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Food Justice: An Environmental Justice Critique of the Global Food System

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1. INTRODUCTION

Environmental justice is an important framework for understanding the North–South divide in many areas of international law and policy, including energy, climate, hazardous wastes, and food. An environmental justice analysis makes visible the ways in which the global North benefits from unsustainable economic activity while imposing the environmental consequences on the global South and on the planet's most vulnerable human beings, including women, racial and ethnic minorities, indigenous peoples, and the poor.[1]

From the colonial era to the present, the North has exploited the fertile lands, forests, and vast mineral resources of Asia, Africa, and Latin America, and wreaked havoc on the livelihoods and ecosystems of the region's inhabitants.[2] In recent decades, Northern countries have also used the global South as a dumping ground for hazardous wastes and a haven for polluting industry, a practice known as "toxic colonialism."[3] Finally, the global North has contributed disproportionately to climate change by utilizing more than its fair share of the atmosphere to deposit its greenhouse gases and by maintaining per capita emissions that continue to dwarf those of the South.[4]

[1] C. G. Gonzalez, "Environmental Justice and International Environmental Law," in S. Alam, M. J. H. Bhuiyan, T. M. R. Chowdhury, and E. J. Techera (eds.) *Routledge Handbook of International Environmental Law* (New York: Routledge, 2013), pp. 78–84.

[2] P. Hossay, *Unsustainable: A Primer for Global Environmental and Social Justice* (London: Zed Books, 2006), pp. 52–55; C. Ponting, *A Green History of the World: The Environment and the Collapse of Great Civilizations* (New York: Penguin Books, 1991), pp. 195–223.

[3] See generally J. Clapp, *Toxic Exports: The Transfer of Hazardous Wastes from Rich to Poor Countries* (Ithaca: Cornell University Press, 2010). See also Chapter 12, Z. Lipman, "The Hazardous Waste Trade."

[4] A. Simms, *Ecological Debt: The Health of the Planet & The Wealth of Nations* (London: Pluto Press, 2005), pp. 93–109.

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While everyone suffers from the effects of environmental pollution, natural resource degradation, and climate change, socially and economically marginalized communities are disparately burdened due to their proximity to environmental hazards, their dependence on natural resources, and their limited access to good nutrition, decent housing, adequate health care, and other means of protecting themselves from environmental ills. In response to these inequities, environmental justice movements have arisen in both the North and the South, and are demanding healthy environments, sustainable livelihoods, and equitable access to natural resources.[5]

The global food system is a paradigmatic example of environmental injustice. Decades of Northern aid, trade, finance, and investment policies have devastated the livelihoods and ecosystems of rural communities in the global South while producing bountiful harvests and hefty profits for the Northern transnational corporations that dominate the global food system.[6] Despite global agricultural yields sufficient to supply every person on the planet with approximately 2,700 calories per day,[7] nearly a billion people, most of whom reside in the global South, experience chronic undernourishment because they lack the resources to purchase food on the market or to grow the food they require.[8]

This chapter applies an environmental justice analysis to the global food system, and identifies the ways in which this system perpetuates food injustice among and within nations. It adopts a tripartite definition of food justice consisting of ecologically sustainable food production, equitable access to food and food-producing resources, and democratic local and national control over food and agricultural policy. Because the concept of food justice originates in the theory and practice of the environmental justice movement,[9] the chapter describes the origins of this movement and explains how environmental justice as an analytical framework applies to North–South relations. The chapter then analyzes the underlying causes of food injustice, and outlines several strategies to create a more equitable and sustainable approach to global food governance.

[5] K. Harper and S. R. Rajan, "International Environmental Justice: Building the Natural Assets of the World's Poor," Political Economy Research Institute, University of Massachusetts Amherst, Working Paper Series No. 87 (2004), p. 1.

[6] E. Holt-Gimenez and R. Patel, *Food Rebellions! Crisis and the Hunger for Justice* (Oakland: Food First Books, 2009), pp. 1, 6, 20.

[7] J. Ziegler, C. Golay, C. Mahon, and S. Way, *The Fight For the Right to Food: Lessons Learned* (New York: Palgrave Macmillan, 2011), p. 3.

[8] C. G. Gonzalez, "Institutionalizing Inequality: The WTO, Agriculture and Developing Countries" (2002) 27 *Columbia Journal of Environmental Law* 431 at 468–470 (explaining the causes of chronic undernourishment).

[9] A. H. Alkon and J. Agyeman, "Introduction: The Food Movement as Polyculture," in A. H. Alkon and J. Agyeman (eds.), *Cultivating Food Justice: Race, Class and Sustainability* (Cambridge: MIT Press, 2011), pp. 7–9.

2. FROM ENVIRONMENTAL JUSTICE TO FOOD JUSTICE

The environmental justice movement emerged in the United States in the 1980s as a grassroots response to the concentration of polluting industries and abandoned hazardous waste sites in low-income communities of color.[10] Environmental justice scholars and activists articulated four distinct but interrelated dimensions of environmental injustice. They alleged distributive injustice in the form of disparate exposure to environmental hazards and inadequate access to environmental amenities (such as parks and open space); procedural unfairness due to the exclusion of socially and economically marginalized communities from governmental decision-making; corrective injustice in the form of ineffective enforcement of the environmental laws; and social injustice because environmental degradation is inextricably intertwined with other social ills, such as poverty and racism.[11]

From movements to secure access to clean water and sanitation to popular mobilizations against dams, mining, and petroleum extraction, grassroots environmental movements in the global South have embraced the language of environmental justice and have developed North–South and South–South transnational networks dedicated to specific issues, including water justice, food justice, energy justice, and climate justice.[12] Known collectively as "the environmentalism of the poor,"[13] these grassroots environmental justice movements dispel the myth that environmental protection is a luxury that the South can ill afford and emphasize the rights of local communities to self-determination, democratic participation, and access to the basic necessities of life.[14]

The inequities of the global food system have sparked a variety of movements in both the North and the South, most notably the food justice movement in the United States and the international movement for food sovereignty.[15] Reflecting its

[10] L. Cole and S. Foster, *From the Ground Up: Environmental Racism and the Rise of the Environmental Justice Movement* (New York: New York University Press, 2001), pp. 19–33.

[11] R. R. Kuehn, "A Taxonomy of Environmental Justice" (2000) 30 *Environmental Law Reporter* 10681 at 10685, 10689, 10694–10695, 10700–10702.

[12] J. Martinez-Alier et al., "Between Activism and Science: Grassroots Concepts for Sustainability Coined by Environmental Justice Organizations" (2014) 21 *Journal of Political Ecology* 19 at 27–42.

[13] Ibid, at 24–25.

[14] C. G. Gonzalez, "Beyond Eco-Imperialism: An Environmental Justice Critique of Free Trade" (2001) 78 *Denver University Law Review* 979 at 985–986, 999.

[15] For example, La Vía Campesina, one of the most prominent advocates of food sovereignty, is a network of small-scale farmers, farm laborers, fisherfolk, and indigenous communities, composed of more than 164 local and national organizations in seventy-three countries in both the North and the South. La Vía Campesina promotes small-scale sustainable agricultural as an alternative to the globalization of industrial agriculture, and advocates removing food from the purview of the World Trade Organization Agreement on Agriculture. See La Via Campesina, "The International Peasant's Voice," http://viacampesina.org. An example of the US-based food justice movement is the Growing Food and Justice for All Initiative, a network of individuals and organizations working to create healthy and sustainable food

roots in the environmental justice movement, the U.S. food justice movement denounces the social and economic factors that prevent low-income communities of color from purchasing or producing healthy, nutritious, environmentally sustainable, and culturally appropriate food. The movement seeks to empower these communities to create local food systems that meet their needs (through urban gardens, farmworker organizing, and indigenous subsistence–based practices such as hunting and fishing) as a transition to a more equitable and sustainable food system.[16] The international food sovereignty movement seeks to dismantle the corporate-dominated free trade policies that have devastated rural livelihoods and environments in both the North and the South, promotes the redistribution of land and water rights to small-scale farmers, and advocates the right of peoples and nations to define their own food policies and control their food-producing resources.[17] While international aid agencies strive to achieve food security, defined as "physical and economic access to sufficient, safe and nutritious food"[18] regardless of where, how, and by whom such food is produced, the food sovereignty and food justice movements demand a structural transformation of national and global food systems to promote democratized, localized, equitable, and sustainable food production.[19]

This chapter adopts a definition of food justice that reconciles the aims of both movements and emphasizes ecological sustainability, equitable access to food and food-producing resources, and democratic control over food and agricultural policy. For the purposes of this chapter, food justice is the right of communities to grow, sell, and consume healthy, nutritious, affordable, and culturally appropriate food produced through ecologically sustainable methods, and their right to democratically determine their own food and agriculture policies.[20] In other words, food

systems in communities of color known as *food deserts* due to the absence of fresh, high-quality foods. This network also advocates on behalf of farmworkers, who produce most of the nation's food but ironically suffer from chronic undernourishment. See Growing Food and Justice for All Initiative, www.growingfoodandjustice.org.

[16] Alkon and Agyeman, note 9, p. 414; E. Holt-Gimenez, "Food Security, Food Justice, or Food Sovereignty? Crises, Food Movements, and Regime Change," in A. H. Alkon and J. Agyeman (eds.), *Cultivating Food Justice: Race, Class and Sustainability* (Cambridge: MIT Press, 2011), p. 323.

[17] Holt-Gimenez, note 16, pp. 124–125; J. Clapp, *Food* (Cambridge: Polity Press, 2012), p. 172.

[18] World Food Summit, "Rome Declaration on World Food Security and World Food Summit Plan of Action," www.fao.org, para. 1.

[19] E. Holt-Gimenez and Y. Wang, "Reform or Transformation? The Pivotal Role of Food Justice in the U.S. Food Movement" (2011) 5 *Race/Ethnicity: Multidisciplinary Global Contexts* 83 at 89–90.

[20] This definition is consistent with food sovereignty: "the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems." R. Patel, "What Does Food Sovereignty Look Like?" (2009) 36(2) *Journal of Peasant Studies* 663 at 666 (quoting the 2007 Nyéléni Declaration on Food Sovereignty). This definition is likewise compatible with one of the definitions of food justice articulated by the U.S. food justice movement: "communities exercising their right to grow, sell, and eat [food that is] fresh, nutritious, affordable, culturally

justice is grounded in the human right to food, and is based on the principles of intergenerational equity, intragenerational equity, public participation in decision-making, and economic self-determination. Like the food sovereignty movement's call for local and national control of food-producing resources, this definition "does not negate trade, but rather it promotes the formulation of trade policies and practices that serve the rights of peoples to safe, healthy and ecologically sustainable production."[21]

Achieving food justice requires careful attention to North–South power imbalances that determine where, how, and by whom food is grown and consumed. Environmental justice is a useful framework for analyzing North–South power asymmetries and for developing legal strategies to promote a more equitable and sustainable global economic order. North–South relations are grounded in *distributive injustice* because the global North consumes a disproportionate share of the planet's resources and also contributes disproportionately to global environmental degradation; Southern countries bear most of the harm due to their vulnerable geographic locations, lack of resources, and limited capacity to grapple with environmental problems.[22] North–South relations raise issues of *procedural injustice* because the North dominates the institutions of global economic governance, including the World Bank, the International Monetary Fund (IMF), and the World Trade Organization (WTO), whose policies have increased economic inequality within and among nations and have accelerated natural resource exploitation.[23] *Corrective injustice* is perhaps most evident in the inability of vulnerable nations to obtain compensation for harms inflicted by powerful states, as exemplified by the small island states facing imminent destruction of their territories due to climate change.[24] Finally, North–South environmental conflicts are grounded in broader *social injustice* because they cannot be studied in isolation from the colonial and postcolonial policies that impoverished the global South and enabled the North to appropriate its natural resources.[25] The remainder of this chapter will examine the global food system through an environmental justice lens, and will explicitly apply this fourfold framework at the conclusion of the analysis.

appropriate and grown locally with care for the well-being of land, workers, and animals." Alkon and Agyeman, note 9, p. 5.

