a Warming World*. New York: W.W. Norton & Company.
- Yanomani v. Brazil*, Case 7615 (Brazil), 1984–1985 Annual Report of the Inter-American Commission on Human Rights 24, OEA.