

6 Achieving Zero Hunger Using a Rights-Based Approach to Food Security and Sustainable Agriculture

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The 2030 Agenda for Sustainable Development was adopted by the United Nations (UN) General Assembly in September 2015 and signed by 193 countries. Its 17 Sustainable Development Goals (SDGs) and 169 Targets are intended to guide global development action from 2016 to 2030. Described as “the blueprint to achieve a better and more sustainable future for all,”² the SDGs collectively represent an urgent and universal call to action to end poverty, address inequality, protect the planet, and secure peace and justice.

The second Sustainable Development Goal—SDG 2 or the “Zero Hunger Goal”—seeks to end hunger and achieve food security for all by 2030. SDG 2 recognizes that achieving this Goal requires a dual and inter-related focus on improving access to nutritious food while promoting sustainable agriculture. This, in turn, “entails improving the productivity and incomes of small-scale farmers by promoting equal access to land, technology and markets, sustainable food production systems and resilient agricultural practices.”³ As noted in the 2017 High Level Political Forum (HLPF) Thematic review of SDG 2, the Zero Hunger Goal “links the eradication of hunger and of malnutrition to a transformation in agriculture and food systems, and to the empowerment of rural people, women and men alike, as critical agents of change.”⁴

SDG 2’s linking of food security and nutrition to sustainable agricultural production, and its associated call for the empowerment of rural communities, is significant in at least three respects: First, it is a reminder that the majority of those who live in poverty and suffer from food insecurity live in rural areas and rely on agriculture as their primary source of livelihood.⁵ Second, it is a tacit acknowledgment of the enormous social, environmental, and health-related costs of our industrial food system. And third, it points to the fundamental

¹ The author thanks, with great appreciation, Cassandra Jurenci, Taylor Keselica, and Claire McLeod for their research support.

² *About the Sustainable Development Goals*, U.N. SUSTAINABLE DEVELOPMENT GOALS, /www.un.org/sustainabledevelopment/sustainable-development-goals/, (last visited May 18, 2020).

³ *Goal 2: End Hunger, Achieve Food Security and Improved Nutrition and Promote Sustainable Agriculture*, U.N. DEP’T OF ECON. & SOC. AFF., STATISTICS DIVISION, <https://unstats.un.org/sdgs/report/2016/goal-02/> (last visited May 18, 2020).

⁴ 2017 HLPF THEMATIC REVIEW OF SDG 2: END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION, AND PROMOTE SUSTAINABLE AGRICULTURE, HIGH-LEVEL POLITICAL FORUM ON SUSTAINABLE DEVELOPMENT 1 (2017) [hereinafter “2017 HLPF THEMATIC REVIEW”].

⁵ U.N. Special Rapporteur on the right to food, *Critical Perspective on Food Systems, Food Crises and the Future of the Right to Food*, ¶ 14, U.N. Doc A/HRC/43/44 (Jan. 21, 2020) [hereinafter “*Critical Perspective on Food Systems*”].

imbalance of power in that food system, underscoring both the vulnerability and resiliency of rural communities therein.

This chapter brings into view the transformative changes that are needed to build food systems that are sustainable, nourishing and just—which in turn can help achieve SDG 2 and related Goals. The first part of the chapter provides an overview of the many costs and consequences of our industrial food system—the fragility of which has been brought into sharp relief by the COVID-19 pandemic. The second part then turns to a review of SDG 2 targets and assesses the lack of progress in achieving these targets on multiple fronts. I argue that this lack of progress can be attributed in part to the SDGs' continued embrace of a productivist approach that fails to center the human rights of those made most vulnerable by our industrial food system. In the third part of the chapter, I argue that we must reject destructive agricultural practices and embrace a rights-based approach to food security and to sustainable food production. This, in turn, requires shifting from industrial agriculture to diversified agroecological food systems. It also requires global recognition of the rights of peasants and other small-scale food producers who, ironically, also form the majority of the world's food insecure. The chapter concludes with a look at emerging data and case studies that illuminate the viability and potential of these alternative agroecological models.

The Costs and Consequences of our Industrial Food System

The causes and consequences of hunger and food insecurity are many and include both urban and rural poverty, widening income and wealth inequality, conflict, climate change, and myriad issues surrounding the inequitable distribution of, and access to, land and other productive resources. This chapter focuses in particular on the role that the industrial food system plays in exacerbating hunger, rural dispossession, and environmental degradation.

Our shift from complex, diverse, and decentralized food systems toward a homogenous, extractive, and centralized industrial food system began far before the mid-20th century but deepened considerably with the advent of the so-called Green Revolution.⁶ Beginning in the 1960s, the Green Revolution ushered in a new era of food production that combined high-yielding plant varieties with increased irrigation, highly mechanized production processes, and the use of nitrogen-based fertilizers and pesticides.⁷ These innovations increased the production volumes of major cereals (particularly maize, wheat, and rice) and of soybean,⁸ but also entailed significant environmental and social costs.⁹

In the decades following the Green Revolution, structural adjustment programs mandated by international financial institutions encouraged developing countries to focus on

6 The Catholic Health Association of India [CHAI], *Exploring the Potential of Diversified Traditional Food Systems to Contribute to a Healthy Diet*, at 21, (2018), <https://foodsovereigntyalliance.files.wordpress.com/2018/12/Report-1.pdf>.

7 U.N. Special Rapporteur on the right to food, *The Transformative Potential of the Right to Food*, ¶ 6, U.N. Doc A/HRC/25/57 (Jan. 24, 2014); see also, Bryan Newman, Development Report No. 15: *A Bitter Harvest: Farmer Suicide and the Unforeseen Social, Environmental and Economic Impacts of the Green Revolution in Punjab, India*, Food First Institute for Food and Development Policy 1 (2007).

8 Over recent decades, however, yields have either failed to improve, stagnated, or collapsed in 24–39% of the world's production zones for these crops. See International Panel of Experts on Sustainable Food Systems [IPES-Food], *From Uniformity to Diversity: A Paradigm Shift from Industrial Agriculture to Diversified Agroecological Systems*, at 3, (June 2016) [hereinafter "*From Uniformity to Diversity*"].

