



2010

Moving from Food Crisis to Food Sovereignty

Annie Shattuck

Eric Holt-Giménez

Follow this and additional works at: <https://digitalcommons.law.yale.edu/yhrdlj>



Part of the [Human Rights Law Commons](#)

Recommended Citation

Annie Shattuck & Eric Holt-Giménez, *Moving from Food Crisis to Food Sovereignty*, 13 YALE HUM. RTS. & DEV. L.J. (2010).

Available at: <https://digitalcommons.law.yale.edu/yhrdlj/vol13/iss2/2>

This Article is brought to you for free and open access by Yale Law School Legal Scholarship Repository. It has been accepted for inclusion in Yale Human Rights and Development Law Journal by an authorized editor of Yale Law School Legal Scholarship Repository. For more information, please contact julian.aiken@yale.edu.

Comment

Moving from Food Crisis to Food Sovereignty

Annie Shattuck† & Eric Holt-Giménez††

I. INTRODUCTION

In Haiti U.N. peacekeepers fired on protesters demonstrating against the rising cost of rice.¹ Over 70,000 people took to the streets in Mexico City to protest the price of tortillas.² Even the Italians rioted over the price of pasta.³ The global food crisis of 2007 and 2008 once again thrust hunger into the international spotlight. According to the Food and Agriculture Organization of the United Nations (FAO) chief Jacques Diouf, food prices spiked 45% in just nine months⁴, setting off a rash of riots around the world.⁵ When the protests settled, at least one government was left teetering⁶ and an additional 200 million people were driven into the ranks of the hungry.⁷

† Policy Analyst, Food First/Institute for Food & Development. Partially adapted from the authors' *FOOD REBELLIONS! CRISIS AND THE HUNGER FOR JUSTICE* (2009).

†† Policy Analyst and Executive Director, Food First/Institute for Food & Development Policy.

1. See *Food Riots Turn Deadly in Haiti*, BBC NEWS, Apr. 5, 2008, available at <http://news.bbc.co.uk/2/hi/americas/7331921.stm>.

2. Jonathan Watts, *Riots and Hunger Feared as Demand for Grain Sends Food Costs Soaring*, THE GUARDIAN, Dec. 4, 2007, at 15, available at <http://www.guardian.co.uk/world/2007/dec/04/china.business>.

3. *Id.*

4. See Press Release, Food & Agric. Org. of the U.N. (FAO), *Urgent Measures Required to Reduce Impact of High Food Prices on the Poor* (Apr. 9, 2008), <http://www.fao.org/newsroom/en/news/2008/1000823/index.html>.

5. See STEVE WIGGINS & STEPHANIE LEVY, OVERSEAS DEV. INST., *RIISING FOOD PRICES: A GLOBAL CRISIS* (2008), available at <http://www.odi.org.uk/resources/download/1009.pdf>.

6. Kathie Klarreich, *Food Riots Lead to Haitian Meltdown*, TIME, Apr. 14, 2008, available at <http://www.time.com/time/world/article/0,8599,1730607,00.html>.

7. Rod McGuirk, *U.N. Food Agency Says 200 Million More People Hungry*, ABC NEWS, Oct. 26, 2009, available at <http://abcnews.go.com/International/wireStory?id=8914480> (last visited

The food crisis was not caused by population pressures or food scarcity. In fact, in 2007, the year the food crisis began in earnest, the world produced more grain than ever before.⁸ Over the last twenty years, food production has risen steadily at over 2% a year.⁹ Meanwhile, over the same period, population growth has slowed to 1.09% per year, with an average growth rate of 1.2%.¹⁰ Global population growth is not outstripping food supply; rather, the ability to pay for food is being outpaced by production. While commodity prices have largely come down since the peak of the crisis in 2008, the price of food worldwide has not returned to pre-2007 levels.¹¹ With 1.02 billion hungry people on the planet, compared to just 873 million before the crisis, global hunger rates have not come down either.¹²

The international community has pledged to attack hunger and poverty for decades, with little actual progress. Since adoption of the high-profile Millennium Development Goals in 2000, which pledged to cut hunger in half by 2015, global hunger has only increased.¹³ The continuing food crisis constitutes a global humanitarian disaster. But like all disasters, this crisis is caused not by some natural hazard, but instead by the extreme vulnerability of the world's food systems. This systemic vulnerability is a product of overproduction, northern food aid, international finance institutions, and free market "development" policies like structural adjustment, free trade agreements, and green revolution farming models.

The movement for "food sovereignty" – people's democratic control of the food system – directly confronts these core vulnerabilities. The concept originated with the peasant organization La Via Campesina. Made up of one hundred farmers' organizations from sixty-eight countries, La Via Campesina has been advocating for food sovereignty since 1996.¹⁴ A counterpoint to institutional ideas of food security, food sovereignty asserts a future where governments can and will create policy that favors smallholder agriculture over its industrial cousins. Food sovereignty

Apr. 13, 2010).