[21] Patel, note 20 (quoting the definition of food sovereignty developed in 2002 by the Peoples Food Sovereignty Network).

[22] R. Anand, *International Environmental Justice: A North–South Dimension* (Burlington: Ashgate, 2001), pp. 128–130; Gonzalez, note 14 at 987–1000.

[23] Anand, note 22, pp. 132–133; Hossay, note 2, pp. 191–198; R. Peet, *Unholy Trinity: The IMF, World Bank and WTO* (London: Zed Books, 2003), pp. 200–204.

[24] See Chapter 20, M. Burkett, "Climate Change and Small Island Nations."

[25] C. G. Gonzalez, "Genetically Modified Organisms and Justice: The International Environmental Justice Implications of Biotechnology" (2007) 19 *Georgetown International Environmental Law Review* 583 at 595–602.

3. GLOBAL FOOD INJUSTICE

According to the United Nations Food and Agriculture Organization (FAO), approximately 842 million people do not consume enough calories to satisfy their dietary energy requirements.[26] An additional two billion people suffer from deficiencies of essential micronutrients (such as Vitamin A and iron), and 26 percent of the world's children fail to achieve normal height and weight due to malnourishment.[27]

Chronic undernourishment is a result of poverty rather than food scarcity.[28] Even though the world's population (which stands at over seven billion[29]) is expected to reach 9.6 billion in 2050 and 10.9 million in 2100,[30] the global food system currently produces enough food to feed a global population of 12–14 billion.[31] Thus, efforts to boost food production through technological innovation are unlikely to eradicate world hunger. We will not eliminate chronic undernourishment unless we tackle its underlying causes – poverty and inequality.[32]

Chronic undernourishment is primarily a rural phenomenon. Approximately 80 percent of the world's undernourished people are small farmers, herders, fisherfolk, and landless workers in the rural areas of the global South who produce at least 70 percent of the world's food.[33] The vast majority are small farmers who are net food purchasers because they have been consigned to plots of land that are too small, too hilly, too arid, or inadequately irrigated due, in part, to competition for land and water from large-scale agricultural producers.[34] As explained later in the chapter, the livelihoods of these rural dwellers have been and continue to be undercut by Northern aid, trade, finance, and investment policies that favor large-scale industrial agriculture, accelerate environmental

[26] United Nations Food and Agriculture Organization (FAO), *The State of Food Insecurity in the World 2013: The Multiple Dimensions of Food Insecurity* (Rome: FAO, 2013), p. 8.

[27] FAO, *The State of Food and Agriculture 2013: Food Systems for Better Nutrition* (Rome: FAO, 2013), p. ix.

[28] See generally A. Sen, *Poverty and Famines: An Essay on Entitlement and Deprivation* (New York: Oxford University Press, 1990); O. de Schutter, "International Trade in Agriculture and the Right to Food," Friedrich-Ebert-Stiftung Occasional Papers No. 64 (2009), p. 10.

[29] World Population Clock, www.worldometers.info/world-population.

[30] United Nations Department of Social and Economic Affairs, *World Population Prospects: The 2012 Revision, Key Findings and Advance Tables*, 2013, ESA/P/WP.227, p. 1.

[31] UNCTAD, *Trade and Environment Review 2013, Wake Up Before It is Too Late: Make Agriculture Truly Sustainable Now for Food Security in a Changing Climate* (Geneva: United Nations Publication, 2013), p. 2.

[32] R. M. Bratspies, "Food, Technology and Hunger" (2014) 10 *Law, Culture and the Humanities* 212 at 220–224.

[33] O. de Schutter, "How Not to Think of Land-Grabbing: Three Critiques of Large-Scale Investments in Farmland" (2011) 38(2) *Journal of Peasant Studies* 249 at 256–257; IFAD, *Rural Poverty Report 2011* (Rome: IFAD, 2010), p. 6; ETC Group, "Who Will Feed Us? Questions for the Food and Climate Crises," ETC Group Communiqué, November 1, 2009, p. 1.

[34] de Schutter, note 33 at 256.

degradation, enrich local elites or Northern transnational corporations, and increase the gap between the rich and the poor.

3.1 *The Global Food System: From Colonialism to the Green Revolution*

A useful framework for understanding the evolution of the global food system is the food regime analysis introduced by Harriet Friedman and Philip McMichael.[35] A food regime is a system of production and consumption of food on a global scale that advances the interests of one or more dominant powers.[36]

During the first global food regime (1870–1930s), cheap food and raw materials from the colonies and from independent settler states fueled the industrialization of Europe.[37] European control over a significant part of the planet's natural resources enabled it to achieve a standard of living far beyond the constraints of its own resource base while relegating the South to the production of raw materials and the purchase of manufactured goods.[38] This pattern of trade and production has persisted into contemporary times, and has impoverished the South by subjecting it to the volatility of agricultural commodity prices (including boom and bust cycles) and the declining terms of trade for agricultural products relative to manufactured goods.[39] Nevertheless, the global South was largely food self-sufficient during the first food regime.[40]

During the second food regime (1930s to 1970s), the United States played a pivotal role in the global transition to industrial agriculture, and adopted aid and trade policies that dispossessed small farmers in the global South, undermined Southern food self-sufficiency, and laid the groundwork for the dominance of Northern transnational corporations in the global food system.[41] In the decades following World War II, the United States and Western European nations provided generous subsidies to their agricultural producers, and imposed both tariff and non-tariff import barriers to protect them from foreign competition.[42]

[35] H. Friedmann and P. McMichael, "Agriculture and the State System: The Rise and Decline of National Agriculture, 1870 to the Present" (1989) 29(2) *Sociologia Ruralis* 93.

[36] E. Holt-Gimenez and A. Shattuck, "Food Crises, Food Regimes and Food Movements: Rumblings of Reform or Tides of Transformation?" (2011) 38 *Journal of Peasant Studies* 109 at 110.

[37] H. Friedmann and P. McMichael, note 35 at 95–103.

[38] L. Young, *World Hunger* (London: Routledge, 1997), pp. 41–42.

[39] Ibid; Ponting, note 2, pp. 213–214.

[40] H. Friedmann, "From Colonialism to Green Capitalism: Social Movements and Emergence of Food Regimes" (2005) 22 *Research in Rural Sociology and Development* 227 at 238.

[41] Holt-Gimenez and Shattuck, note 36 at 110.

[42] T. P. Stewart (ed.), *The GATT Uruguay Round: A Negotiating History (1986-1992)* (Boston: Kluwer Law and Taxation Publishers, 1993), pp. 125, 141, 155–156; M. A. Aksoy, "Global Agricultural Trade Policies," in M. A. Aksoy and J. C. Beghin (eds.), *Global Agricultural Trade and Developing Countries* (Washington DC: The World Bank, 2005), p. 37.

By contrast, most Southern countries taxed the agricultural sector in order to finance industrialization.[43]

The United States and European subsidies and import barriers were permitted under the 1947 General Agreement on Tariffs and Trade[44] (1947 GATT), which generally exempted agriculture from the GATT's trade liberalization requirements.[45] Indeed, the 1947 GATT benefited the North at the expense of the South by mandating the reduction of tariffs on manufactured goods (produced primarily by the North) while authorizing import barriers that enabled Northern countries to limit or exclude Southern textiles, clothing, and agricultural products.[46] By the mid-1950s, Southern countries had organized to demand a variety of measures to address these inequities, including the phase-out of Northern agricultural subsidies and import barriers; preferential access to Northern markets; and the right to use quotas and tariffs to protect infant industries from foreign competition.[47] In response to sustained Southern pressure, amendments and side agreements to the 1947 GATT incorporated Southern demands for preferential treatment (known as special and differential treatment).[48] However, these measures were largely ineffective because they were couched in non-binding language and often excluded the products of greatest significance to Southern countries, such as agricultural products, clothing, and textiles.[49]

When Northern agricultural subsidies (as well as agricultural mechanization and the application of chemical fertilizers and pesticides) resulted in overproduction, the United States and the European Community exported their surplus food to the global South as food aid or provided a variety of subsidies and credits to private grain traders to facilitate the purchase of this food by Southern countries.[50] The provision of surplus food to Southern countries free of charge or at reduced prices exacerbated poverty and hunger in the global South by depressing local food prices and undermining the livelihoods of small farmers.[51] As small farmers lost their lands and swelled the ranks of landless rural workers, wages for agricultural labor declined – increasing rural inequality and generating widespread undernourishment.[52] Prime agricultural lands became concentrated in the hands of affluent farmers, who produced coffee, cocoa, beef, vegetables, bananas, and feed grains for

[43] Stewart, note 42, pp. 154–157; Aksoy, note 42, p. 37.
[44] In force 1 January 1948, 55 UNTS 194; 61 Stat. pt. 5; TIAS 1700.
[45] Gonzalez, note 8 at 440–446.
[46] F. Ismail, "Rediscovering the Role of Developing Countries in GATT Before the Doha Round" (2008) 1 *Law and Development Review* 49 at 58–59.
[47] Ibid at 59–67.
[48] Ibid at 65–67.
[49] Y-S. Lee, *Reclaiming Development in the World Trading System* (Cambridge: Cambridge University Press, 2006), pp. 107–110.
[50] Clapp, note 17, pp. 26–33.
[51] J. Wessel, *Trading the Future: Farm Exports and the Concentration of Economic Power in Our Food System* (San Francisco: Institute for Food and Development Policy, 1983), p. 168.
[52] Ibid, pp. 166–168.

export rather than for domestic consumption.[53] As domestic food production declined, many of the world's poorest countries became dependent on food imports.[54]

In the 1960s and 1970s, during the height of the Cold War, the United States sought to alleviate chronic malnourishment in the global South and forestall communist revolutions by exporting not just food, but the industrial agricultural model, including new high-yielding seeds, fossil fuel–based pesticides, and fertilizers, machinery, irrigation, and monocropping.[55] Known as the Green Revolution, this industrial agricultural model increased global food production, but displaced ecologically sustainable agricultural practices and fostered dependence on agricultural inputs manufactured by Northern transnational corporations.[56] The Green Revolution's impact on undernourishment remains fiercely contested. While some observers contend that the Green Revolution enabled food production to outpace population growth, others point out that the Green Revolution increased rural inequality by benefiting the large farmers who could afford the necessary agricultural machinery, irrigation systems, and other expensive inputs.[57] When rising food production caused prices to plummet, many small farmers were rendered destitute and landless.[58] An influential study analyzing more than 300 published reports on the Green Revolution concluded that the Green Revolution generally exacerbated rural inequality.[59]

The primary beneficiaries of food aid and of the rapid industrialization of Southern agriculture were the Northern industrial farmers, grain traders, and input manufacturers that received generous government subsidies, access to new consumer markets in the global South, and the opportunity to supply Southern farmers with machinery, pesticides, fertilizers, and seeds.[60] Even in the United States, small farmers were squeezed by the rising costs of agricultural inputs and the declining prices of agricultural commodities caused by the global sourcing of agricultural products by transnational corporations.[61] In the course of a few decades, farming operations in the United States became larger, more integrated into corporate supply chains, and more dependent on government export subsidies.[62]

[53] Ibid, p. 167.
[54] Clapp, note 17, p. 33; Friedmann, note 40 at 242.
[55] Clapp, note 17, p. 33.
[56] C. Fowler and P. Mooney, *Shattering: Food, Politics, and the Loss of Genetic Diversity* (Tucson: University of Arizona Press, 1990), pp. 54–79.
[57] Clapp, note 17, pp. 38–41; V. Shiva, *The Violence of the Green Revolution* (London: Zed Books, 1991), pp. 176–177.
[58] Shiva, note 57, p. 177; K. Griffin, *The Political Economy of Agrarian Change: An Essay on the Green Revolution* (Cambridge: Harvard University Press, 1974), p. 73.
[59] D. K. Freebairn, "Did the Green Revolution Concentrate Incomes? A Qualitative Study of Research Reports" (1995) 23 *World Development* 265 at 277.
[60] Clapp, note 17, pp. 32–33; Friedmann, note 40 at 243.
[61] Wessel, note 51, pp. 23–25.
[62] Friedmann, note 40 at 243.