9 U.N. Special Rapporteur on the right to food, *The Transformative Potential of the Right to Food*, *supra* note 7, at ¶ 6.

the production and export of cash crops over basic food crops. These shifts in production, along with the liberalization of trade in agricultural products in the 1990s, turned a number of food-exporting developing countries into net food-importers,¹⁰ making them particularly vulnerable to price volatility and supply chain disruptions. Moreover, as highly subsidized developed-country producers glutted markets, peasant farming was undermined across the Global South, fueling waves of migration.¹¹

The focus on integrating food producers into global markets that are now dominated by mega-sized agribusiness actors has decidedly come at the expense of sustainable and diversified local food systems. As the COVID-19 pandemic has shown, the industrial food system's complex and specialized food supply chains are also ill-equipped by design to handle disruptions such as closed borders, reduced labor mobility, trade restrictions, and lockdowns.¹² Ultimately, when measured against the Goal of ending hunger, achieving food security, improving nutrition, and promoting sustainable agriculture, the food systems we have inherited from the 20th century fall dramatically short. As described below, "food and agriculture are now deeply implicated in the climate crisis and loss of biodiversity, the erosion of rural livelihoods, and the contamination of land and water."¹³

Environmental Costs

The natural resource base on which food production depends is being rapidly degraded. A hyper-focus on increasing agricultural production, including from the time of the Green Revolution, has led to a host of environmental problems including accelerated soil erosion, deforestation, extension of monocultures, and a loss of biodiversity. The industrial food system—which relies on long petrochemical-based supply chains—causes massive deforestation in order to make way for large-scale plantations to produce food commodities and animal feed, and to secure land for animal grazing.¹⁴ Such changes in land and water use and management have been cited by the UN Food and Agriculture Organization (FAO) as a key driver of biodiversity loss, along with the attendant "transition to intensive production of a reduced number of species, breeds, and varieties."¹⁵ A 2019 FAO study—which was based

10 Smita Narula, *Reclaiming the Right to Food as a Normative Response to the Global Food Crisis*, 13 YALE HUM. RTS. & DEV. L.J. 403, 411 (2010) [hereinafter "Reclaiming the Right to Food"].

11 U.N. Special Rapporteur on the right to food, *The Transformative Potential of the Right to Food*, *supra* note 7, at ¶¶ 10–12.

12 Jennifer Clapp, *Spoiled Milk, Rotten Vegetables and a Very Broken Food System*, N.Y. TIMES (May 8, 2020), www.nytimes.com/2020/05/08/opinion/coronavirus-global-food-supply.html.

13 COLIN ANDERSON ET AL., CENTRE FOR AGROECOLOGY, WATER & RESILIENCE, BUILDING, DEFENDING AND STRENGTHENING AGROECOLOGY: A GLOBAL STRUGGLE FOR FOOD SOVEREIGNTY, at 2, (2015) www.gaiafoundation.org/wp-content/uploads/2017/04/Building-defending-strengthening-agroecology-2015-3.pdf.

14 See FAO, WORLD LIVESTOCK: TRANSFORMING THE LIVESTOCK SECTOR THROUGH THE SUSTAINABLE DEVELOPMENT GOALS 100 (2018) (stating that "[t]he expansion of pastures and croplands to feed livestock is a major driver of land-use change and deforestation."); see also FAO, STATE OF THE WORLD'S FORESTS 2016: FORESTS AND AGRICULTURE: LAND-USE CHALLENGES AND OPPORTUNITIES 88 (2016) (noting that cattle ranching has been a major driver of deforestation in the Amazon region since the 1990s); see also ETC GROUP, WHO WILL FEED US? THE PEASANT FOOD WEB VS. THE INDUSTRIAL FOOD CHAIN 32 (3rd ed. 2017) [hereinafter "WHO WILL FEED US?"] (noting that the industrial food chain "dominates more than 75% of global agricultural land ... and 80% of the Chain's agricultural land is used for livestock production").

15 COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE, FAO, THE STATE OF THE WORLD'S BIODIVERSITY FOR FOOD AND AGRICULTURE 65 (2019) [hereinafter "FAO BIODIVERSITY REPORT"] (adding

on 91 country reports—found that “many key components of biodiversity for food and agriculture [BFA] at genetic, species and ecosystem levels are in decline,”¹⁶ including many species that contribute to vital ecosystem services, such as pollinators.¹⁷

According to some estimates, approximately one-fourth of human-made greenhouse gas emissions can be attributed to industrial modes of agricultural production when combined with the resource requirements to transport, package, and conserve food.¹⁸ In turn, “increased climate variability and weather-related disasters affect agriculture and threaten the stability of food prices.”¹⁹ The FAO estimates that one-third of all the food that is produced globally goes to waste, wasting with it the immense resources that went into the food’s production.²⁰ As industrial farming methods are further introduced into nonindustrial settings, soil depletion, petrochemical fertilizers, eutrophication, and coastal dead zones are also increasingly becoming commonplace in regions where such environmental degradation was previously unseen.²¹

Social Costs

Our industrial food system also generates hunger and malnutrition, impoverishes farmers, and displaces rural communities and Indigenous Peoples from their lands. Studies reveal that, “[a]n estimated 80 percent of the poorest people live and work in rural areas, half of whom are small-scale and traditional farmers, 20 percent are landless and 10 percent subsist through fishing, hunting, and activities.”²² The extreme vulnerability of food producers to hunger and food insecurity—and to the current COVID-19 crisis—is a result of the deep imbalance of power in our food system and the systematic denial of food producers’ basic rights.²³

that “the maintenance of traditional knowledge related to BFA is negatively affected by the loss of traditional lifestyles as a result of population growth, urbanization and the industrialization of agriculture and food processing, and by overexploitation and overharvesting”).

16 *Id.* at xxxviii.

17 *Id.* The report further notes that in 2014, fewer than 200 of cultivated plant species were produced at significant levels, and just 9 crops—sugar cane, wheat, maize, potatoes, soybeans, oil-palm fruit, sugar beet, cassava, and rice—constituted more than 66% of world crop production by weight. Additionally, as of 2015, nearly one-third of fish stocks were overfished and as of 2018, nearly 26% of the 7,745 local livestock breeds were at risk of extinction. *Id.* at 114.

18 Joseph Poore and Thomas Nemecek, *Reducing Food’s Environmental Impacts through Producers and Consumers*, 360 (6392) *SCIENCE*, 987, 987 (2019); see also 2017 HLPF THEMATIC REVIEW, *supra* note 4, at 6 (estimating that “20–25 percent of total greenhouse gas emissions are directly caused by agriculture, including deforestation”).