8. See Sophia Murphy & Armin Paasch, *The Global Food Challenge: Introduction*, in *THE GLOBAL FOOD CHALLENGE: TOWARDS A HUMAN RIGHTS APPROACH TO TRADE AND INVESTMENT POLICIES* 3, 3 (2009), available at <http://www.fian.org/resources/documents/others/the-global-food-challenge/pdf>.

9. See ERIC HOLT-GIMÉNEZ ET AL., *FOOD REBELLIONS! CRISIS AND THE HUNGER FOR JUSTICE* 8, fig.2 (2009).

10. See U.S. Census Bureau, International Database Total Midyear Population for the World: 1950-2050, <http://www.census.gov/ipc/www/idb/worldpop.php> (last visited Apr. 9, 2010).

11. See David Dawe & Christian Morales-Opazo, *How Much Did Developing Country Domestic Staple Food Prices Increase During the World Food Crisis? How Much Have They Declined?* 6 (FAO, Agric. Dev. Econ. Division Working Paper No. 09-09, 2009), available at <ftp://ftp.fao.org/docrep/fao/012/ak421e/ak421e00.pdf>.

12. See FAO, *Hunger*, <http://www.fao.org/hunger/en/> (last visited April 12, 2010).

13. *Id.*

14. See Annette-Aurélié Desmarais, *The Via Campesina: Consolidating an International Peasant and Farm Movement*, 29 J. PEASANT STUD. 91, 100-101 (2002); What is La Via Campesina?, <http://viacampesina.org/en/index.php> (follow "Organisation" hyperlink) (last visited April 12, 2010).

demands that everyone has the right to enough resources to feed oneself. Many of La Via Campesina's members have also been practicing agroecology, the science and practice of sustainable agriculture, for over thirty years, with solid results in the fight against hunger and poverty.¹⁵

Agroecology and food sovereignty, a set of practices and political demands coming from small farmers' movements, directly address the root causes of hunger: poverty and inequality. Together they imply not only restructuring control over land and food-producing resources, but also restructuring market power; democratically determining national food and agriculture policies; increasing biodiversity; transitioning away from fossil fuel-based inputs; and balancing gender power relations.¹⁶ Agroecology and food sovereignty have the potential to radically change our food systems in favor of the poor and underserved.

We will examine both the proximate and root causes of the global food crisis, as well as the potential for solutions based on agroecology and food sovereignty to address global hunger.

II. CRISIS AND THE HUNGER FOR JUSTICE

The overnight reversal of a thirty-year global trend in cheap food unleashed what quickly became referred to as the "global food crisis."

The media generally told five stories about the causes of the food crisis: they blamed high oil prices, rising consumption in India and China, the global biofuels boom, drought, and to some degree, speculation. These *proximate* causes merit discussion because many of the assumptions behind them are plainly false. Some are symptoms of a deeper, structural vulnerability. The volatile price of oil, for example, did exert pressure on food prices, but industrial agriculture's dependence on fossil fuel-based inputs is at the root of this effect. These five proximate causes are important to understand in order to go past the myths about world hunger to address root causes.

1. The Volatile Price of Oil

As it fluctuated wildly between \$60 and \$140 a barrel, the price of oil exercised a ratchet effect of intermittent upward pressure on food prices. High oil prices increase food production and distribution costs, which in turn drive up food prices. Food produced under modern industrial methods requires more fossil fuel calories than it produces in food calories. This energy is required not only to transport food considerable distances,

15. Latin America's *Campesino a Campesino* Movement has been a leader in the practice of agroecology among La Via Campesina members. See, e.g., Eric Holt-Giménez, *Measuring Farmers' Agroecological Resistance After Hurricane Mitch in Nicaragua: A Case Study in Participatory, Sustainable Land Management Impact Monitoring*, 93 *AGRIC., ECOSYSTEMS & ENV'T* 87, 100 (2002).

16. See generally Raj Patel, *What Does Food Sovereignty Look Like?*, 36 *J. PEASANT STUD.* 663 (2009).

but also to operate machinery and to manufacture inorganic fertilizers and pesticides.

2. Rising Meat Consumption

The Northern media has been quick to blame China and India for driving up cereal prices because of increasing consumption of grain-fed meat among their growing middle classes. In this view, economic progress in developing economies puts a strain on the world's food supply. But the fact is that both China and India are practically self-sufficient in grain and meat. Some analysts insist that China at least will not become a major meat or grain importer.¹⁷

3. Unfavorable Climate

Poor harvests have been caused by climatic events, like the 2008 tragedies in Burma, Cuba, and Haiti. Extreme weather has been responsible for poor harvests, in particular in Southeast Asia and Australia. An average of 500 weather-related disasters now take place each year, compared with 125 in the 1980s; the number of floods has increased six-fold over the same period.¹⁸ Conventional agriculture is also more vulnerable to these kinds of disasters than farms under ecological management.¹⁹

4. Agrofuels

The agrofuels "boom" touched off a frenzy of venture capital investment in fuel crops, initially driving up the price of grains and food. This attracted further speculation in food. The use of arable land to grow industrial fuel crops is increasingly recognized as a net negative in terms of climate change, water, and energy use.²⁰ The World Bank deemed the shift toward agrofuel crop production to be a significant contributor to food price rises.²¹ However, as we will see, the long-term impact of agrofuels on the food system goes beyond food price inflation and the "food versus fuel" debate to further consolidating corporate control of land.