The North's promotion of industrial agriculture also generated a variety of negative environmental consequences that currently threaten food production, including a dramatic worldwide decline in crop genetic diversity, dependence on fossil fuel–based inputs, massive soil erosion, depletion of aquifers, and rising greenhouse gas emissions.[63] Approximately 75 percent of the planet's food crop diversity was lost in the twentieth century as farmers ceased to cultivate an assortment of local crops in favor of the genetically uniform, high-yielding varieties of wheat, rice, maize, and potato introduced by the Green Revolution.[64] This loss of genetic diversity increased the vulnerability of the global food system to pests, drought, floods, and other external shocks, including those associated with climate change.[65] And climate change, although caused primarily by the historic and current greenhouse gas emissions of the global North, is anticipated to disproportionately affect Southern countries, to depress food production (including the productivity of fisheries), and to raise food prices.[66] Ironically, agriculture currently generates more anthropogenic greenhouse gas emissions than any other sector of the economy.[67] While industrial agriculture is a significant contributor to climate change, small-scale sustainable agriculture[68] can play an important role in climate change mitigation and adaptation.[69] Sustainable agriculture mitigates greenhouse gas emissions by minimizing the use of fossil fuel–based pesticides and fertilizers and increasing carbon sequestration in soils.[70] It also promotes climate change

[63] J. N. Pretty, *Regenerating Agriculture: Policies and Practices for Sustainability and Self-Reliance* (Washington DC: Joseph Henry Books, 1995), pp. 58–80; F. Kirschenmann, "Do Increased Energy Costs Offer Opportunities for A New Agriculture," in F. Magdoff and B. Tokar, *Agriculture and Food in Crisis* (New York: Monthly Review Press, 2010), p. 227.

[64] Pretty, note 63, p. 93.

[65] Fowler and Mooney, note 56, pp. 42–46.

[66] IPCC, *Climate Change 2014: Impacts, Adaptation, and Vulnerability, Summary for Policymakers* (Cambridge: Cambridge University Press, 2014), pp. 7–8, 16–18.

[67] K. Hahlbrock, *Feeding the Planet: Environmental Protection through Sustainable Agriculture* (London: Haus Publishing, 2007), p. 217; J. Bellarby, B. Foereid, A. Hastings, and P. Smith, *Cool Farming: Climate Impacts of Agriculture and Mitigation Potential* (Amsterdam: Greenpeace International, 2008), pp. 15–17.

[68] This chapter uses the term "sustainable agriculture" to refer to a goal rather than a rigid set of practices. Sustainable agriculture incorporates natural pest, nutrient, soil, and water management technologies into the production process and seeks to reduce the use of fossil fuel-based fertilizers and pesticides. It strives to conserve and enhance biodiversity, including plant genetic resources, livestock, soil organisms, and insects. Finally, sustainable agriculture combines the traditional knowledge of farmers with the latest scientific innovations to enhance farmer self-reliance and reduce dependence on costly external inputs. See Pretty, note 63, pp. 8–12.

[69] Working Group on Climate Change and Development, *Other Worlds Are Possible: Human Progress in an Age of Climate Change* (International Institute for Environment and Development, 2009), pp. 40–42; International Trade Centre (UNCTAD & WTO) & Research Institute of Organic Agriculture, "Organic Farming and Climate Change," http://intracen.org, p. 7–9, 117–118, 21.

[70] International Trade Centre (UNCTAD & WTO) & Research Institute of Organic Agriculture, note 69, pp. 7–8.

adaptation because it enhances resilience to drought, floods, and pests by diversifying the variety of crops cultivated and by increasing the soil's organic matter and water retention ability.[71]

Thus, the realization of food justice – particularly ecologically sustainable food production and equitable access to food and food-producing resources – will turn on the global food system's ability to enhance the well-being of small farmers and promote environmentally friendly cultivation practices. Unfortunately, the global food system has done precisely the opposite.

3.2 *Double Standards in International Agricultural Trade*

Prior to the debt crisis of the 1980s, Southern countries could insulate their farmers from unfair competition with highly subsidized United States and EU agricultural producers by imposing tariffs on imported food products. This policy space was quickly eroded during the third food regime, which emerged in the aftermath of the global economic shocks of the 1970s and 1980s, and is characterized by the unprecedented domination of agricultural markets by Northern transnational corporations.[72] Enticed into borrowing money from Northern commercial banks to finance a variety of development projects, many Southern countries were unable to pay their debts when the oil price shocks of 1973 and 1979–1980 increased energy costs and sent interest rates skyrocketing.[73] Many food import-dependent Southern countries were particularly affected because they had borrowed heavily in the early 1970s, when soaring food prices coincided with the first oil price shock.[74] In exchange for loan repayment assistance from the IMF and the World Bank, three quarters of Latin American countries and two thirds of African countries were required to adopt a one-size-fits-all package of economic reforms known as structural adjustment.[75]

The structural adjustment programs mandated by the IMF and the World Bank inaugurated the double standards that plague international agricultural trade to the present day: protectionism for the North and open markets for the South.[76] These structural adjustment programs required Southern countries to adopt a standard package of neoliberal economic reforms, including lowering tariffs, eliminating non-tariff import barriers, and slashing government assistance to the agricultural sector (such as marketing assistance, price guarantees, social safety

[71] Ibid.
[72] Holt-Gimenez and Shattuck, note 36, at 111.
[73] Peet, note 23, pp. 71–75; S. George, *A Fate Worse Than Debt: The World Financial Crisis and the Poor* (New York: Grove Press, 1990), pp. 28–29.
[74] Friedmann, note 40, at 244.
[75] Peet, note 23, p. 75.
[76] C. G. Gonzalez, "Markets, Monocultures, and Malnutrition: Agricultural Trade Policy Through an Environmental Justice Lens" (2006) 14 *Michigan State Journal of International Law* 345 at 364.

nets, and agricultural research and education).[77] However, Northern agricultural producers continued to receive lavish agricultural subsidies from their governments, and benefited handsomely from the opening of additional export markets in the global South.[78]

The reduction of Southern import barriers and diminution of support to small farmers devastated rural livelihoods by placing resource-poor Southern farmers in direct competition with highly subsidized Northern agricultural producers.[79] As cheap food imports flooded Southern markets, food production in the global South declined, and waves of impoverished farmers migrated to urban slums.[80] Unable to find remunerative employment or adequate housing, millions of displaced farmers wound up working in low-wage informal jobs, residing in self-constructed dwellings, and struggling to obtain the basic necessities of life.[81] In India, over 250,000 farmers have committed suicide since the 1990s as a consequence of the economic hardships inflicted by the neoliberal economic reforms mandated by the IMF and the World Bank (including reduction of agricultural import barriers and elimination of domestic agricultural subsidies).[82]

The structural adjustment policies of the IMF and the World Bank diminished food self-sufficiency in the global South by dispossessing small farmers and by requiring Southern countries to dedicate prime agricultural lands to agro-export production in order to service the foreign debt.[83] Many Southern countries curtailed domestic food production in order to grow "non-traditional" agricultural exports such as flowers, fruits, and vegetables in addition to the "traditional" exports introduced during the first food regime, such as sugar, coffee, cocoa, and other tropical commodities.[84] Diversion of fertile agricultural lands from food cultivation to the chemical-intensive production of cash crops increased dependence on food imports and intensified the environmental damage associated with industrial agriculture.[85]

[77] M. Chossudovsky, *The Globalisation of Poverty: Impacts of IMF and World Bank Reforms* (London: Zed Books, 1997), pp. 62–63; J. Madeley, *Hungry for Trade: How the Poor Pay for Free Trade* (New York: Zed Books, 2000), p. 77.

[78] C. G. Gonzalez, "The Global Food Crisis: Law, Policy, and the Elusive Quest for Justice" (2010) 13 *Yale Human Rights and Development Law Journal* 462 at 469.

[79] Ibid.

[80] Ibid at 469–470.

[81] V. Prashad, *The Poorer Nations: A Possible History of the Global South* (London: Verso, 2012), pp. 272–273.

[82] Center for Human Rights and Global Justice, *Every Thirty Minutes: Farmer Suicides, Human Rights and the Agrarian Crisis in India* (New York: New York University School of Law, 2011), pp. 5–12.

[83] George, note 73, pp. 28–29; Peet, note 23, p. 71.

[84] Friedmann, note 40 at 251.

[85] A. Mittal, UN Conference on Trade and Development (UNCTAD), *The 2008 Food Price Crisis: Rethinking Food Security Policies*, G-24 Discussion Paper No. 29, June 2009, UNCTAD/GDS/MDP/G24/2009/3, pp. 13–15; Structural Adjustment Participatory Review International Network (SAPRIN), *The Policy Roots of Economic Crisis and Poverty: A Multi-Country Participatory Assessment of Structural Adjustment* (SAPRIN, 2002), pp. 124–126.