19 2017 HLPF THEMATIC REVIEW, *supra* note 4, at 6.

20 *Food Loss and Food Waste*, FOOD & AGRICULTURE ORG., www.fao.org/food-loss-and-food-waste/en/ (last visited May 19, 2020).

21 Eli D. Lazarus, *Land Grabbing as a Driver of Environmental Change*, 46.1 *AREA* 74, 79 (2014). See also Intergovernmental Panel on Climate Change (IPCC), *Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems*, Table 4.1 at 356–8, and Findings 4.2.1 at 354–6, 4.3.1 at 366, 4.4.1.3 at 372–3, and 4.7.2 at 379–80 (2019).

22 U.N. Special Rapporteur on the right to food, *Critical Perspective on Food Systems*, *supra* note 5, at ¶ 14 (internal citations omitted).

23 See, e.g., *id.* at ¶¶ 22–5 (describing the exploitation of agricultural workers, their exposure to dangerous pesticides, and the prevalence of child labor in the agricultural sector).

The increasing corporate consolidation of the food chain means that a mere handful of agribusiness companies now exert immense control over and reap tremendous profit from the production, processing, and retailing of our food.²⁴ Small-scale farmers are hungry because the profits of their labor are being captured by agribusinesses along the food chain, and because they cultivate plots of lands that are often very small, making the vast majority of them net food buyers.²⁵ They also face significant barriers to markets due to infrastructural deficiencies and technical trade requirements.²⁶ Most smallholder farmers are women, but few hold titles to land. The land they do own is often infertile or lacks water. Many women also face wage inequities and sexual violence in the fields.²⁷

In most countries, peasants and rural workers have no right to form unions, earn a living wage, or receive social security.²⁸ Peasant farmers struggle to access productive resources or save their seeds, and are highly vulnerable to climate shocks.²⁹ Price volatility and a lack of proper supports for small-scale agriculture are also putting peasant farmers in a dire situation, as is evident by the high incidence of farmer suicides in multiple countries.³⁰

Rural communities throughout the world, including peasant farmers, landless rural workers, Indigenous Peoples, pastoralists, fisherfolk, and their families, also bear the brunt of the large-scale land and water grabs that prop up the industrial food chain. In 2016, and 8 years since publishing its first and influential report on the subject of land grabs,³¹ GRAIN published a new dataset documenting nearly 500 land deals around the world that were exclusively for food and agriculture and covered roughly 30 million hectares. In early 2016, a similar data-pooling initiative known as the Land Matrix included about 1,100 land deals

24 See generally IPES-Food, *Too Big to Feed: Exploring the Impacts of Mega-Mergers, Consolidation and Concentration of Power in the Agri-Food Sector* (2017).

25 U.N. Special Rapporteur on the right to food, *Report of the Special Rapporteur on the Right to Food*, U.N. Doc. A/65/281 (Aug. 11, 2010). The industrial food chain also generates hunger in urban areas. See, e.g., Sylvia A. Allegretto et al., *UC Berkeley Center for Labor Research and Education, Fast Food, Poverty Wages: The Public Cost of Low-Wage Jobs in the Fast-Food Industry*, U.C. BERKELEY LABOR CENTER (Oct. 15 2013), <http://laborcenter.berkeley.edu/fast-food-poverty-wages-the-public-cost-of-low-wage-jobs-in-the-fast-food-industry/> (noting that workers in the fast food industry in the United States work for poverty wages and are often food insecure).

26 U.N. Special Rapporteur on the right to food, *Critical Perspective on Food Systems*, *supra* note 5, at ¶ 14.

27 See Maryellen Kennedy Duckett, *Empowering Female Farmers to Feed the World*, NAT'L GEOGRAPHIC, www.nationalgeographic.com/culture/2019/03/partner-content-empowering-female-farmers/ (asserting that, among other barriers, women face farm land ownership barriers that negatively affects their ability to seek "higher earnings and reliable sources of income"); see also SARA KOMINERS, OXFAM AMERICA, *WORKING IN FEAR: SEXUAL VIOLENCE AGAINST WOMEN FARMWORKERS IN THE UNITED STATES* 15–16 (2015) (stating that women farmworkers in the United States face sexual violence in many forms, including verbal abuse and rape).

28 Peter Hurst et al., *Agricultural Workers and Their Contribution to Sustainable Agriculture and Rural Development*, Food and Agriculture Organization et. al., 19, Point 1.4 at 25, 32, 3.4 at 35, 2.21 at 58 (2007), www.fao.org/3/a-bp976c.pdf.

29 2017 HLPF THEMATIC REVIEW, *supra* note 4, at 1.

30 See *Farmer Suicides: A Global Phenomenon*, PRAGATI (May 6, 2015), <http://pragati.nationalinterest.in/2015/05/farmer-suicides-a-global-phenomena/>; Paméla Rougerie, *Quiet Epidemic of Suicide Claims France's Farmers*, N.Y. TIMES (Aug. 20, 2017), www.nytimes.com/2017/08/20/world/europe/france-farm-suicide.html; and Debbie Weingarten, *Why Are America's Farmers Killing Themselves?*, THE GUARDIAN (Dec. 11, 2018), www.theguardian.com/us-news/2017/dec/06/why-are-americas-farmers-killing-themselves-in-record-numbers.