17. See Herb Thompson, *Grains in China: Foodgrain, Feedgrain and World Trade*, 37 J. CONTEMP. ASIA 524, 526 (2007).

18. OXFAM, CLIMATE ALARM: DISASTERS INCREASE AS CLIMATE CHANGE BITES 108 (2007), available at http://www.oxfam.org.uk/resources/policy/climate_change/bp108_weather_alert.html.

19. Holt-Giménez, *supra* note 15, at 100.

20. Joseph Fargione et al., *Land Clearing and the Biofuel Carbon Debt*, 319 SCI. 1235, 1236-1237 (2008).

21. WORLD BANK, RISING FOOD PRICES: POLICY OPTIONS AND WORLD BANK RESPONSE, WORLD BANK 1 (2008), available at http://siteresources.worldbank.org/NEWS/Resources/risingfoodprices_backgroundnote_apr08.pdf.

5. Speculation

Speculation was a proximate cause of the crisis, but the underlying deregulation of commodities, futures and derivatives markets made a speculative bubble possible. As the combination of drought, agrofuels, and rising oil prices drove food prices upwards, speculators flocked to the commodities market, eager to take advantage of rising prices. After the sub-prime mortgage meltdown in the United States, there was a surge in international investment in commodity futures in rice, wheat, corn and soy. This drove prices up even further, which in turn attracted more futures investment—with little or no oversight or control from governments. Commodities traders also began crossing over into financial markets, with agribusinesses like Cargill and ADM adding investment arms, and investment banking firms like Goldman Sachs trading heavily in commodities futures. All these crossovers made it difficult to prevent a crisis in one sector of the economy (such as the sub-prime mortgage disaster) from spreading through all sectors. Though rising commodity prices and financial speculation with food have happened before, the “quantity . . . of money flowing through today’s global markets is unprecedented in human history.”²²

“As of April 2008, index investors owned approximately 35% of all corn futures contracts on regulated exchanges in the United States, 42% of all soybean contracts, and 64% of all wheat contracts, compared to minimal holdings in 2001.”²³ These holdings are immense: the wheat holdings alone could account for the delivery of twice the U.S. annual wheat consumption.²⁴ Index speculators are now a significant force in commodities futures markets, even though their buying and trading has nothing to do with the supply and demand fundamentals of any single commodity.

III. BUILDING VULNERABILITY: BEHIND THE PROXIMATE CAUSES

The vulnerability underlying the global food crisis, however, is not simply a combination of high oil prices, drought, or even speculation per se. Rather, it is a product of decades of “development” that privileged industrial production for export over local food production, exacerbated economic inequality, and made poor countries dependent on a volatile global market for their food. We must understand this history in order to address the root causes of hunger.

Forty years ago, developing countries had yearly agricultural trade surpluses of \$1 billion.²⁵ Today, after decades of development, the food

22. Ben Collins, *Hot Commodities, Stuffed Markets, and Empty Bellies*, DOLLARS & SENSE, July 1, 2008, at 9.

23. *Id.*

24. *Id.*

25. FAO, THE STATE OF AGRICULTURAL COMMODITY MARKETS 2004, 14 (2004), available at <ftp://ftp.fao.org/docrep/fao/007/y5419e/y5419e00.pdf>.

deficit in the Global South has expanded to \$11 billion/year.²⁶ Even more telling, Low Income Food Deficit Countries imported over \$38 billion in basic cereal grains in 2007/2008.²⁷

Rampant poverty (around 2.5 billion people live on less than \$2 a day)²⁸ combined with a growing dependence on volatile, deregulated global markets made the rise in food prices a full-fledged disaster. Many, if not most, of these poor live in nations now largely dependent on the global market for food, which is why one analyst has asserted that for every one percent increase in global food prices another sixteen million will go hungry.²⁹

There are four key threads to the story that will help us understand how the global system was built, how the industrial agrifoods complex became dominant, and why both are failing people and the planet.

1. Development and the Green Revolution (1960–90)

Agriculture was a key component of “development” – the extension of the industrial North’s economic model to the “lesser developed countries” of the Global South. The modernization of agriculture, based on the industrialization farm inputs, was deemed the “Green Revolution.” Though credited with saving the world from hunger, the Green Revolution led to the monopolization of seed and chemical inputs by Northern companies; the loss of ninety percent of the South’s agricultural biodiversity; the global shift to an oil-based agricultural economy; and the displacement of millions of peasants to fragile hillsides, shrinking forests, and urban slums. Contrary to popular belief, the Green Revolution produced as many hungry people as it fed.³⁰ How could this be? The Green Revolution often exacerbated underlying social inequalities. A 1995 review of over three hundred studies on the Green Revolution over a thirty-year period found that of those with conclusions on equity, eighty percent found that inequality increased after the introduction of Green Revolution technologies.³¹

26. *Id.*

27. Special Rapporteur of the right to food, *Report of the Special Rapporteur on the right to food, Olivier de Schutter, Building Resilience: A Human Rights Framework for World Food and Nutrition Security*, at 29, U.N. Doc. A/HRC/9/23, (Sept. 8, 2008), available at <http://www.unhcr.org/refworld/docid/48cf71dd2.html>.