The WTO Agreement on Agriculture (AoA), which entered into force in 1995, purported to eliminate the double standards in global agricultural trade and to "establish a fair and market-oriented agricultural trading system."[86] The AoA required WTO members to reduce trade-distorting agricultural subsidies (including both domestic subsidies and export subsidies), convert all import barriers to tariffs (a process known as "tariffication"), and reduce these tariffs over time.[87]

The AoA failed to achieve its subsidy reduction objectives because Northern countries made aggressive use of the ambiguities in the AoA to continue to subsidize their agricultural producers and exporters.[88] Agricultural subsidies in the North actually *increased* in the aftermath of the AoA.[89] Ironically, since most Southern countries had already liberalized their markets pursuant to structural adjustment programs, the primary impact of the AoA was to preclude these countries from adopting export subsidies in the future and from providing domestic subsidies beyond *de minimis* levels.[90]

The AoA tariffication requirements did not open up Northern markets for the benefit of Southern exporters, but did succeed in restricting the ability of Southern countries to raise tariffs when confronted with surges of cheap, subsidized agricultural products.[91] Because the AoA did not specify how to convert non-tariff import barriers into tariffs, most Northern countries adopted tariffs that were far more import-restrictive than the non-tariff barriers they replaced (a phenomenon known as "dirty tariffication").[92] Northern countries maintained high tariffs on many Southern products (particularly those that competed with domestically produced equivalents, such as fruits and vegetables), and also engaged in tariff escalation – the practice of charging higher tariffs as the processing chain advances.[93] Tariff escalation harms Southern countries by discouraging them from diversifying their economies into higher value-added processed goods.[94] By contrast, most Southern countries did not engage in tariffication at all because they had already eliminated their non-tariff barriers (and reduced their tariffs) pursuant to IMF/World

[86] *WTO Agreement on Agriculture*, Geneva, 15 April 1994, in force 1 January 1995, 1867 UNTS 410, preamble para. 2.
[87] Gonzalez, note 8 at 450–456.
[88] Ibid at 459–468 (analyzing the ambiguities in the AoA that enabled the United States and the EU to maintain their domestic subsidies and export subsidies); J. A. McMahon and M. G. Desta, "The Agreement on Agriculture: Setting the Scene," in J. A. McMahon and M. G. Desta (eds.), *Research Handbook on the WTO Agriculture Agreement* (Cheltenham: Edward Elgar, 2012), pp. 12–16 (explaining why the AoA's restrictions on domestic subsidies and export subsidies are easy to circumvent).
[89] Gonzalez, note 8 at 366.
[90] Ibid, at 453–454, 479.
[91] Ibid at 458–461, 476–477.
[92] Ibid at 458; M. G. Desta, *The Law of International Trade in Agricultural Products* (The Hague: Kluwer, 2002), pp. 75–76.
[93] Gonzalez, note 8 at 461–462.
[94] Ibid at 462.

Bank-mandated structural adjustment programs.[95] Southern countries that did not engage in tariffication were particularly vulnerable to Northern agricultural export dumping because the AoA mechanism authorizing tariff increases to protect small farmers from devastating influxes of cheap, imported food (the "special safeguard mechanism") was only available to countries that engaged in tariffication.[96]

In sum, while the AoA did not create the double standards in international agricultural trade that systematically disfavor small farmers in the global South, it did reinforce these inequities by embedding them in a legally binding international agreement. These double standards enabled Northern agricultural producers to destroy the livelihoods of small farmers in the global South by dumping agricultural products on world markets at prices that are below the local cost of production.[97]

Over the course of several decades, Southern countries that were once net food exporters have been transformed into net food importers.[98] Poor harvests, fluctuating demand for these nations' exports, and rising prices for food imports can trigger balance of payments crises, chronic food shortages, and famines.[99] Indeed, both low-income and middle-income Southern countries are now being buffeted by higher food prices.[100] In 2008, 2011, and 2013, soaring food prices sparked food riots in countries as diverse as Argentina, Brazil, China, Turkey, Egypt, Syria, Iraq, Somalia, Yemen, Tunisia, Haiti, Mozambique, Sudan, and Saudi Arabia.[101]

The redirection of food trade from national to global markets has also reinforced the power of transnational corporations that dominate the global food system. Supported by decades of overseas food aid programs, government subsidies, and public sector agricultural research, these transnational grain traders, seed and agrochemical corporations, and retail supermarket chains wield unprecedented market power.[102] This market power enables these companies to pay farmers low prices for their agricultural output, charge high prices for agricultural inputs (such as seeds and fertilizers), and impose product quality standards that may be too onerous for many small farmers to satisfy.[103]

[95] Ibid at 476.
[96] Ibid at 477.
[97] S. Murphy, B. Lilliston, and M. B. Lake, *WTO Agreement on Agriculture: A Decade of Dumping* (Minneapolis: IATP, 2005), p. 1; C. Häberli, "The WTO and Food Security: What's Wrong with the Rules?" in R. Rayfuse and N. Weisflet, *The Challenge of Food Security* (Cheltenham: Edward Elgar, 2012), pp. 163–164.
[98] Action Aid, *The Impact of Agro-Exports Surges in Developing Countries* (Johannesburg: ActionAid, 2008), p. 8.
[99] United Nations Food and Agriculture Organization, *The State of Agricultural Commodity Markets 2009* (Rome: FAO, 2009), pp. 32–34.
[100] N. Hossain, R. King, and A. Kelbert, *Squeezed: Highlights from Life in a Time of Food Price Volatility, Year 1 Results* (Oxford: Oxfam GB for Oxfam International, 2013).
[101] N. Ahmed, "Global Riot Epidemic Due to Demise of Cheap Fossil Fuels," *The Guardian*, March 1, 2014.
[102] Clapp, note 17, pp. 96–118.
[103] Ibid.

In addition to dispossessing small farmers in the global South through low-priced exports, transnational corporations have also displaced local food retailers and promoted a worldwide convergence of urban diets on a narrow range of staple foods as well as meat, edible oils, fats, sugars, and cheap, unhealthy processed foods – thereby contributing to a global epidemic of obesity and diet-related diseases.[104] Contrary to popular misconception, two thirds of the planet's overweight and obese people reside in the global South.[105] This means that many of the low- and middle-income Southern countries struggling with chronic malnutrition are also disproportionately burdened with diet-related diseases, including diabetes, cancer, and cardiovascular disease.[106]

Finally, Monsanto and other proponents of biotechnology have unduly influenced public debates over genetically modified (GM) crops by touting this technology as the solution to the problem of world hunger.[107] They argue that genetic engineering will address chronic malnourishment in the global South by boosting food production and generating crops with useful characteristics, such as enhanced nutritional content, insect resistance, and greater tolerance for drought and salinity.[108] Regrettably, the obsessive focus on agricultural production obscures the actual causes of undernourishment (poverty and inequality), the economic and environmental impacts of GM crops, and the propensity of this technology to reinforce corporate domination of the global food system.

The extremely high cost of biotechnological research and development, combined with intellectual property rights in GM crops, has facilitated the rise of a global oligopoly in the seed industry.[109] Currently, six corporations control 66 percent of global seed sales.[110] In addition to the patent protection accorded to GM crops in the global North, the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) requires WTO member states to protect plant varieties by patents or by an effective *sui generis* system.[111] These intellectual

[104] P. McMichael, "Global Development and the Corporate Food Regime" (2005) 11 *Research in Rural Sociology and Development* 269 at 288–289.

[105] U. Friedman, "Two-Thirds of Obese People Now Live in Developing Countries," *The Atlantic*, May 29, 2014.

[106] Ibid; S. E. Clark, C. Hawkes, S. M. Murphy, K. A. Hansen-Kuhn, and D. Wallinga, "Exporting Obesity: U.S. Farm and Trade Policy and the Transformation of the Mexican Consumer Food Environment" (2012) 18 *International Journal of Occupational and Environmental Health* 56 (analyzing the negative impacts of trade liberalization on obesity and declining public health in Mexico).

[107] C. Todhunter, "The GMO Biotech Lobby's Emotional Blackmail and Bogus Claims: GM Crops Will Not Feed the World," www.globalresearch.ca (quoting Monsanto CEO Robert Fraley); N. E. Borlaug, "Farmers Can Feed the World," *Wall Street Journal*, July 30, 2009.

[108] K. Aoki, "Food Forethought: Intergenerational Equity and Global Food Supply – Past, Present, and Future" (2011) *Wisconsin Law Review* 399 at 458.

[109] Ibid at 481.

[110] ETC Group, "Gene Giants Seek Philanthrogopoly," *Communiqué*, 110, March 2013, p. 3.

[111] *WTO Agreement on Trade-Related Aspects of Intellectual Property Rights*, Geneva, 15 April 1994, 1869 UNTS 299; 33 ILM 1197 (1994), art. 27. The relationship between the TRIPS

property rights give corporations like Monsanto, Syngenta, and Pioneer the power to require all end-users of their seeds to sign restrictive license agreements.[112] Instead of exercising their traditional rights to improve, market, and save seeds from season to season, farmers who purchase GM seeds must buy new seeds every growing season at prices dictated by the global seed industry.[113] Indeed, these licenses are so restrictive that they even forbid the use of GM seeds for independent research, including research investigating the environmental and human health impacts of GM crops.[114]

Ironically, many of the GM crops marketed by Northern transnational corporations were developed from germplasm and traditional knowledge acquired free of charge from local and indigenous communities in the global South (a phenomenon known as biopiracy).[115] As one observer points out:

> Under the legal regime in place prior to the 1990s, once "primitive" or "raw" plant germplasm was construed legally as the "common heritage of mankind," it could be removed from genetically rich regions for as little as it cost to gather a few samples. These "free" genetic resources then flowed into Northern gene banks and laboratories of agrichemical giants, where their genetic diversity was "worked" to improve and safeguard proprietary, patented varieties. Then, these "stabilized" varieties were sold at a premium in the emerging agricultural markets of the very countries and regions where the genetic resources originated, pushing formerly genetically diverse countries toward industrial agriculture and monoculture.[116]

GM crops replicate the anti-poor bias of the Green Revolution. GM crops favor wealthy farmers because poor farmers generally lack the cash or credit necessary to purchase patented seeds every season as well as the expensive chemical inputs necessary to cultivate these crops.[117] Small farmers who incur debt to purchase this technology risk losing their lands if seed and agrochemical prices rise and/or yields

regime, the *Convention on Biological Diversity*, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 1760 UNTS 79; 31 ILM 818 (1992) (hereinafter CBD), and the *International Treaty on Plant Genetic Resources for Food and Agriculture*, 3 November 2001, in force 29 June 2004, www.planttreaty.org, all of which govern the treatment of plant genetic resources, is beyond the scope of this chapter. For an excellent analysis of this topic, see Aoki, note 108. The North–South tensions on access to genetic resources and equitable sharing of the resulting benefits under the CBD and the *Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the 1992 Convention on Biological Diversity*, www.cbd.int, are discussed in Chapter 9 of this volume by J. Cabrera, "Access and Benefit Sharing: North–South Challenges in Implementing the Convention on Biological Diversity and its Nagoya Protocol."

[112] Aoki, note 108 at 470.

[113] Ibid at 452–455.

[114] Ibid at 470.

[115] K. Aoki, "Seeds of Dispute: Intellectual Property Rights and Agricultural Biodiversity" (2009) 3 *Golden Gate University Environmental Law Journal* 79 at 133–136.

[116] Ibid at 135–136.