31 See *Seized: The 2008 Landgrab For Food and Financial Security*, GRAIN (Oct. 24, 2008) www.grain.org/article/entries/93-seized-the-2008-landgrab-for-food-and-financial-security.

representing 38 million hectares, 74% of which were for food and agriculture.³² These land deals often lack transparency, disregard land users' rights, and are concluded without the consent of or meaningful consultation with affected communities.³³ The impact of these deals and of industrial agriculture on a region's water supply is another major concern. According to the HLPF, "A growing number of regions are facing water scarcity due to excessive water use in agriculture. Groundwater is being depleted, polluted, or salinized in ways disproportionately affecting the poor and vulnerable."³⁴

The industrial food system has also stripped our diet of its nutritional content. Agribusiness companies have flooded markets with processed, calorie-dense, and nutrient-poor foods. Inadequate diets are a major contributing factor to the increase of non-communicable diseases occurring now in all regions of the world. Worldwide, the prevalence of obesity is on the rise, heightening the risk for type 2 diabetes, heart disease, and gastrointestinal cancers.³⁵ Industrial agriculture also creates the conditions for future pandemics in two respects. First, as a key driver of habitat destruction, commercial agriculture removes essential protective barriers and enhances human-wildlife interaction.³⁶ Second, intensive livestock production, "amplifies the risks of diseases emerging and spreading" through the "confinement of large numbers of animals in small spaces, narrowed genetic diversity, fast animal turnover, and habitat fragmentation through expansion of livestock production."³⁷

In sum, our industrial food system "generates food loss and waste, mistreats animals, emits greenhouse gases, pollutes ecosystems, displaces and abuses agricultural and fishery workers, and disrupts traditional farming communities. Put simply, the human rights of food system actors, including agricultural workers, smallholder farmers, and consumers, are often ignored or worse, violated."³⁸

Tracking Progress on SDG 2

As evidenced above, how we produce our food—and how we treat those who feed us—has profound implications for food security, climate change, agro-biodiversity, public health, and human rights. SDG 2 therefore clearly intersects with other Sustainable Development Goals, including but not limited to: SDG 1 (poverty eradication), SDG 3 (good health and well-being), SDG 5 (gender equality), SDG 6 (clean water and sanitation), SDG 7 (clean energy), SDG 8 (decent work), SDG 10 (reduced inequalities), SDG 12 (responsible consumption and production), SDG 13 (climate action), SDG 15 (life on land), and SDG 16 (peace, justice, and strong institutions). That the implementation of SDG 2 has implications for multiple SDGs is, of course, unsurprising given the interdependent and holistic nature of all the Goals and the fact that food security and food production implicate social, political,

32 GRAIN, *The Global Farm Land Grab in 2016: How Big, How Bad?*, RESILIENCE (July 13, 2016), www.resilience.org/stories/2016-07-13/the-global-farm-land-grab-in-2016-how-big-how-bad/.

33 Smita Narula, *The Global Land Rush: Markets, Rights, and the Politics of Food*, 49 STAN. J. INT'L L. 101, 107 (2013) [hereinafter "*The Global Land Rush*"].

34 2017 HLPF THEMATIC REVIEW, *supra* note 4, at 6.

35 U.N. Special Rapporteur on the right to food, *Critical Perspective on Food Systems*, *supra* note 5, at ¶ 31, 33.

36 IPES-Food, *COVID-19 and the Crisis in Food Systems: Symptoms, Causes, and Potential Solutions*, at 2 (April 2020) [hereinafter "*COVID-19 and the crisis in food systems*"].

37 *See Id.* at 2.

38 U.N. Special Rapporteur on the Right to Food, *Critical Perspective on Food Systems*, *supra* note 5, at ¶ 6.

economic, environmental, cultural, and human rights concerns. This section begins with an overview of the SDG 2 targets and then looks at how the global community is faring in achieving the Zero Hunger Goal, especially in light of the COVID-19 pandemic.

SDG Targets

To help actualize SDG 2, the UN has set multiple ambitious targets. The first four targets, which are to be achieved by 2030, are as follows:

Target 2.1: “end hunger and ensure access by all ... to safe, nutritious and sufficient food all year round.”

Target 2.2: “end all forms of malnutrition, including achieving, by 2025, internationally agreed targets on stunting and wasting in children under [five].”

Target 2.3: “double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.”

Target 2.4: “ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.”³⁹

A fifth target (2.5), which is indexed to the year 2020, is to “maintain the genetic diversity of seeds, cultivated plants, and ... animals[,]” and to “promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed.” Finally, an additional three targets call for: Increasing investments in agricultural and rural economies “in order to enhance agricultural productive capacity in developing countries” (Target 2.A); correcting and preventing “trade restrictions and distortions in world agricultural markets” (Target 2.B); and ensuring “the proper functioning of food commodity markets and their derivatives ... in order to limit extreme food price volatility” (Target 2.C).⁴⁰

Progress toward achieving each target is measured using specific indicators. Target 2.1 on ending hunger, for example, is assessed by looking at the prevalence of undernourishment and of moderate or severe food insecurity in the world today. Target 2.2 on ending all forms of malnutrition looks at the prevalence of stunting and malnutrition (both wasting and overweight) among children under 5 years of age.⁴¹ A look at several indicators reveals a lack of progress toward achieving SDG 2.

A Troubling Lack of Progress and the Impact of COVID-19

The annual “State of Food Security and Nutrition in the World” (SOFI) report is widely viewed as a critical measure of global progress toward the achievement of SDG 2 as it provides updated estimates on the prevalence of hunger and malnourishment in the world

³⁹ *Goal 2: Zero Hunger*, U.N. SUSTAINABLE DEVELOPMENT GOALS, www.un.org/sustainabledevelopment/hunger/ (last visited May 19, 2020).

⁴⁰ *Id.*

⁴¹ *Id.*

today.⁴² The most recent SOFI report, which was published in July 2020, continues to paint a worrying picture. Critically, the report found that “The number of people affected by hunger globally has been slowly on the rise since 2014 In 2019, close to 750 million—or nearly one in ten people in the world—were exposed to severe levels of food insecurity.”⁴³

The SOFI report additionally estimated that around 2 billion people experienced some level of food insecurity in 2019 in that they lack regular access to safe, nutritious, and sufficient food.⁴⁴ Moreover, the “gender gap in accessing food increased from 2018 to 2019,” with women experiencing a greater prevalence of moderate and severe food insecurity at the global level.⁴⁵ More than 1 in 5 children under five (144 million) were stunted in 2019—so malnourished that they will not reach their full physical and cognitive potential. Although progress has been made on this front, the world is not on track to achieve the 2025 target for stunting in children under five.⁴⁶ Meanwhile, the prevalence of overweight and obesity—another form of malnutrition—continues to rise in all regions.⁴⁷ With regard to the SDGs and the impact of COVID-19, the report concludes that

The world is not on track to achieve Zero Hunger by 2030. If recent trends continue, the number of people affected by hunger will surpass 840 million by 2030, or 9.8 per cent of the population. This is an alarming scenario, even without taking into account the potential impacts of the COVID-19 pandemic A preliminary assessment suggests the pandemic may add between 83 and 132 million people to the total number of undernourished in the world in 2020 depending on the economic growth scenario.⁴⁸

The COVID-19 pandemic is accelerating hunger and nutrition-related crises, hitting poor and vulnerable communities the hardest and dealing a profound blow to efforts to achieve the SDGs.⁴⁹ Worldwide lockdowns are further straining people’s ability to access food as is a widespread loss of income. UN agencies have warned that projected global economic downturns and disruptions to food supply chains could unleash widespread food-related crises.