28. J. OTTE ET AL., *FOOD MARKETS AND POVERTY ALLEVIATION 1* (2008), available at http://www.fao.org/ag/AGInfo/programmes/en/ppipi/docarc/rep-0811_foodmarkets.pdf.

29. C. Ford Runge & Benjamin Senauer, *How Biofuels Could Starve the Poor*, FOREIGN AFF. May-June 2007, available at <http://www.foreignaffairs.org/20070501faessay86305/c-ford-runge-benjamin-senauer/how-biofuels-could-starve-the-poor.html>.

30. See FRANCES MOORE LAPPÉ ET AL., INST. FOR FOOD AND DEV. POL., *WORLD HUNGER: 12 MYTHS* 61 (1998).

31. See Donald K. Freebairn, *Did the Green Revolution Concentrate Incomes? A Quantitative Study of Research Reports*, 23 *WORLD DEV.* 265, 277 (1995); see also LAPPÉ ET AL., *supra* note 30, at 65 & 210 n.42.

2. Overproduction and Food Aid

Following the Great Depression, the United States created a farm price support system to manage supply and make sure farmers' production costs were commensurate with the prices they received for their grain. Surplus production was held in reserves that were used in lean years and sent abroad to allies during World War II. The United States stepped up agricultural production following the war, filling up the reserves and sending surplus to Europe during reconstruction. European agriculture recovered as governments bought all of farmers' grains at a good price, stimulating supply. With the spread of new technologies like oil-based fertilizer, pesticides, and mechanization, Europe and the United States began chronically producing more food than they could consume. Instead of cutting back on production, Northern governments used subsidies, tariffs, price supports, and quotas to ensure a continuous oversupply. In the United States, price supports were lowered yearly with overproduction increasing year after year.

Because it is designed to ensure overproduction, most of the benefits of government support to agriculture are captured by large corporations who buy grain below the cost of production. While public support for the food system is vital, the way that subsidies and market-price supports have been used in the United States and Europe simply exacerbate oversupply and lead to international dumping of surplus food.

Interwoven with the history of overproduction is the history of U.S. food aid. In 2007, 99.3% of U.S. food aid was "in-kind," that is, procured in the U.S. and shipped to recipient countries, rather than purchased closer to recipients.³² This had the effect of flooding local markets with grain priced below the cost of production, undercutting local farmers.³³ There are three types of food aid: program aid, project aid, and emergency aid. Program aid is not really food aid, but cheap food sales that help the donors dispose of surplus commodities.³⁴ Until the late 1990s, program food aid made up for seventy percent of all food aid.³⁵ In whatever form it arrived, food aid served to open markets for Western companies – not to rebuild local agriculture.

3. Structural Adjustment Programs

The structural adjustment programs (SAPs) imposed by the World Bank and the International Monetary Fund (IMF) in the 1980s and 1990s broke down tariffs dismantled national marketing boards, eliminated price guarantees, and destroyed research and extension systems in the Global

32. WORLD FOOD PROGRAMME, 2007 AID FLOWS 7 (2007).

33. FREDERICK MOUSSEAU, OAKLAND INST., FOOD AID OR FOOD SOVEREIGNTY? ENDING WORLD HUNGER IN OUR TIME 9 (2005).

34. *Id.* at 4.

35. *Id.* at 13.

South.³⁶ By deregulating agricultural markets, the SAPs cleared the way for western multilateral companies to “dump” agricultural commodities like subsidized grain into local markets. These grains were sold at prices below the costs of production. This tied Southern food security to global markets instead of encouraging developing countries to increase self-sufficiency through local farm production.

4. Regional Free Trade Agreements and the World Trade Organization

The rules of the free trade agreements (FTAs) and the World Trade Organization (WTO) then cemented the SAPs into international treaties that overrode national labor and environmental laws and legally prevented countries from protecting their food systems from below-cost foreign products.³⁷ While these policies were sold under the banner of free trade, under WTO rules the U.S. and EU can still heavily subsidize their agribusinesses, but other countries are prohibited from doing the same.

The overlapping histories of development, the Green Revolution, Northern subsidies, structural adjustment, and free trade agreements help to explain why poverty and overproduction—not scarcity and overpopulation—are the main causes of hunger in the world.

IV. THE RESULTS: CONCENTRATION, THE INDUSTRIAL AGRIFOODS COMPLEX AND THE GLOBAL LAND GRAB

The product of this skewed system is a globalized, highly centralized, industrial agrifoods complex. Built over the past half-century—largely with public funds for grain subsidies, foreign aid, and international agricultural research—the industrial agrifoods complex is made up of multinational grain traders; giant seed, chemical and fertilizer corporations; global processors; and supermarket chains. These global companies dominate local markets and increasingly control the world’s food-producing resources: land, labor, water, inputs, genes, and investments.