[117] Gonzalez, note 25 at 604–605.

fluctuate or decline.[118] In addition, GM crops (such as herbicide-resistant crops) reduce the demand for manual labor (including weeding) in Southern countries with abundant rural populations and limited capacity to absorb rural migrants into urban employment. By reducing labor costs, GM crops benefit large commercial farms at the expense of landless laborers and small farmers who augment their income through part-time employment on large commercial farms.[119] In so doing, they undermine the livelihoods of the world's most malnourished population while contributing to the displacement of small-scale farming by industrial agriculture.[120]

GM crops also pose significant environmental risks. First, GM crops reinforce monocropping, thereby supplanting the diverse indigenous crops cultivated for millennia in the global South and the traditional knowledge of the subsistence farmers who preserve much of the world's agrobiodiversity.[121] The growing genetic uniformity of the world's food supply increases the likelihood of catastrophic crop failure (akin to the Irish potato famine, but this time on a global scale) in the event of drought, pest infestations, or other environmental disruptions.[122] Genetic erosion in the global South due to monocropping deprives plant breeders of the genetically diverse cultivated and wild species necessary to identify traits that provide resistance to new pests and diseases.[123] As climate change introduces new challenges, GM crops may "be incapable of changing, of evolving, of adapting to new conditions, or stronger pests."[124] Second, insect-resistant crops (such as crops containing the natural microbial pesticide *Bacillus thuringiensis*) and herbicide-tolerant crops (such as crops resistant to Monsanto's Roundup herbicide) may accelerate the evolution of resistance in weeds and pests, thereby requiring the use of more powerful herbicides and pesticides.[125] This has already occurred in the United States, where the appearance of Roundup-resistant weeds has necessitated greater use of herbicides.[126] Third, GM crops may disrupt the mechanisms used by small farmers to maintain soil fertility and control pests by harming non-target organisms, such as beneficial soil organisms and natural predators of insect pests.[127] Fourth, GM crops may transfer transgenes containing herbicide resistance or natural insecticides to other plants, which could then become super-weeds immune to herbicides and insects. The risk of gene transfer is particularly high for crops grown in close proximity to wild or weedy relatives (such as maize in Mexico),

[118] Ibid at 604.
[119] Ibid at 604–605.
[120] Aoki, note 108 at 478.
[121] Gonzalez, note 25 at 607–608.
[122] Ibid.
[123] Aoki, note 108 at 125–126.
[124] Fowler and Mooney, note 56, p. 53.
[125] Gonzalez, note 25 at 608–609.
[126] Aoki, note 108 at 459–460.
[127] Gonzalez, note 25 at 609–610.

and may result in the loss of genetic variability necessary to adapt crops to changing environmental conditions.[128]

In short, the profit-driven biotechnology industry has generally catered to the interests of large-scale commercial farmers while devoting scant resources to the needs of small-scale producers.[129] Genetic engineering has also reinforced the negative environmental consequences of industrial agriculture (such as monocropping) and introduced new risks (such as the transfer of transgenes).[130] While a full discussion of GM crops is beyond the scope of this chapter, it is important to recognize that genetic engineering might be beneficial if the technology were controlled by the public sector with farmer input and participation, priced at affordable rates, available without restrictive licenses, deployed to enhance the livelihoods of small farmers rather than the profits of transnational corporations, and subjected to rigorous assessments of environmental and human health risks.

3.3 *Financial Speculation, Biofuels, and the Global Land Rush*

Small farmers in the global South face additional challenges in the form of financial speculation in agricultural commodity markets, biofuels production, and large-scale acquisitions of agricultural lands. When the U.S. housing market collapsed in 2007, speculative investment flooded into agricultural commodity markets and contributed significantly to the 2008 global food price crisis.[131] This influx of speculative investment commenced with the deregulation of over-the-counter (OTC) derivatives following the passage of the U.S. Commodity Futures Modernization Act in 2000.[132] This statute and the subsequent decisions of the Commodity Futures Trading Commission exempted OTC derivatives (including commodity index funds) from regulatory oversight, including reporting requirements and position limits (restrictions on the number of contracts that non-commercial traders can hold).[133] The failure of governments to curb speculation in agricultural commodity markets increases market volatility and poses particularly serious risks to low-income consumers (including small farmers) and to net food-importing Southern nations.[134]

[128] Ibid at 608–609.
[129] Ibid at 603–604; Aoki, note 108 at 476–478.
[130] Gonzalez, note 25 at 607–610.
[131] P. Wahl, "The Role of Speculation in the 2008 Food Price Bubble," in S. Murphy and A. Paasch (eds.), *The Global Food Challenge: Towards a Human Rights Approach to Trade and Investment Policies* (Minneapolis: IATP, 2009), pp. 70–71; F. Kaufman, "How Goldman Sachs Created the Food Crisis," *Foreign Policy*, April 27, 2011.
[132] O. de Schutter, "Food Commodities Speculation and Food Price Crises," United Nations Special Rapporteur on the Right to Food, Briefing Note 02, September 2010.
[133] Ibid, p. 5–6; Clapp, note 17, pp. 139–142; N. Colbran, "The Financialisation of Agricultural Commodity Futures Trading: The 2006–2008 Global Food Crisis," in R. Rayfuse and N. Weisflet, *The Challenge of Food Security* (Cheltenham: Edward Elgar, 2012), pp. 173–174.
[134] Wahl, note 131, pp. 75–76.

Another driver of food price volatility is the growing demand for biofuels. Although most studies question the net carbon benefits of the vast majority of biofuels,[135] the European Union and the United States have encouraged the development of the biofuels industry through their renewable fuels mandates, and through policies that subsidize or protect this industry.[136] Biofuels production competes with food production for land, water, and other productive resources, and has contributed to rising food prices.[137]

The final threat to the livelihoods of small farmers in the global South is the proliferation of large-scale leases or purchases of Southern agricultural lands on terms that may deprive current users and occupiers of food-producing resources.[138] Despite the lack of systemic data regarding these land transactions, a 2012 report by the International Land Coalition (ILC), a collaboration among forty grassroots and civil society organizations, estimated that an area eight times the size of the United Kingdom or nearly the size of western Europe was transferred between January 2000 and November 2011.[139] While the ILC has since revised this figure to approximately fifty-two million hectares transferred or under negotiation, the size of the global land rush is nevertheless significant.[140]

As Chidi Oguamanam explains in his contribution to this volume, these so-called "land grabs" have been driven by transnational corporations eager to exploit the growing demand for biofuels; by foreign investors (including Northern hedge funds, investment banks, and pension funds) speculating on arable land; and by middle-income Southern countries (such as Saudi Arabia, Qatar, China, India, and South Korea) seeking to engage in the offshore production of food to mitigate food price volatility on international markets and domestic shortages of arable land and irrigation water.[141] Africa appears to be the primary target of these

[135] R. Sims, M. Taylor, J. Saddler, and W. Mabee, *From 1st to 2nd Generation Biofuel Technologies: An Overview of Current Industry and R&D Activities* (International Energy Agency, Paris, 2008), pp. 6, 18–19.

[136] Committee on World Food Security, "Biofuels and Food Security: A Report by the High Level Panel of Experts on Food Security and Nutrition" (Rome, 2013), www.fao.org, pp. 27–32.

[137] Ibid, pp. 13–15.

[138] W. Answeeuw, L. A. Wiley, L. Cotula, and M. Taylor, *Land Rights and the Rush for Land: Findings of the Global Commercial Pressure on Land Research Project* (Rome: International Land Coalition, 2012); L. Cotula, S. Vermeulen, R. Leonard, and J. Keeley, *Land Grab or Development Opportunity? Agricultural Investment and International Land Deals in Africa* (London: FAO/IIED/IFAD, 2009); A. Spieldoch and S. Murphy, "Agricultural Land Acquisitions: Implications for Food Security and Poverty Alleviation," in M. Kugelman and S. L. Levenstein (eds.), *Land Grab? The Race for the World's Farmland* (Washington DC: Woodrow Wilson International Center for Scholars, 2009).

[139] Answeeuw, note 138, p. 19.

[140] Land Matrix, http://landmatrix.org.

[141] M. Kugelman and S. L. Levenstein (eds.), *Land Grab? The Race for the World's Farmland* (Washington DC: Woodrow Wilson International Center for Scholars, 2009), p. 2; Spieldoch and Murphy, note 138, pp. 41–42; Answeeuw, note 38, p. 21; Clapp, note 17, pp. 150–151. See Chapter 11, C. Oguanaman, "Bioenergy and Land Grabs."

land acquisitions.[142] While Northern companies account for most of the land transactions, middle-income Southern nations (including India, Brazil, South Africa, and China) have become significant participants in the global land rush.[143] The growing demand for Southern agricultural lands has produced South–South tensions as more affluent Southern nations emulate the resource-grabbing practices of their Northern counterparts at the expense of the planet's poorest communities.[144]

These transactions pose serious risks to small farmers in the targeted Southern countries, including eviction from their lands, depletion or pollution of water resources, and loss of access to forests, fisheries, and other natural resources.[145] For example, small farmers and herders whose ownership or usufruct rights are not recognized by government officials may be dispossessed by foreign investors or by local elites eager to sell or lease these lands to foreign investors.[146] The conversion of labor-intensive subsistence farms to highly mechanized export-oriented industrial agriculture may reduce local food availability, intensify poverty by shrinking rural employment, contaminate the local water supply with pesticide and fertilizer run-off, degrade the land through intensive cultivation, increase greenhouse gas emissions, and deplete water resources needed by local communities.[147]

These land acquisitions are accelerating the South's transition from peasant cultivation to large-scale industrial agriculture at the precise moment when scientists and policy-makers are advocating a shift to small-scale sustainable agriculture in food-insecure countries. In 2013, the United Nations Conference on Trade and Development (UNCTAD) published a major report urging a paradigm shift in agriculture – away from industrial agriculture and toward sustainable, regenerative production systems that enhance the productivity of small-scale farmers.[148] Indeed, sustainable agriculture has produced significant increases in agricultural yields in Asia, Africa, and Latin America while enhancing environmental quality, reducing

[142] Answeeuw, note 138, p. 23.
[143] L. Cotula, *The Great African Land Grab? Agricultural Investments and the Global Food System* (London: Zed Books, 2013), pp. 55–67.
[144] T. Ferrando, "Land Grabbing under the Cover of Law: Are BRICS-South Relationships any Different?," September 2014, www.tni.org.
[145] Spieldoch and Murphy, note 138, pp. 43–48.
[146] R. Q. Montemayor, "Overseas Farmland Investments – Boon or Bane for Farmers in Asia?," in M. Kugelman and S. L. Levenstein (eds.), *Land Grab? The Race for the World's Farmland* (Washington DC: Woodrow Wilson International Center for Scholars, 2009), pp. 101–102; O. de Schutter, "The Green Rush: The Global Race for Farmland and the Rights of Land Users' (2011) 52(2) *Harvard International Law Journal* 501 at 537.
[147] R. Meinzen and H. Markelova, "Nuance: Toward a Code of Conduct in Foreign Land Deals," in M. Kugelman and S. L. Levenstein (eds.), *Land Grab? The Race for the World's Farmland* (Washington DC: Woodrow Wilson International Center for Scholars, 2009), p. 74; Montemayor, note 146, pp. 102–105; Spieldoch and Murphy, note 138, pp. 46–47.
[148] UNCTAD, note 31.

dependence on external inputs, and protecting the traditional agroecological knowledge of small farmers and indigenous communities.[149]

International investment law has facilitated the global land rush by enabling foreign investors to obtain more favorable treatment than domestic stakeholders.[150] In Africa, where these land transactions are concentrated, control over land remains largely in the hands of the government or, in some jurisdictions, in the hands of customary chiefs.[151] Far from protecting the rights of local communities, government officials and local elites have often welcomed foreign agricultural investment and collaborated in the dispossession of rural dwellers in order to enrich themselves and enhance their control of the state through political patronage.[152]

Contracts between the foreign investor and the host state typically provide the foreign investor with rights and benefits not guaranteed to the local population, including secure land and water rights, tax incentives, and the right to export the agricultural commodities produced.[153] Because domestic legal protection for local land users is often weak, [154] the rights of the foreign investor will generally trump those of local communities.[155] Many contracts also include "stabilization" clauses that require the host state to compensate the foreign investor for any economic losses attributable to the host state's modification of the regulatory

[149] UN General Assembly, *Report Submitted by the Special Rapporteur on the Right to Food*, 20 December 2010, A/HRC/16/49; UNCTAD and UNEP, *Organic Agriculture and Food Security in Africa*, 2008, UNCTAD/DITC/TED/2007/15; C. Badgley, J. Moghtader, E. Quintero, E. Zakem, M. J. Chapell, K. Avilés-Vázquez, A. Samulon, and I. Perfecto, "Organic Agriculture and the Global Food Supply" (2007) 22 *Renewable Agriculture and Food Systems* 86; J. Pretty, A. D. Noble, D. Bossio, J. Dixon, R. E. Hine, F. W. T. Penning de Vries, and J. I. L. Morison, "Resource Conserving Agriculture Increases Yields in Developing Countries" (2006) 40 *Environmental Science and Technology* 1114; IFAD, "The Adoption of Organic Agriculture among Small Farmers in Latin America and the Caribbean," www.ifad.org; N. Parrott and T. Marsden, *The New Green Revolution: Organic and Agroecological Farming in the South* (London: Greenpeace Environmental Trust, 2002); J. N. Pretty, "Reducing Food Poverty by Increasing Sustainability in Developing Countries" (2003) 95 *Agricultural Ecosystems and the Environment* 217; J. N. Pretty and R. Hine, "The Promising Spread of Sustainable Agriculture in Asia" (2000) 24 *Natural Resources Forum* 107; J. N. Pretty, "Can Sustainable Agriculture Feed Africa? New Evidence on Progress, Processes and Impacts" (1999) 1 *Environment, Development and Sustainability* 253.