In April 2020, the World Food Programme (WFP) estimated that without concerted action, 265 million people in low- and middle-income countries would suffer from acute hunger by the end of the year as a result of the COVID-19 pandemic⁵⁰—up from the 135 million people who already faced acute hunger, largely as a result of conflict, climate change,

42 See FAO, IFAD, UNICEF, WFP & WHO, *THE STATE OF FOOD SECURITY AND NUTRITION IN THE WORLD 2020. TRANSFORMING FOOD SYSTEMS FOR AFFORDABLE HEALTHY DIETS* (2020). [hereinafter “FAO SOFI REPORT”].

43 *Id.* at xvi.

44 *Id.*

45 *Id.*

46 *Id.*

47 *Id.*

48 *Id.*

49 A Resolution adopted by the U.N. General Assembly on April 2, 2020 recognized that, “the poorest and most vulnerable are the hardest hit by the pandemic and that the impact of the crisis will reverse hard-won development gains and hamper progress towards achieving the Sustainable Development Goals.” G.A. Res. A/RES/74/270, at 1 (Apr. 3, 2020).

50 Paul Anthem, *Risk of Hunger Pandemic as COVID-19 Set to almost Double Acute Hunger by End of 2020*, WORLD FOOD PROGRAM INSIGHT (Apr. 16, 2020), <https://insight.wfp.org/covid-19-will-almost-double-people-in-acute-hunger-by-end-of-2020-59df0c4a8072>.

and economic crises.⁵¹ Those living in conflict zones and refugee camps are particularly vulnerable as are countries that rely heavily on food imports should trade flows be affected.⁵² The FAO too has sounded the alarm on the pandemic's devastating impacts on efforts to reduce hunger and food insecurity, especially in net food-importing countries.⁵³

With regard to other SDG 2 targets, the FAO concluded pre-pandemic that it was “too early to call” whether we are on track to meeting Target 2.3 on doubling the agricultural productivity and incomes of small-scale food producers.⁵⁴ It did, however, note that the “productivity of small-scale producers is systematically lower on average than for larger food producers and, in most countries, the incomes of small-scale food producers are less than half those of larger food producers.”⁵⁵ In a more recent post-COVID-19 briefing paper the FAO drew attention to the fact that the “poorest and most vulnerable groups will experience the most negative effects of the current pandemic,” a demographic that “includes subsistence farmers as well as smallholder farmers’ enterprises”⁵⁶ who in the most immediate term are being affected by the disruption of markets and related services and by reduced labor mobility, which in turn means lower incomes for farming households.⁵⁷

Progress toward Target 2.5 on maintaining the genetic diversity of seeds, cultivated plants, and their related wild species—as indicated by the number of plant genetic resources secured in medium- or long-term conservation facilities—is decidedly “off track”⁵⁸ as is progress toward Target 2.C which seeks to limit extreme food price volatility.⁵⁹ Government spending on agriculture declined by 37% from 2001 to 2017,⁶⁰ contravening Target 2.A’s goal of increasing investments in agricultural and rural economies. A continuous downward trend in export subsidy outlays, however, has decreased distortions in world agricultural markets (Target 2.B).⁶¹

Target 2.4 on ensuring sustainable food production systems and implementing resilient agricultural practices is of particular relevance to this chapter, and to ensuring progress

51 Global Network against Food Crises, *2020 Global Report on Food Crises* (2020), www.wfp.org/publications/2020-global-report-food-crises.

52 See Paul Anthem, *Risk of Hunger Pandemic as COVID-19 Set to almost Double Acute Hunger by end of 2020*, *supra* note 50 (noting that “Sub-Saharan African countries such as Somalia and South Sudan imported more than 40 million tons of cereals from around the world in 2018 to plug gaps in local food production.” The WFP notes that countries with large public debt will also struggle to mobilize the resources needed to respond to the crisis).

53 See FAO, COVID-19 GLOBAL ECONOMIC RECESSION: AVOIDING HUNGER MUST BE AT THE CENTRE OF THE ECONOMIC STIMULUS 1 (2020) [hereinafter “FAO COVID-19 STIMULUS REPORT”]; A June 2020 report prepared by teams of independent experts at the Sustainable Development Solutions Network and the Bertelsmann Stiftung similarly concluded that COVID-19 will have “severe negative impacts on most SDGs” including SDG 2. J. SACHS, ET AL. SUSTAINABLE DEVELOPMENT REPORT 2020: THE SUSTAINABLE DEVELOPMENT GOALS AND COVID-19 vi, 4 (2020).

54 FAO, TRACKING PROGRESS ON FOOD AND AGRICULTURE-RELATED SDG INDICATORS 10 (2019) [hereinafter “FAO PROGRESS REPORT”].

55 *Id.* at 10.

56 FAO, SUSTAINABLE CROP PRODUCTION AND COVID-19 1 (2020).

57 *Id.* at 2.

58 FAO PROGRESS REPORT, *supra* note 54, at 12.

59 *Id.* at 18 (stating that during the 2016–2017 period, for example, the “high volatility of general food prices affected a quarter of countries in Africa and Western Asia, and a fifth of countries in Central and Southern Asia”).

60 U.N. Secretary-General, *Special Edition: Progress towards the Sustainable Development Goals*, ¶ 23, U.N. Doc. E/2019/68 (July 24, 2019).