While many activists assert that the global food system is broken, it works extraordinarily well for these companies. Today two companies, Archer Daniels Midland and Cargill, capture three-quarters of the world

36. See generally JOHN FARRINGTON, OVERSEAS DEV. INST., PUBLIC SECTOR EXTENSION: IS THERE A LIFE AFTER STRUCTURAL ADJUSTMENT? ODI NATURAL RESOURCE PERSPECTIVES 3 (1994), available at <http://www.odi.org.uk/resources/details.asp?id=2167&title=public-sector-agricultural-extension-there-life-after-structural-adjustment> (describing the decline of extension programs); William Moseley et al., *Neoliberal Policy, Rural Livelihoods, and Urban Food Security in West Africa: A Comparative Study of The Gambia, Cote d’Ivoire and Mali*, 107 PROC. NAT’L ACAD. SCI. U.S. 5774 (2010) (describing effects of SAPs on food production and household livelihood security in The Gambia, Côte d’Ivoire, and Mali).

37. The Uruguay Round Agreement of Agriculture that came into effect in 1995 had a profound effect on domestic subsidies, price support programs and market access. For an extensive review of the way these rules affect small farm agriculture and food sovereignty, see PETER M. ROSSET, *FOOD IS DIFFERENT: WHY WE MUST GET THE WTO OUT OF AGRICULTURE* (2006).

grain trade.³⁸ Chemical giant Monsanto controls 22.4% of the global proprietary seed market.³⁹ In the United States, one company controls 40% of the fluid milk supply; four companies control 85% of beef packing; and five companies control about half the retail grocery market.⁴⁰ In the last quarter of 2007, as the world food crisis was breaking, Archer Daniels Midland's earnings jumped 42%, Monsanto's by 45%, and Cargill's by 86%.⁴¹ Mosaic Fertilizer, a subsidiary of Cargill, saw profits rise by 1,200%.⁴² These figures translate into profits in the midst of crisis.

The trend toward monopoly control over our food systems is particularly visible from within the United States, where a handful of industrial agrifoods corporations mediate the relationship between three million farm operators and 300 million consumers, and gobble up the lion's share of the food dollar. Over the last sixty years, the companies that buy, sell, and process farm products as well as the chains that distribute and sell food, have steadily eroded farmer's profits. While in the 1950s, U.S. farmers received 40–50% of the food dollar,⁴³ today they receive around 20%.⁴⁴ With this, farmers still must pay for inputs and labor.

Land is becoming more concentrated as well. Driven by both new markets for agrofuels and high/volatile food prices, corporations and governments are moving in what is being called the "Global Land Grab."⁴⁵ A failed deal between South Korean firm Daewoo and the government of Madagascar would have leased 1.3 million hectares to the company for ninety-nine years, essentially for nothing. Similarly, the Tanzanian government has granted the British firm Sun Biofuels exclusive access to 22,230 acres of land for ninety-nine years, rent-free in exchange for \$20 million worth of roads and schools, and a German company expects to have 494,000 acres under cultivation in Tanzania soon.⁴⁶ A British company has reportedly taken 3,000 hectares of communal pasture land in Ethiopia for a jatropha plantation in an area where 39% of the population already

38. BILLY VORLEY, UNITED KINGDOM FOOD GROUP, FOOD INC.: CORPORATE CONCENTRATION FROM FARM TO CONSUMER 11 (2003), available at <http://www.ukfg.org.uk/docs/UKFG-Foodinc-Nov03.pdf>.

39. KRISTINA HUBBARD, OUT OF HAND: FARMERS FACE THE CONSEQUENCES OF A CONSOLIDATED SEED INDUSTRY 13 (2009), available at <http://farmertofarmercampaign.com/Out%20of%20Hand.FullReport.pdf>.

40. WILLIAM HEFFERNAN & MARY HENDRICKSON, CONCENTRATION OF AGRICULTURAL MARKETS 1 (2007), available at <http://www.nfu.org/wp-content/2007-heffernanreport.pdf>.

41. Geoffrey Lean, *Multinationals Make Billions in Profit Out of Growing Global Food Crisis*, THE INDEPENDENT, May 4, 2008, available at <http://www.independent.co.uk/environment/green-living/multinationals-make-billions-in-profit-out-of-growing-global-food-crisis-820855.html>.

42. *Id.*

43. U. GA. C. AGRIC. & ENVTL. SCI., CHANGES IN U.S. AGRICULTURE: FROM THE 1950'S TO THE 1990'S (2008), <http://www.ces.uga.edu/Agriculture/agecon/pubs/agric50-90.htm>.

44. See National Farmers Union, *Farmer's Share of Retail Food Dollar* (2010), available at http://nfu.org/wp-content/march_2010_farmersshare.pdf.

45. Alexandra Spieldoch, *The Global Land Grab*, FOREIGN POL. FOCUS, June 18, 2009, available at http://www.fpif.org/articles/global_land_grab.