[150] C. Smaller and H. Mann, *A Thirst for Distant Lands: Foreign Investment in Agricultural Land and Water* (Winnipeg: International Institute for Sustainable Development, 2009), p. 14.

[151] Cotula, note 143, pp. 27, 86–87, 90–100.

[152] L. Cotula, "Land Grabbing in the Shadow of the Law: Legal Frameworks Regulating the Global Land Rush," in R. Rayfuse and N. Weisflet, *The Challenge of Food Security* (Cheltenham: Edward Elgar, 2012), p. 218.

[153] Smaller and Mann, note 150, p.14.

[154] K. Deininger and D. Byerlee, *Rising Global Interest in Farmland: Can It Yield Sustainable and Equitable Benefits?* (Washington DC: The International Bank for Reconstruction and Development/The World Bank, 2011), pp. 97–98.

[155] United Nations Department of Economic and Social Affairs (UNDESA), "Foreign Land Purchases for Agriculture: What Impact on Sustainable Development?," Sustainable Development Innovation Briefs, January 2010, p. 2.

framework applicable to the investment.[156] This provision essentially "freezes" the law applicable to the investment and may deter host states from taking legal action to protect human rights and the environment, such as reallocating water rights to ensure that local communities have sufficient water for drinking, cooking, bathing, sanitation, and irrigation; restricting food exports at times of critical food shortages; and enhancing labor and environmental standards as the country's regulatory framework evolves.[157]

Bilateral investment treaties (BITs) between the host state (mainly Southern countries) and the investor's home state (typically Northern countries) usually provide additional protections to the foreign investor, including national treatment; the prohibition against expropriation without compensation; fair and equitable treatment (also known as international minimum standards of treatment); the right to export the products produced; and the investor–state arbitration mechanism, which authorizes the foreign investor to commence arbitration against the host state in the event of a breach of the BIT.[158] These provisions may limit the ability of the host state to protect the human rights of its citizens. For example, the fair and equitable treatment provision requires the host state to honor the "legitimate expectations" of the investor arising from the contract or other government commitments.[159] If the contract is silent on water rights, an arbitration tribunal might conclude that the investor's "legitimate expectation" of water for irrigation overrides the current or future water needs of the local community for drinking, bathing, sanitation, small-scale farming, and other uses.[160] If the host state reallocates water rights to fulfill the rights of its citizens, the foreign investor may be entitled to compensation.[161] The right to export agricultural products could likewise require the host state to compensate the foreign investor if the host state imposes export restrictions to address domestic food shortages – even if these export restrictions are otherwise permissible under international trade law.[162]

In short, Northern countries have reinforced the structural inequities in the global economic order that produce chronic undernourishment by failing to curb speculation in agricultural commodity markets, adopting policies that foster speculative investment in Southern agricultural lands (such as U.S. and EU biofuels policies), and imposing one-sided investment agreements that benefit foreign investors at the expense of local communities in the global South.

Based on the foregoing account of the global food system, the North–South dimension of food injustice can now be articulated. The global food system is a

[156] L. Cotula, "Regulatory Takings, Stabilization Clauses and Sustainable Development," OECD Global Forum on International Investment, March 27–28, 2008.
[157] UNDESA, note 155, pp. 3–4.
[158] Smaller and Mann, note 150, pp. 11–13.
[159] Ibid, p. 12.
[160] UNDESA, note 155, p. 3.
[161] Smaller and Mann, note 150, pp. 16–17.
[162] UNDESA, note 155, p. 4.

paradigmatic example of North–South *distributive injustice* because Northern grain traders, agrochemical companies, food retailers, and financial speculators reap the benefits of the South's transition to export-oriented industrial agriculture, while the costs are borne disproportionately by net food-importing Southern states and by the planet's poorest rural dwellers, who are displaced, marginalized, and undernourished. *Procedural injustice* is evident in the North's domination of the international economic institutions that determine global patterns of agricultural trade and production, including the IMF, the World Bank, and the WTO. Southern states are generally marginalized, and civil society is often excluded altogether.[163] The global food system is an example of *corrective injustice* because victims of chronic undernourishment may not be able to bring a claim against the Northern states whose economic policies have inflicted unspeakable harm due, in part, to the difficulty of establishing causation. The destruction of Southern ecosystems and livelihoods exacts an enormous toll on marginalized populations, but is often rendered invisible by the distance in space and time between the institutions that govern the global economic order and the local communities that bear the social and environmental costs.[164] Finally, the global food system is an example of *social injustice* because it cannot be analyzed in isolation from the colonial and postcolonial economic policies that impoverished the global South and brought the planet's ecosystems to the brink of collapse.

4. A JUSTICE-CENTERED APPROACH TO GLOBAL FOOD POLICY

A justice-based approach to global food policy must promote the human right to food, curtail the power of transnational corporations, mitigate North–South inequality, and ensure the full and effective participation of Southern nations and peoples in local and global food governance. While a full discussion of these strategies is beyond the scope of this chapter, this section discusses several necessary reforms in order to illustrate the ways in which an environmental justice framework might influence the evolution of international law.

4.1 *Human Right to Food*

Food justice, like environmental justice more broadly, is grounded in human rights. The human right to food is recognized in the Universal Declaration of

[163] McMichael, note 104 at 285.

[164] R. Nixon, *Slow Violence and the Environmentalism of the Poor* (Cambridge: Harvard University Press, 2011), pp. 10–17; C. G. Gonzalez, "An Environmental Justice Critique of Comparative Advantage: Indigenous Peoples, Trade Policy, and the Mexican Neoliberal Economic Reforms" (2011) 32 *University of Pennsylvania Journal of International Law* 723 at 786–789 (discussing the responsibility of Northern countries to ameliorate the human rights violations caused their trade policies and by the structural adjustment programs mandated by the IMF and the World Bank).

Human Rights (UDHR) and in the International Covenant on Economic, Social and Cultural Rights (ICESCR).[165] The right to food is also protected through Article 6(1) of the International Covenant on Civil and Political Rights (ICCPR), which guarantees the right to life and has been interpreted to require the implementation of affirmative measures to eliminate chronic undernourishment.[166] Additionally, Article 1 of both the ICESCR and the ICCPR prohibits states from interfering with a population's means of subsistence.[167]

In order to provide authoritative guidance on the right to food, the United Nations Committee on Economic Social and Cultural Rights published General Comment 12, which clarifies the obligations of states to respect, protect, and fulfill this right.[168] First, states must *respect* the right to food by "not taking any measures that result in preventing such access."[169] In other words, states must consider the impact of legislation, regulation, and treaties on the right to food, and must refrain from actions that interfere with the ability of communities and individuals to feed themselves.[170] For example, states must respect the subsistence rights of small farmers by protecting them from foreign dumping of subsidized food products. Second, General Comment 12 requires states to *protect* the right to food by implementing measures "to ensure that enterprises or individuals do not deprive individuals of their access to adequate food."[171] For example, states must prevent third parties (such as local elites and foreign corporations) from depriving vulnerable populations of access to land, water, and other inputs necessary to grow food, and must develop and enforce environmental regulations to prevent the degradation of ecosystem services that support agricultural production.[172] Third, states must *fulfill* the right to food by providing food directly "whenever an

[165] *Universal Declaration of Human Rights*, Paris, 10 December 1948, GA res. 217A (III), UN Doc A/810 at 71 (1948), art. 25 [hereinafter UDHR]; *International Covenant on Economic, Social and Cultural Rights*, New York, 16 December 1966, in force 3 January 1976 GA res. 2200A (XXI), 21 UN GAOR Supp. (No. 16) at 49, UN Doc. A/6316 (1966); 993 UNTS 3; 6 ILM 368 (1967) [hereinafter ICESCR].

[166] *International Covenant on Civil and Political Rights*, New York, 16 December 1966, in force 23 March 1976, GA res. 2200A (XXI), 21 UN GAOR Supp. (No. 16) at 52, UN Doc. A/6316 (1966); 999 UNTS 171; 6 ILM 368 (1967), art 6(1) [hereinafter ICCPR]; Office of the High Commissioner for Human Rights, *General Comment No. 6: The Right to Life*, 30 April 1982, para. 5 in *Compilation of General Comments and General Recommendations adopted by Human Rights Treaty Bodies*, 8 May 2006, UN Doc. HRI/GEN/REV.8, p. 166.

[167] ICCPR, note 166, art. 1; ICESCR, note 165, art. 1.

[168] UN Committee on Economic Social and Cultural Rights, *General Comment No. 12: The Right to Adequate Food*, 12 May 1999, UN Doc. E/C.12/1999/5 [hereinafter General Comment 12].

[169] Ibid, para. 15.

[170] N. C. S. Lambek, "Respecting and Protecting the Right to Food: When States Must Get Out of the Kitchen," in N. C. S. Lambek , P. Claeys, A. Wong, and L. Brilmayer (eds.), *Rethinking Food Systems: Structural Challenges, New Strategies, and the Law* (Dordrecht: Springer, 2014), p. 108.

[171] General Comment 12, note 168, para. 15.

[172] Lambek, note 170, pp. 109–110.

individual or group is unable, for reasons beyond their control, to enjoy the right to adequate food by the means at their disposal."[173] States must also facilitate the right to food by enhancing the livelihoods of food-insecure populations through social safety nets and other assistance programs.[174]

Some scholars have questioned the usefulness of the human rights framework in light of the "diminished governance capacity of Third World states, which is the result of years of intervention by international law and international institutions."[175] Indeed, as explained earlier in this chapter, the lending practices of the IMF and the World Bank as well as international trade and investment agreements have created an international legal framework that benefits foreign investors and transnational food corporations and constrains the ability of Southern states to comply with their right to food obligations.