61 *Id.*

on other SDG 2 targets. The 2017 HLPF review of SDG 2 concluded that better tools are “urgently needed” to monitor progress toward Target 2.4 on sustainable agriculture and resilient food systems.⁶² Under the custodianship of the FAO, progress has been made toward the development of SDG Indicator 2.4.1, which intends to measure the proportion of agricultural area under productive and sustainable agriculture. The main measurement instrument—farm surveys—are being piloted in several countries and are intended to capture the environmental, economic, and social dimensions of sustainable production.⁶³

A look at the list of themes and sub-indicators that inform indicator 2.4.1 suggests that there may now be a concerted attempt to shift away from simply focusing on net calorie production and yield per hectare toward inclusion of other important indicators such as soil health, water use, use of practices that support agro-biodiversity, wage rates for agricultural workers, and secure tenure rights to land.⁶⁴ This shift to more holistic forms of measurement that can capture the inequities of our food system is a welcome development. The prevailing political climate, however, continues to favor and support industrial agriculture, which exacerbates inequalities and undermines the achievement of multiple SDG 2 targets. Indeed, efforts to reduce hunger, support small-scale food producers, ensure sustainable food production systems, and maintain the genetic diversity of seeds, plants, and animals, will decidedly fail if States continue to invest in large-scale industrial agriculture.⁶⁵

Taken together, the reports cited above do not paint an optimistic picture. On the contrary, they suggest that if we proceed with business as usual, we will continue to witness a rise in hunger and food insecurity, as well as a profound loss of biodiversity and increasingly unsustainable agricultural practices. Lifting billions out of food insecurity, addressing the impending COVID-19 food crisis, and averting future pandemics requires nothing short of a fundamental paradigm shift in how we grow our food and how we treat those who feed us. Even prior to COVID-19, the UN acknowledged as much, asserting that

It is time to rethink how we grow, share and consume our food A profound change of the global food and agriculture system is needed if we are to nourish the 821 million people who are hungry today and the additional 2 billion people expected to be undernourished by 2050.⁶⁶

These calls for a transformative paradigm shift have only gotten louder in the context of the COVID-19 pandemic,⁶⁷ which is placing food and farmworkers in a particularly precarious position⁶⁸ and laying bare “the underlying risks, fragilities, and inequities in global food

62 2017 HLPF THEMATIC REVIEW, *supra* note 4, at 6.

63 FAO, SDG INDICATOR 2.4.1 PROPORTION OF AGRICULTURAL AREA UNDER PRODUCTIVE AND SUSTAINABLE AGRICULTURE 11 (2019).

64 *Id.* at 25–28, 33–36, 39–40.

65 U.N. Special Rapporteur on the right to food, *Interim Report of the Special Rapporteur on the Right to Food*, ¶ 38, U.N. Doc A/74/164 (July 15, 2019) [hereinafter “*Interim Report*”].

66 *Goal 2: Zero Hunger*, *supra* note 39.

67 *See, e.g.*, FAO, SUSTAINABLE CROP PRODUCTION AND COVID-19, *supra* note 56, at 4 (advocating for more local food distribution with shorter and more simplified food supply chains).

68 COVID-19 has laid bare the precarious situation of food- and farmworkers who in addition to working in poor conditions at very low pay are now facing major health risks as they work to keep food supplies flowing. *See, e.g.*, Leah Douglas, *Mapping COVID-19 Outbreaks in the Food System*, FOOD & ENV’T REPORTING NETWORK (Apr. 22, 2020), <https://thefern.org/2020/04/mapping-covid-19-in-meat-and>

systems.”⁶⁹ But despite reaching these conclusions, States continue to advance large-scale industrial agriculture.⁷⁰ Moreover, the mainstream prescriptions for how to achieve SDG 2 remain rooted in a productivist approach⁷¹ that fails to center the human rights of those made most vulnerable by our industrial food system.

The Fallacies of the Productivist Paradigm

The dominant paradigm used to organize, measure, and evaluate our food system, is a market-based and profit-driven productivist paradigm that reduces the host of issues we are facing to a production problem. Put simply, the productivist paradigm focuses on the supply of food commodities and the efficiency of food production. The narrative that we must increase food production by 50% by 2050 in order to meet the needs of a growing population⁷² is a case in point. Increasing food production is offered as a unidimensional solution to a problem that is in fact complex, multidimensional, and structural. A narrow and short-sighted focus on increasing the global production of food commodities conveniently sidesteps key questions related to poverty, access to food and food-producing resources, and social equity and power relations in the food system.⁷³ In other words, it is not enough to simply ask how much food we can produce. We must ask *how* and *for whom* and with what *nutritional content*.

Although the SDGs place great value on the need for inclusion and sustainability in achieving the 17 Goals, SDG 2 does not challenge embedded assumptions that continue to correlate increased food production with a decrease in food insecurity, when in fact food insecurity is not a production problem but a distribution problem tied to impoverishment and the denial of access to food-producing resources such as land, water, and seeds. Indeed, the number of hungry people in the world has grown since 2014, despite the fact that we have increased global food production.⁷⁴ As articulated by Food First Information and Action Network (FIAN) International,

Mainstream monitoring of food security and nutrition fails to address the critical questions around the social control of the food system, and in particular natural resources,

-food-processing-plants/ (noting that as of May 26, 2020, at least “17,893 meatpacking workers, 1,189 food processing workers, and 703 farmworkers” had tested positive for COVID-19 in the United States).

69 See IPES-Food, *COVID-19 and the Crisis in Food Systems*, *supra* note 36, at 1.

70 U.N. Special Rapporteur on the right to food, *Critical Perspective on Food Systems*, *supra* note 5, at ¶ 41 (noting that “States continue to invest in production practices and industrial agriculture that have detrimental environmental impact” and citing the expansion of the palm oil industry as an example).

71 See Goal 2: *End Hunger, Achieve Food Security and Improved Nutrition and Promote Sustainable Agriculture*, *supra* note 3 (noting that “increased investments through international cooperation” are required to “bolster the productive capacity of agriculture in developing countries”).

72 See *Food Production Must Double by 2050 to Meet Demand from World’s Growing Population, Innovative Strategies Needed to Combat Hunger, Experts Tell Second Committee*, U.N. MEETINGS COVERAGE & PRESS RELEASES (Oct. 9, 2009), www.un.org/press/en/2009/gaef3242.doc.htm; see also FAO, SUSTAINABLE CROP PRODUCTION AND COVID-19, *supra* note 56, at 1 (noting this need for food production increases).