46. Horand Knaup, *Africa Becoming a Biofuel Battleground*, SPIEGEL ONLINE, Sept. 5, 2008, available at <http://www.spiegel.de/international/world/0,1518,576548,00.html>.

depends on emergency food aid.⁴⁷ Similarly, high food prices and a strong dollar have prompted many Middle Eastern states with scarce food production capacity to purchase or lease land overseas.⁴⁸ Land deals in Sudan, Sierra Leone, Ethiopia, and other African nations are becoming so widespread that some commentators have likened the movement to corporate colonialism.⁴⁹

Proponents of agrofuels claim that the world's abandoned cropland and marginal lands can be used to produce agrofuels in ways that do not compromise food production.⁵⁰ One study using satellite imagery and historical data claims that 386 million hectares of such abandoned cropland exist.⁵¹ Such estimates ignore the fact that these marginal lands are often occupied and used for subsistence farming by rural populations.⁵² In a recent report, Jonathan Davies of the World Initiative for Sustainable Pastoralism notes that,

These marginal lands do not exist on the scale people think. In Africa, most of the lands in question are actively managed by pastoralists, hunter-gatherers and sometimes dryland farmers. . . . [Given] the current cavalier approach to land appropriation, or the disregard of the land rights of rural inhabitants in many countries, it is inevitable that agrofuel production will be done by large investors at the expense of local communities.⁵³

The report further claims the agrofuels discussion has "ignored the presence of pastoralists, indigenous peoples, small scale farmers and women on these lands, and failed to understand that intensive agriculture/monoculture is not the only form of land use."⁵⁴

While Africa may be ground zero, the rush on agricultural land is not limited to the African continent. For example, in Columbia, according to one report, "93 percent of the land under palm cultivation . . . is located in the collective territorial zone of black communities."⁵⁵ The report also

47. THE GAIA FOUNDATION ET AL., AGROFUELS AND THE MYTH OF MARGINAL LANDS 7 (2008), available at www.gaiafoundation.org/documents/Agrofuels&MarginalMyth.pdf.

48. GRAIN INTERNATIONAL, SEIZED! THE 2008 LAND GRAB FOR FOOD AND FINANCIAL SECURITY (2008), available at <http://www.grain.org/go/landgrab>.

49. See Julian Borger, *Rich Countries Launch Land Grab to Safeguard Food Supply*, THE GUARDIAN, Nov. 22, 2008, available at <http://www.guardian.co.uk/environment/2008/nov/22/food-biofuels-land-grab>.

50. See, e.g., Gopalakrishnan et al., *Use of Marginal Land and Water to Maximize Biofuel Production*, in BIOFUELS, BIOENERGY, AND BIOPRODUCTS FROM SUSTAINABLE AGRICULTURAL AND FOREST CROPS: PROCEEDINGS OF THE SHORT ROTATION CROPS INTERNATIONAL CONFERENCE 19-20 (Zalesny et al. eds., 2008).

51. Christopher B. Field et al., *Biomass Energy: the Scale of the Potential Resource*, 23 TRENDS IN ECOLOGY & EVOLUTION 65, 68 (2008).

52. Goeran Berndes et al., *The Contribution of Biomass in the Future Global Energy Supply: A Review of 17 Studies*, 25 BIOMASS AND BIOENERGY 1, 14 (2003).

53. See GAIA FOUNDATION ET AL., *supra* note 47, at 3.

54. *Id.* at 8.

55. *Columbia Palm Oil Biodiesel Plantations: A "Lose-Lose" Development Strategy?*, Food First/Inst. for Food and Dev. Pol., Feb. 18, 2008, <http://www.foodfirst.org/en/node/2051>.

states that nearly all traditional villages have been cleared and are being resettled with former paramilitaries and outsiders.⁵⁶ Similarly, in Guatemala, the expansion of palm oil and sugar plantations for agrofuels is prompting a powerful re-concentration of landholdings, significantly reducing the land available for food production.⁵⁷

This continued pattern of concentration in land and market power threatens to exacerbate the structural causes of the food crisis, enclosing more and more of the world's food-producing resources in fewer and fewer hands.

V. FOOD SOVEREIGNTY AND AGROECOLOGY – POLITICS AND PRACTICE FROM BELOW

In 1996, La Via Campesina launched a global call for *food sovereignty*, defined as the human right to healthy, culturally appropriate, sustainably grown food, and the right of communities to determine their own food systems. The call echoed and amplified the voices of social movements everywhere that struggle for land reform, control over local resources, fair markets, neighborhood food systems, and sustainable agriculture.

Food sovereignty goes beyond food security—the term employed by the FAO—because it proposes not just universal access to food, but democratic *control* over food throughout the entire *food web*.

Key demands of food sovereignty include land reform, protection of national food markets from dumping of surplus commodities, local control of seeds, access to credit, technical assistance for agroecological methods, fair prices and market conditions, and an end to the violence against women. The logic of food sovereignty demands rolling back structural adjustments and free trade practices, reinvesting in grain reserves and public extension, protecting key sectors, re-localizing production, and reducing market dominance of large transnational corporations.