In order to secure food justice, international human rights law must hold accountable the Northern states that are complicit in the widespread violation of the right to food. Human rights institutions should recognize and enforce what John Knox, the United Nations Independent Expert on Human Rights and the Environment, calls "diagonal human rights." Diagonal human rights are rights held by individuals against foreign governments for the extraterritorial consequences of their aid, trade, finance, and investment policies, including the power they wield in international financial institutions.[176]

Article 56 of the Charter of the United Nations imposes diagonal or extraterritorial obligations on all states by requiring all UN members to "take joint and separate action in cooperation with the Organization" to ensure the realization of human rights.[177] In addition, Article 2(1) of the ICESCR obligates states parties to "take steps, individually and through international assistance and cooperation" to progressively realize the rights set forth in the treaty.[178] General Comment 12 explains the extraterritorial aspects of the right to food as follows:

[173] General Comment 12, note 168, para. 15.

[174] Lambek, note 170, pp. 110.

[175] P. Simons, "International Law's Invisible Hand and the Future of Corporate Accountability for Violations of Human Rights" (2012) 3 *Journal of Human Rights and the Environment* 5 at 40.

[176] J. Knox, "Diagonal Human Rights," in M. Gibney and S. Skogly (eds.), *Universal Human Rights and Extraterritorial Obligations* (Philadelphia: University of Pennsylvania Press, 2010), p. 83.

[177] *Charter of the United Nations*, San Francisco, 26 June 1945, in force 24 October 1945, 59 Stat. 1031; TS 993; 3 Bevans 1153, art. 56. These obligations are extraterritorial because they require countries to work together toward the realization of human rights in their own countries and in other countries. They create diagonal human rights to the extent that they authorize individuals and communities to bring human rights claims not only against their own states (vertical claims) but also against other states (diagonal claims) whose action or inaction contributed to human rights violations – such as countries that permitted agricultural dumping in foreign markets. See Knox, note 176.

[178] ICESCR, note 165, art. 2(1).

> In the spirit of article 56 of the Charter of the United Nations [. . .], States parties should take steps to respect the enjoyment of the right to food in other countries, to protect that right, to facilitate access to food, and to provide necessary aid when required. States parties should, in international agreements whenever relevant, ensure that the right to adequate food is given due attention and consider the development of further international legal instruments to that end.[179]

In order to comply with these extraterritorial obligations, Northern states must *respect* the right to food in the global South by negotiating, interpreting, and applying trade and investment agreements in ways that provide Southern countries with sufficient flexibility to regulate in the public interest and to deploy subsidies, tariffs, and other import barriers to enhance the livelihoods of small farmers and other food-insecure populations. Northern states must *protect* the right to food by ensuring that third parties subject to their jurisdiction and control, such as transnational corporations, do not violate the right to food in other countries. States that are members of the IMF, the World Bank, and regional development banks must take affirmative steps to guarantee that the policies and practices of these institutions are consistent with their right to food obligations. Finally, Northern countries must *fulfill* the right to food by providing food aid in ways that enhance rather than undermine the livelihoods of small farmers in the global South – by, for example, purchasing such food from Southern farmers rather than using food aid as a pretext for Northern export dumping.

A human rights approach is essential to the achievement of food justice because it gives agency to the individuals and communities experiencing chronic undernourishment rather than treating them as objects of "development." Human rights law puts a human face on food injustice, and empowers subordinated communities to speak for themselves in domestic or international tribunals and in the court of public opinion. In so doing, human rights law serves as a powerful tool to educate the public about food injustice, name and shame human rights abusers, foster dialogue about alternatives to the current food system, and create the political mobilization necessary to bring about change.

4.2 *Corporate Accountability*

One of the most daunting obstacles to the realization of food justice is corporate impunity for human rights abuses – including agricultural export dumping and land-grabbing. The governance challenges of Southern states and the unwillingness of Northern states to regulate the extraterritorial conduct of their transnational corporations enable these corporate entities to escape liability for their violations of the right to food. The question of how best to regulate corporations to prevent extraterritorial human rights abuses has been the subject of intense debate and

[179] General Comment 12, note 168, para. 36.

remains largely unsettled. While a complete discussion of the legal strategies that might be pursued to achieve corporate accountability is beyond the scope of this chapter, possible approaches include strengthening the human rights enforcement capacity of Southern countries, holding Northern countries liable for failing to regulate the extraterritorial conduct of their corporations, enhancing the mechanisms available in the home state to adjudicate human rights violations abroad, developing treaties that impose human rights obligations directly on corporations, and aggressive antitrust enforcement.

The ICESCR obligates states to ensure that business entities incorporated in their jurisdiction do not violate economic, social, and cultural rights in other countries.[180] In 2011, a distinguished group of human rights experts adopted a series of principles (known as the Maastricht Principles on Extraterritorial Obligations of States in the Area of Economic, Social and Cultural Rights) that reaffirm the duty of states to ensure that non-state actors (such as transnational corporations) do not engage in extraterritorial human rights violations.[181] Some scholars argue that failure to regulate the extraterritorial conduct of corporate nationals renders states liable for the human rights violations of their corporations – particularly if a state has actual or constructive knowledge of potential human rights violations (caused, for example, by food dumping or land-grabbing) and either fails to exercise due diligence to prevent such violations or enters into trade and investment agreements that restrict the ability of the affected states to protect the human rights of their citizens.[182] Alternatively, a home state's failure to regulate or mitigate the human rights violations of corporate nationals' foreign subsidiaries may constitute a violation of the duty to refrain from causing transboundary harm.[183]

As a practical matter, Northern states have not generally regulated the extraterritorial conduct of their corporations. Moreover, Southern states that experience corporate human rights abuses often find their regulatory authority hamstrung by international trade and investment law.[184] In addition, corporate impunity is fostered by the ways that international and domestic law treat parent companies, subsidiaries, and foreign affiliates as separate entities subject to the domestic laws of the state of incorporation. Domestic courts are generally

[180] R. McCorquodale and P. Simons, "Responsibility Beyond Borders: State Responsibility for Extraterritorial Violations by Corporations" (2007) 70 *Modern Law Review* 598 at 617–619.

[181] *Maastricht Principles on Extraterritorial Obligations of States in the Area of Economic, Social and Cultural Rights*, Maastricht, September 28, 2011, www.etoconsortium.org, Principle 17; O. de Schutter et al., "Commentary to the Maastricht Principles on Extraterritorial Obligations of States in the Area of Economic, Social and Cultural Rights" (2012) 34 *Human Rights Quarterly* 1084 at 1122–1124.

[182] McCorquodale and Simons, note 180 at 619–623.

[183] Ibid at 624.

[184] P. Simons and A. Macklin, *The Governance Gap: Extractive Industries, Human Rights, and the Home State Advantage* (New York: Routledge, 2014), pp. 7–8.

reluctant to pierce the corporate veil and impose liability on parent companies for the activities of their subsidiaries.[185]

An alternative solution to corporate impunity is the direct imposition of human rights obligations on corporations. In 2004, the United Nations Human Rights Commission rejected a proposal by the Sub-Commission on the Promotion and Protection of Human Rights to impose international human rights obligations on transnational business entities.[186] Instead, the United Nations Special Representative of the Secretary-General on the Issue of Human Rights and Transnational Corporations and other Business Enterprises, John G. Ruggie, developed a framework consisting of non-binding norms along with measures to enhance the ability of states to regulate transnational corporations.[187] Critics denounced Ruggie's proposal as tantamount to self-regulation.[188] In June 2014, the United Nations Human Rights Council voted to convene a working group to develop a legally binding instrument to impose human rights obligations on corporations.[189] While this represents an audacious move to curb corporate impunity, it is unclear that the Northern countries in which many of these corporations are located would sign or ratify such treaties. Finally, anti-competition law is an important tool to reduce the power of transnational corporations in the global food system. U.S. antitrust law tends to focus on harm to consumers rather than producers, and has generally turned a blind eye to market concentration in the agricultural sector.[190] At the global level, UNCTAD has developed a model law on competition that seeks to "control or eliminate [. . .] abuse of dominant positions of market power, which limit access to markets or otherwise unduly restrain competition, adversely affecting domestic or international trade or economic development."[191] Regardless of whether anti-competitive activity is addressed at the national or international level, it is essential to develop new approaches that consider harm to producers as well as consumers and to aggressively curb the concentration of market power in the agri-food industry.[192]

[185] Ibid, pp. 8–9.
[186] Ibid, p. 3.
[187] *See UN Sub-Commission on the Promotion and Protection of Human Rights, Norms on the Responsibilities of Transnational Corporations and other Business Enterprises with Regard to Human Rights*, 26 August 2003, E/CN.4/Sub.2/2003/12/Rev.2; UN Sub-Commission on the Promotion and Protection of Human Rights, *Commentary on the Norms on the Responsibilities of Transnational Corporations and other Business Enterprises with Regard to Human Rights*, 13 August 2003, E/CN.4/Sub.2/2003/12/38/Rev.2.
[188] Simons and Macklin, note 184, pp. 7–8.
[189] UN Human Rights Council, *Elaboration of an International Legally Binding Instrument on Transnational Corporations and Other Business Enterprises with Respect to Human Rights*, 25 June 2014, A/HRC/L.22/Rev.1.
[190] Aoki, note 108 at 451–452.
[191] UN Conference on Trade and Development, *Model Law on Competition*, 2007, TD/RBP/CONF.5/7/Rev.3, p. 3.
[192] Aoki, note 108 at 451–452.

4.3 *Mitigating North–South Economic Inequality*

A justice-based approach to global food policy requires redressing the North–South economic disparities arising from the colonial and postcolonial policies and practices described above. A key step toward a more just economic order is the implementation of differential treatment in international economic law.[193] Differential treatment is a means of remedying past inequities by giving Southern countries more favorable treatment in international legal instruments.[194] The 1947 GATT incorporated differential treatment through a series of amendments and side agreements that permitted, but did not require, Northern countries to give preferential treatment to their Southern trading partners (such as greater market access and non-reciprocal tariff concessions). However, because the North's obligations were largely voluntary, Northern governments evaded these commitments.[195] Southern demands for differential treatment were later overridden by the free-market economic reforms imposed through IMF and World Bank structural adjustment policies and through multilateral and regional trade agreements, including the WTO – which imposed similar obligations on all countries, but simply gave Southern countries more time to comply. These reforms required Southern countries to remove the import barriers that protected their industries from more technologically advanced Northern competitors, and also restricted the South's ability to use tariffs and subsidies to protect and promote nascent industries and domestic food producers.[196]

In order to address the structural causes of food injustice, international trade agreements must permit Southern countries to utilize a variety of tariffs, subsidies, and other protectionist measures to diversify and industrialize their economies

[193] Differential treatment in international law is a means of reducing the economic disparities between the global North and the global South by giving more advantageous treatment to the latter in both international economic law (special and differential treatment in the GATT/WTO) and international environmental law (common but differentiated responsibility in a variety of environmental treaties). In the decades following World War II, Southern nations came together as the Group of 77 to demand differential treatment in international economic law in order to overcome the legacy of colonialism and facilitate the global South's economic development. Differential norms were initially incorporated into the 1947 GATT, and were known as special and differential treatment. Differential norms were later included in several environmental treaties (including the Montreal Protocol on Substances that Deplete the Ozone Layer, the United Nations Framework Convention on Climate Change, and the Kyoto Protocol) in accordance with the principle of common but differentiated responsibility, which authorizes asymmetrical obligations on Northern and Southern countries based on the North's superior financial and technical resources, the North's disproportionate contribution to global environmental problems, and the South's economic and ecological vulnerability. Gonzalez, note 1, pp. 88–92.

[194] Ibid, p. 88.

[195] Ibid, pp. 88–89; P. Kishore, "Special and Differential Treatment in the Multilateral Trading System" (2014) 13 *Chinese Journal of International Law* 363 at 369–372, 376–388.