73 See IPES-Food, *From Uniformity to Diversity*, *supra* note 8, at 8.

74 FAO, *THE FUTURE OF FOOD AND AGRICULTURE: TRENDS AND CHALLENGES 2* (2018) (noting that “[g]ains in productivity and technological advances have contributed to more efficient resource use and improved food safety. But major concerns persist. Some 795 million people still suffer from hunger, and more than two billion from micronutrient deficiencies or forms of overnourishment”).

and proposes solutions based on the current industrial model of production that feeds a global, and inherently unequal economy.⁷⁵

Prescriptions to “invest in agriculture” will not work until and unless we pursue a rights-based approach that centers the agency and authority of peasants and other rural communities in decision-making processes, and prescriptively puts a thumb on the scale in favor of shorter supply chains, of more equitable land distribution, of food sovereignty and sustainable labor-intensive food systems, and of using agro-ecological methods and traditional knowledge that helps protect agro-biodiversity. As noted by the UN Special Rapporteur on the right to food,

The right to food extends beyond productivism, the paradigm in which Goal 2 (zero hunger) is rooted. Realizing this right requires tackling the historical and structural inequalities that undermine availability, adequacy, accessibility and sustainability of food systems ... States, as the primary duty bearers, must create environments conducive to the enjoyment of the right to food.⁷⁶

The Right to Food and Rights-Respecting Food Systems

Ensuring Food as a Human Right

The right to food has been part of the international human rights legal framework since its inception. The right first found expression in Article 25 of the Universal Declaration of Human Rights (UDHR), which states that “[e]veryone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food.”⁷⁷ The right was subsequently codified by Article 11 of the International Covenant on Economic, Social and Cultural Rights (ICESCR), which encompasses two separate but related norms: The right to adequate food (Article 11(1)) and the right to be free from hunger (Article 11(2)).⁷⁸

Under international human rights law, States-parties to the ICESCR must progressively ensure that food is *accessible*, both physically and economically; that food is *adequate*, meaning safe, nutritious, and culturally appropriate; that food is *available* to purchase or that people have the means to produce it themselves, including through secure access to land and other productive resources; and that food is produced *sustainably*, preserving the right to food for future generations.⁷⁹

As part of their obligations, States must take steps to *respect, protect, and fulfill* the right to food. Respecting the right to food means refraining from enacting laws, policies, or programs that would interfere with people’s ability to exercise their right to food. Protecting the right to food means ensuring that third party actors such as corporations do not interfere with people’s ability to exercise their right. The duty to fulfill the right to food is a positive obligation that requires states to pro-actively engage in, *inter alia*, “activities intended to strengthen people’s

75 Emily Mattheisen, FIAN International, *SDG 2: Approaching SDG 2 through the Right to Food and Nutrition*, in SPOTLIGHT ON SUSTAINABLE DEVELOPMENT 2018, 109, 109. (Civil Society Reflection Group on the 2030 Agenda for Sustainable Development, 2018.)

76 U.N. Special Rapporteur on the right to food, *Interim Report*, *supra* note 65, at ¶ 3.

77 Universal Declaration of Human Rights, G.A. Res. 217 (III) A, art. 25, U.N. Doc. A/RES/217 (III) (Dec. 10, 1948).

78 G.A. Res. 2200A (XXI), art. 11, U.N. Doc. A/6316, at 4 (Dec. 16, 1966).

79 ECOSOC, U.N. CHR, General Comment No. 12, The Right to Adequate Food, U.N. Doc. E/C.12/1999/5 ¶¶ 7, 12, 13 (1999).

access to and utilization of resources and means to ensure their livelihood.”⁸⁰ In situations where people are unable to provide food for themselves, the State must implement effective social programs that directly provide adequate food to those in need.⁸¹

SDG 2 does not explicitly recognize the human right to adequate food, but its goals can be seen as aligning with the obligations of States to ensure this right. The SDGs also promise to “leave no one behind”⁸²—a nod to the human rights principles of equality and non-discrimination which in turn are highly relevant to ending hunger, the root cause of which is the inequitable distribution of food and productive resources.⁸³ But SDG 2 does not pursue a rights-based approach—either to ensuring food security or to transitioning to sustainable food systems. As noted above, the Zero Hunger Goal is rooted in a productivist paradigm that fails to hold either State or corporate actors accountable.

If we are to achieve the goal of ending hunger, achieving food security, improving nutrition, and promoting sustainable agriculture, then States’ actions must be informed by their human rights obligations. In short, States must ensure food as a human right and they must invest in a radical transformation of our food system to move away from industrial practices toward diversified agroecological systems.⁸⁴

Although the ICESCR has been widely ratified, it does not enjoy universal ratification.⁸⁵ There is also a significant gap between recognizing the right and ensuring its implementation.⁸⁶ A rights-based approach to the SDGs recognizes that the fulfillment of human rights are a precondition for sustainable development.⁸⁷ A rights-based approach also reminds States to focus on the most vulnerable and marginalized sections of the population,⁸⁸ and ensure that the policy-making process integrates the human rights principles of participation, accountability, non-discrimination, transparency, and the rule of law.⁸⁹

In addition to fulfilling substantive rights such as the right to adequate food in a non-discriminatory manner,⁹⁰ States must also fulfill multiple procedural rights as expressed in both international human rights law and international environmental law. Namely, they must ensure that individuals have the right to receive information about policies and projects that affect their rights; the right to participate in decision-making related to these policies; and the right to an effective remedy when their rights are violated.⁹¹ In short, a rights-based

80 *Id.* at ¶ 15.

81 *Id.*

82 *The Sustainable Development Goals Report: Leaving No One Behind*, U.N. DEP’T OF ECON. & SOC. AFF. (2016), <https://unstats.un.org/sdgs/report/2016/leaving-no-one-behind>.

83 U.N. Special Rapporteur on the right to food, *Interim Report*, *supra* note 65, at ¶ 2.

84 *See, e.g., id.* at ¶ 37 (calling on States to “restructure policies that reinforce inequality, such as those that favour large-scale land acquisitions over small farm development”).

85 The United States, for example, where 1 in 9 households are food insecure and whose trade and agricultural policies have outsized impacts on rural communities worldwide, has signed but not ratified ICESCR. ALISHA COLEMAN-JENSEN, ET AL., *HOUSEHOLD FOOD SECURITY IN THE UNITED STATES IN 2018*, 6 (2019).

86 U.N. Special Rapporteur on the right to food, *Interim Report*, *supra* note 65, at ¶ 59.

87 *See* Yesudas Choondassery, *Rights-Based Approach: The Hub of Sustainable Development*, 8(2) DISCOURSE & COMM. FOR SUSTAINABLE EDUC., 17 (2017).