The call for food sovereignty, while originally emanating from the Global South, has been taken up in the Global North by consumers as well as producers. In Europe, smallholder movements, organic farmers, campaigners for GMO-free food (free of genetically modified organisms), anti-hypermarket movements, and fair trade movements have been fighting to counter the dominance of monocultures and monopolies with local, agroecologically produced, and fairly traded food. In the United States, family farmers, students, neighborhood activists, many professionals, and socially-conscious entrepreneurs have been advocating for fresh and healthy food.

On the local level, food sovereignty has most famously been put into practice in Belo Horizonte, Brazil. In the early 1990s, 20% of the city's

56. *Id.*

57. Laura Hurtado, *Agrofuel Plantations and the Loss of Land for Food Production in Guatemala*, AGROFUELS IN THE AMERICAS 77 (R. Jonasse ed., 2009), available at http://www.foodfirst.org/files/pdf/Agrofuels_in_the_Americas.pdf.

children were going hungry.⁵⁸ Now, in a city of 2.5 million people, hunger has been cut drastically, using only 2% of the city's budget.⁵⁹ The local government supports "Popular" (subsidized) restaurants, local farmers and local markets, extensive community and school gardens, school lunch and breakfast programs that buy from local producers, and below-market vendors on prime patches of public land.⁶⁰ The money comes through a participatory city budgeting process.⁶¹

An even bigger policy step came when Ecuador re-drafted its constitution in 2008 to include food sovereignty. According to the constitution, Ecuador will Promote food sovereignty by transforming the national agro-food system; introduce organic and ecological technologies for sustainable agricultural production, adopt fiscal and redistributive policies to increase resources for farmers to protect the national economy from food import dependency and prohibit the use of biotechnology and genetically modified seeds harmful to human and environmental health.⁶²

The implementation of this national policy continues to be highly contested, but civil society is now using the section to demand follow-through from the federal government.⁶³

Food sovereignty's political demands are complemented on the ground by the practice of sustainable agriculture. While sustainable agriculture has frequently been dismissed by the international agricultural research centers as "lacking science," the fact is that the practices of many ecological farmers have been advancing for some time. The science of agroecology, developed through close ecological observation of traditional farming systems, has become the science for sustainable agriculture. Agroecologists have documented remarkable management practices around the world in which farmers restore and improve farm ecosystem functions. These practices have resulted in stable, high-yielding food production, soil and water conservation, and the enrichment of agricultural biodiversity.⁶⁴ Because agroecology can improve yields while minimizing or eliminating external inputs and associated costs, it both raises incomes

58. Michael Jahi Chappell, *From Food Security to Farm to Formicidae: Belo Horizonte, Brazil's Secretaria Municipal de Abastecimiento and Biodiversity in the Fragmented Atlantic Forest* 73 (2009) (unpublished Ph.D. dissertation, University of Michigan), available at <http://deepblue.lib.umich.edu/handle/2027.42/62417>.

59. *Id.* at 79.

60. Jahi Chappell, *Belo Horizonte: Regional Food Security Supporting Rural Sustainability* 1-2 (2006) (unpublished manuscript), available at http://www.smallplanet.org/images/uploads/belo_horizonte_jahi.pdf.

61. See Chappell, *supra* note 58, at 111.

62. Karla Pena, *Putting Food First in the Constitution of Ecuador*, Food First/Inst. for Food and Dev. Pol., Oct. 31, 2008, <http://www.foodfirst.org/en/node/2301>.

63. See Karla Pena, *Ecuador Paves the Way for Terminator Technology?*, Food First/Inst. for Food and Dev. Pol., June 11, 2009, <http://www.foodfirst.org/en/node/2465>.

64. See generally ROLAND BUNCH, *TWO EARS OF CORN: A GUIDE TO PEOPLE-CENTERED AGRICULTURAL IMPROVEMENT* (1982); ERIC HOLT-GIMÉNEZ & STEPHEN R. GLESSMAN, *AGROECOLOGY: THE ECOLOGY OF SUSTAINABLE FOOD SYSTEMS* (2007); Miguel Altieri, *Applying Agroecology to Enhance Productivity of Peasant Farming Systems in Latin America*, 1 ENV'T, DEV. & SUSTAINABILITY 197, 197-98 (1999); Norman Uphoff, *Agroecological Implications of the System of Rice Intensification (SRI) in Madagascar*, 1 ENV'T, DEV. & SUSTAINABILITY 297, 297 (1999).

for small farmers and increases autonomy. In fact, recent research from the U.N. Conference on Trade and Development (UNCTD) found that organic agriculture in Africa had a strong positive impact on farmer's livelihoods.⁶⁵ That study found that the conversion from traditional low-chemical input farming to organic practices did not result in any loss of productivity. In fact, as the farms became more established, they well exceeded the productivity of traditional farms and even matched that of high-input modern farms.⁶⁶ According to U.N. Development Programme (UNDP) Director Achim Steiner and Supachai Panitchpakdi, the Secretary General of UNCTD, "[t]he evidence presented in this study supports the argument that organic agriculture can be more conducive to food security in Africa than most conventional production systems, and that it is more likely to be sustainable in the long term."⁶⁷