[196] Gonzalez, note 1, p. 89.

and end their crippling dependence on the export of primary commodities. As economist Ha-Joon Chang and others have observed, Northern countries industrialized and prospered through a broad array of protectionist measures (including subsidies, tariffs, and state financing of major industries) that are now prohibited or restricted by IMF/World Bank loan conditions or by the WTO and other trade agreements.[197] If we are to mitigate North–South economic disparities, then trade agreements must curtail Northern protectionism while giving Southern countries the flexibility to intervene strategically in the economy to foster long-term economic development.

In the agricultural sector, eliminating Northern domestic and export subsidies is an important first step toward addressing the double standards in international agricultural trade that devastate the livelihoods of small farmers in the global South. However, trade agreements and the policies and programs of the IMF and World Bank must also give Southern countries the "policy space" to comply with their right to food obligations. Southern countries should utilize this "policy space" to reinvest in the agricultural sector after decades of neglect and to use an appropriate combination of subsidies and import barriers to protect the livelihoods of small farmers, restore ravaged ecosystems, revitalize domestic food production, and promote environmentally friendly cultivation practices.[198]

In addition to creating "policy space" for development, Northern governments should finance Southern government projects designed to increase food self-sufficiency, enhance the livelihoods of small farmers, and encourage the transition to sustainable agriculture. While skyrocketing food prices in 2008 did trigger Northern investment in Southern agriculture, much of that investment was designed to boost the productivity of conventional fossil fuel-dependent industrial agriculture and to increase Southern countries' integration into global food markets.[199]

[197] H-J. Chang, *Kicking Away the Ladder: Development Strategy in Historical Perspective* (London: Anthem Press, 2002), pp. 19–51, 59–66; Y.-S. Lee, *Reclaiming Development in the World Trade System* (Cambridge: Cambridge University Press, 2009), pp. 9–13, 156–165.

[198] Several mechanisms have been proposed in the Doha Round of WTO negotiations to provide Southern countries with greater policy flexibility, including exemptions from tariff cuts for "special products" (SP) essential to food security and rural livelihoods; a special safeguard mechanism (SSM) to allow Southern countries to raise tariffs in response to surges of cheap subsidized imports; and the easing of restrictions on public food reserves as a means of reducing price volatility and ensuring a secure supply of food in the event of shortages or price shocks: Clapp, note 17, p. 79; S. Murphy, *Trade and Food Reserves: What Role Does the WTO Play?* (Minneapolis: Institute for Agriculture and Trade Policy, 2010).

[199] A. Mittal, United Nations Conference on Trade and Development (UNCTAD), *The 2008 Food Price Crisis: Rethinking Food Security Policies*, June 2009, UNCTAD/GDS/MDP/G24/2009/3, pp. 16–17. For example, the Bill and Melinda Gates Foundation, the Rockefeller Foundation, the World Bank and the FAO, with the support of transnational agribusiness firms, launched the Alliance for a Green Revolution in Africa, an effort to boost agricultural productivity among small farmers in the African continent. S. Suppan, "Challenges for Food Sovereignty" (2008) 32 *Fletcher Forum of World Affairs* 111 at 112–113; G. Toenniessen, A. Adesina, and J. De Vries, "Building an Alliance for a Green Revolution

This single-minded emphasis on increasing agricultural production is misguided in light of the fact that one third of the food produced for human consumption is currently lost due to inadequate infrastructure to properly manage and store food between production and consumption (primarily in the global South) or discarded due to stringent quality standards or "best-before dates" (primarily in the global North).[200] Northern investment in rural infrastructure in the global South (such as roads, storage and refrigeration facilities, and processing centers) could improve food availability and reduce pressure on land, water, and biodiversity.[201] However, these investments will not promote food justice unless they enhance the ability of small farmers to grow, sell, and purchase food and encourage the adoption of ecologically sustainable production methods. As Olivier de Schutter, the former UN Special Rapporteur on the Right to Food, observes:

> [I]nvestments that increase food production will not make significant progress in combatting hunger and malnutrition if they do not lead to higher incomes and improved livelihoods for the poorest – particularly small-scale farmers in developing countries. And short-term gains will be offset by longer-term losses if they cause further degradation of ecosystems, thus threatening the ability to maintain current level of production in the future [. . .]. Pouring money into agriculture will not be sufficient; the imperative today is to take steps that facilitate the transition towards a low-carbon, nature-conserving type of agriculture that benefits the poorest farmers.[202]

Finally, there are several additional steps that Northern countries can take to remedy some of the more egregious examples of food injustice. First, because the growing demand for biofuels is a significant driver of food price volatility and speculative investment in Southern agricultural lands, Northern countries should reduce this demand by phasing out their renewable fuels mandates for first and second generation biofuels that compete with food for land, water, and other agricultural inputs. Second, Northern countries should discourage speculative investment in agricultural commodities by developing internationally coordinated

in Africa" (2008) 1136 *Annals of the New York Academy of Sciences* 233. Critics contend that this initiative will replicate the anti-poor bias of the Green Revolution and undermine the livelihoods and agroecological practices of small farmers by emphasizing biotechnology, synthetic fertilizers, and debt-driven, export-oriented commercialization of agricultural products. African Centre for Biosafety, "Alliance for a Green Revolution in Africa (AGRA): Laying the Groundwork for the Commercialisation of African Agriculture," www.acbio.org.za.

[200] J. Gustavsson, C. Cederberg, U. Sonesson, R. van Otterdijk, and A. Meybeck, *Global Food Losses and Food Waste: Extent, Causes and Prevention* (Rome: Food and Agriculture Organization of the United Nations, 2011), pp. 4–15.

[201] Food and Agriculture Organization of the United Nations, *Food Wastage Footprint: Impacts on Natural Resources* (Rome: Food and Agriculture Organization of the United Nations, 2013); A. Telesetsky, "Waste Not, Want Not: The Right to Food, Food Waste and the Sustainable Development Goals" (2014) 42 *Denver Journal of International Law and Policy* 481.

[202] UNCTAD, note 31, p. 34.

measures to regulate and tax these transactions. Third, Northern countries should work with their Southern counterparts to develop model investment contracts and bilateral investment treaties that impose binding human rights obligations on foreign investors (enforceable in both the home state and the host state), allow host states to bring counterclaims in arbitral proceedings for violations of these obligations, and contain targeted provisions that address the host state's food security and sustainable development priorities. Finally, Northern and Southern countries should collaborate to impose a moratorium on Southern land grabs until such time as host states, home states, civil society, and international institutions develop robust and effective mechanisms to oversee and regulate these transactions.

4.4 *Regime Change*

Chronic undernourishment is merely one symptom of a larger problem: a corporate-dominated food regime that exacerbates North–South inequality, ignores ecological limits, and dispossesses rural communities in the name of modernization and development. As Philip McMichael observes:

> The development project incorporated post-colonial states into a universal system of national accounting methods, standardizing the measurement of material well-being (GNP), and the "externalization" of a variety of environmental degradations and social catastrophes. Only monetized transactions were counted as productive, devaluing subsistence, cooperative labor, indigenous culture, seed saving, and managing the commons as unproductive, marginalized and undeveloped activity. As a consequence, the world's rural population decreased by some 25 percent in the second half of the twentieth century, with the steady displacement of peasant cultures.[203]

In recent decades, national and transnational food movements (including the Northern food justice movement and the international food sovereignty movement) have spearheaded the struggle for food justice and challenged the corporate food system. These movements have forged alliances across the North–South divide to demand a more equitable and sustainable food system premised on democratic community control over food and food-producing resources.[204] Framing their demands in the language of human rights, these movements call for the collective right of peoples to food sovereignty.[205] The right to food sovereignty rejects the individual focus of the Northern human rights canon in favor of the collective rights of communities, peoples, and nations to freely choose

[203] McMichael, note 104 at 279–280.
[204] Holt-Gimenez and Wang, note 19 at 88–90.
[205] Ibid at 90–91; P. Claeys, "The Creation of New Rights by the Food Sovereignty Movement: The Challenge of Institutionalizing Subversion" (2012) 46 *Sociology* 844 at 849.

their economic, political, and social system.[206] In so doing, the call for food sovereignty echoes the rights of indigenous peoples to self-determination within the confines of the nation-state and reinvigorates the collective human rights invoked by Southern nations during decolonization, including the right to permanent sovereignty over natural resources and the right to development.[207]

In other words, the demand for food justice is ultimately a call for the vesting of the right to development and the right to permanent sovereignty over natural resources in *peoples* rather than states. The peoples would be regarded as the owners of natural resources, and the states would be viewed as trustees responsible for managing them for the collective benefit of the entire population.[208] This reinvigoration of the principle of permanent sovereignty over natural resources responds to the problem of kleptocratic rulers who have "interpreted PSNR as conferring ownership of their nations' resources on themselves" and have "robbed their countries dry, derailing or stunting economic progress in the process." [209] Instead of the traditional focus on the rights of states over their countries' natural resources, this approach would emphasize the duties of states to discharge their fiduciary obligations to their citizens in good faith, the democratization of control over productive resources,[210] and the obligations of states and citizens to promote ecologically sustainable use of these resources.[211]

This interpretation of food justice represents a paradigmatic break with the traditional notion of human rights based on the duty of the liberal democratic state to ameliorate the injustices of the capitalist market economy.[212] While the right to food reinforces the power of the state, the collective right to food sovereignty politicizes the struggle for food justice, promotes the right of peoples to democratically determine their food and agriculture policies, and facilitates the development of transnational alliances to challenge the corporate-dominated food system.

[206] Ibid.

[207] Ibid.

[208] E. Duruigbo, "Permanent Sovereignty and Peoples' Ownership of Natural Resources in International Law" (2006) 38 *George Washington International Law Review* 33 at 37. This interpretation of the right to permanent sovereignty over natural resources bears some resemblance to the common law public trust doctrine, which provides that the state holds certain natural resources in trust for the public and may bar the state from selling these resources to private parties. C. Rose, "Joseph Sax and the Idea of the Public Trust" (1998) 25 *Ecology Law Quarterly* 351; *M. C. Mehta* v *Kamal Nath* (1997) 1 SCC 388 (India) (holding that the public trust doctrine applies in India); *M. I. Builders Private Ltd* v *Radhey Shyam Sahu* (1999) 6 SCC 464 (India) (finding a violation of India's public trust doctrine when a government agency approved the destruction of a public park and market to build a shopping complex).

[209] Duruigbo, note 208 at 35.

[210] Ibid at 67–68.

[211] H. Wittman, "Reconnecting Agriculture and the Environment: Food Sovereignty and the Agrarian Basis of Ecological Citizenship," in H. Wittman et al. (eds.), *Food Sovereignty: Reconnecting Food, Nature and Community* (Oakland: Food First, 2010), p 103.

[212] Claeys, note 205 at 848.

5. CONCLUSION

Solving the problem of chronic undernourishment requires an analysis of the structural causes of food injustice within and among nations. An environmental justice approach to the global food system reveals the ways in which the struggles of marginalized communities for a clean environment, for equitable access to natural resources, and for sustainable livelihoods are embedded in contemporary and historic North–South conflicts – and can produce alliances that transcend the North–South divide. Achieving food justice requires dismantling the corporate-dominated food regime, developing more effective mechanisms to enforce the right to food, and transforming the conventional development discourse by heeding the call for bottom-up approaches based on the knowledge, skills, and values of local communities