Agroecological innovations, such as the System of Rice Intensification in Madagascar and Southeast Asia,⁶⁸ the Push-Pull System in Kenya,⁶⁹ and velvetbean systems in MesoAmerica,⁷⁰ are locally based, low-input practices developed by farmers in partnership with researchers. Agroecological systems also provide a more diverse and nutritious diet, in many cases fighting nutritional deficiencies.⁷¹

The movement-based practices of sustainable agriculture recently received a high level (inadvertent) endorsement from the World Bank. The International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD)—a joint initiative of the World Bank, the UNDP, the FAO and other institutions—was designed based on a hybrid consultation model like the Intergovernmental Panel on Climate Change and the Millennium Ecosystem Assessment. The report, involving over 400 scientists and development experts, took four years to complete. Agroecological approaches to agricultural development—not genetic engineering—were the path outlined to end hunger. Many of the IAASTD's recommendations had strong synergies with the politics and practices of the social movements calling for food sovereignty. The report's findings are surprisingly radical—calling for a thorough, bottom-up transformation of the global food system.⁷²

65. See, e.g., U.N. Conference on Trade & Dev. & U.N. Env't Programme, Capacity Building Task Force on Trade, Env't & Dev., *Organic Agriculture and Food Security in Africa*, 23, U.N. Doc. UNCTAD/DITC/TED/2007/15 (2008) (prepared by Jules Pretty et al.), available at http://www.unctad.org/en/docs/ditcted200715_en.pdf (comparing yields of integrated agricultural and conventional farms).

66. *Id.* at 39.

67. *Id.* at iii.

68. See generally Uphoff, *supra* note 64.

69. Z. R. Khan et al., *Combined Control of Striga Hermonthica and Stemborers by Maize-Desmodium spp. Intercrops*, 25 CROP PROTECTION 989, 990 (2006).

70. Miguel Altieri, *Linking Ecologists and Traditional Farmers in the Search for Sustainable Agriculture*, 2 FRONTIERS IN ECOLOGY & ENV'T 35, 40 (2004).

71. See Rachel Bezner Kerr et al., *Participatory Research on Legume Diversification with Malawian Smallholder Farmers for Improved Human Nutrition and Soil Fertility*, 43 EXPERIMENTAL AGRIC. 437, 451 (2007).

72. See IAASTD, AGRICULTURE AT A CROSSROADS EXECUTIVE SUMMARY OF THE SYNTHESIS REPORT 5-11 (2008), available at

Applauded by farmer organizations and civil society groups, shunned by agribusiness monopolies, shelved by the World Bank, and yet quietly approved by fifty-eight governments (excluding the U.S., Canada and Australia),⁷³ the IAASTD advocates reducing the vulnerability of the global food system through *locally-based* innovations. It calls for redistributing productive land to the rural poor and restructuring the food system in favor of smallholders.⁷⁴ In sum, according to IAASTD contributing author Dr. Marcia Ishii-Eitemann, the IAASTD found that reliance on resource-extractive industrial agriculture is unsustainable; short-term technical fixes do not adequately address the complex challenges of the agricultural sector and often exacerbate social and environmental harm.

Achieving food security and sustainable livelihoods for people now in chronic poverty requires ensuring access to and control of resources by small-scale farmers.⁷⁵

VI. CONCLUSIONS

To end hunger, we must transform the food system. Transforming the global food system means changing the way we produce, consume, and make decisions. This requires a fundamental shift in the balance of power within the world's food systems so that the interests of the planet's majorities are served first. This shift is already underway, evident in the political spaces where decisions over food are made, and in the physical places where food is produced, processed, distributed, and consumed. Food sovereignty represents a substantive shift *away* from the structural privilege of the industrial agrifoods complex, and *toward* greater economic democracy in our food systems. This movement is horizontal, decentralizing the power of decision and action by localizing it in the hands of the poor and underserved. It is also vertical, shifting our understanding of food systems from the corporate logic of exclusive boardrooms, expert institutions, and high-level summits, toward the socially constructed logic of the majority, actively forged from the ground up. The question now is not whether food sovereignty and agroecology can tackle the vulnerability at the root of the food crisis, but if the political will exists to do so.

<http://www.agassessment.org/index.cfm?Page=IAASTD%20Reports&ItemID=2713> (follow "Executive Summary of the Synthesis Report" hyperlink).

73. IAASTD, *AGRICULTURE AT A CROSSROADS GLOBAL REPORT* vii (2008), available at <http://www.agassessment.org/index.cfm?Page=IAASTD%20Reports&ItemID=2713> (follow "Global Report" hyperlink).

74. IAASTD, *supra* note 72, at 5-11.

75. Marcia Ishii-Eitemann, *Report from Johannesburg: Business as Usual is Not an Option*, PAN MAG., Apr. 7, 2008, available at <http://www.panna.org/mag/summer2008/agriculture/business-as-usual-is-not-an-option>.