88 U.N. Special Rapporteur on the right to food, *Critical Perspective on Food Systems*, *supra* note 5, at ¶ 65.

89 *See* United Nations Sustainable Dev. Grp., Human Rights Working Grp., *The human rights-based approach to development cooperation: towards a common understanding among United Nations agencies*, (2003); U.N. Special Rapporteur on the right to food, *Interim Report*, *supra* note 65, at ¶ 50.

90 *Id.*

91 *See* Sumudu Atapattu and Andrea Schapper, *Procedural Rights*, in *HUMAN RIGHTS AND THE ENVIRONMENT: KEY ISSUES*, 129 (Routledge, 2019) (summarizing these procedural rights in the context of explaining States’ obligations to uphold environmental rights). *See also Sustainable Development Goal 16*, U.N.

approach and the human rights instruments that underpin such an approach, provide a set of tools to hold governments accountable. They also provide a framework for transitioning to a rights-respecting food system.

Building Rights-Respecting Food Systems

In addition to the ICESCR and other human rights treaties that codify the right to food, several soft law instruments can help ensure food as a human right and support the transition to sustainable rights-respecting food systems. Most notable among these instruments are the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (Tenure Guidelines) and the UN Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP).

The Tenure Guidelines, which were adopted by the 125 member countries of the Committee on World Food Security in 2012,⁹³ represent a landmark international agreement that provides practical guidance to States on how to “improve the governance of tenure of land, fisheries and forests based on human rights, with an emphasis on vulnerable and marginalized people.”⁹⁴ The Guidelines are of particular significance for Target 2.3 and more generally for small-scale food producers who have been dispossessed of land or denied access to or control over food-producing resources. The Tenure Guidelines also represent a clear repudiation of the philosophy that land distribution should be purely market-driven or that large-scale industrialized agricultural production can ensure the developmental and food security needs of the planet in a sustainable and equitable way.⁹⁵

UNDROP is the most recent addition to the human rights toolkit. It was adopted by the UN General Assembly in December 2018 following six years of intensive inter-governmental negotiations and extensive inputs from those whose rights are directly at stake. UNDROP makes visible the widespread and often egregious violations of peasants’ rights.⁹⁶ It also makes visible the profound role that rural women play in the economic survival of

SUSTAINABLE DEV. GOALS (expressly stating that access to justice must be achieved in order to provide “security, rights and opportunities”).

92 See, e.g., Convention on the Elimination of All Forms of Discrimination against Women [CEDAW], U.N. GAOR, 34th Sess., G.A. Res. 34/180, Supp. No. 46 at 193, U.N. Doc. A/34/46 (Dec. 18, 1979), art. 12(2) (requiring States Parties to ensure adequate nutrition for women during pregnancy and lactation) and Convention on the Rights of the Child [CRC], G.A. Res. 44/25, annex, U.N. GAOR, 44th Sess., Supp. 49 at 167, U.N. Doc. A/44/49 (Nov. 20, 1989), arts. 24(2)(c), 27 (requiring States Parties to take appropriate measures to combat disease and malnutrition through, *inter alia*, the provision of adequate nutritious foods and clean drinking water).

93 See generally FAO, VOLUNTARY GUIDELINES ON THE RESPONSIBLE GOVERNANCE OF TENURE OF LAND, FISHERIES AND FORESTS IN THE CONTEXT OF NATIONAL FOOD SECURITY (2012).

94 Emily Mattheisen, FIAN International, *SDG 2: Approaching SDG 2 through the Right to Food and Nutrition*, *supra* note 75, at 110.

95 Narula, *The Global Land Rush*, *supra* note 33, at 169.

96 See Preamble of UNDROP, which notes the disproportionate impacts of poverty, hunger, and malnutrition faced by peasants, and further acknowledges the prevalence of forcible evictions and displacement, gender discrimination and violence, hazardous and exploitative work environments, violence and intimidation, and lack of meaningful access to institutional and procedural protections as the conditions under which a disproportionate number of peasants work and live. Human Rights Council Res. 39/12, U.N. Doc. A/HRC/RES/39/12, at 3 (Oct. 8, 2018).

their families and in rural and national economies, as well as the financially and legally precarious (and often violent) circumstances in which they carry out this work.⁹⁷

UNDROP, which aligns with several SDG 2 targets, reaffirms that “peasants and other people working in rural areas have the right to the full enjoyment of all human rights and fundamental freedoms,”⁹⁸ including the right to adequate food.⁹⁹ The Declaration also fills key normative gaps in rights protections under international law. Notably, the Declaration asserts peasants’ rights to land, seeds, and food sovereignty.¹⁰⁰ UNDROP also affirms peasants’ rights to maintain biological diversity¹⁰¹ which is highly relevant to SDG Target 2.5, as well as their right to contribute to the design and implementation of climate change adaptation and mitigation policies, including through the use of traditional practices and knowledge.¹⁰²

Ensuring peasants’ rights can help States reduce hunger and malnutrition, in line with SDG Targets 2.1 and 2.2, while increasing incomes for small-scale producers and securing access to food-producing resources for women, Indigenous Peoples, family farmers, pastoralists, and fisherfolk (Target 2.3).¹⁰³ Importantly, UNDROP upholds peasant farming as a sustainable and viable alternative to industrial agriculture thereby advancing Target 2.4.

Transnational peasant movements—led by *La Via Campesina*—have been advocating for a peasants’ rights declaration since at least 2001 on the premise that small-scale farmers, pastoralists, fisherfolk, and farmworkers are a vulnerable group increasingly subject to forced displacements from their lands, denied access to water and seeds, impoverished by trade and agricultural policies, and attacked and criminalized by State actors acting in collusion with the private sector.¹⁰⁴ *La Via Campesina* is a transnational grassroots peasants’ movement that promotes and defends food sovereignty and small-scale sustainable agriculture “as a way to promote social justice and dignity.”¹⁰⁵ Most significantly, they have framed their demands

97 See Preamble of UNDROP, “Stressing that peasant women and other rural women play a significant role in the economic survival of their families and in contributing to the rural and national economy, including through their work in the non-monetized sectors of the economy, but are often denied tenure and ownership of land, equal access to land, productive resources, financial services, information, employment or social protection, and are often victims of violence and discrimination in a variety of forms and manifestations.” Human Rights Council Res. 39/12, U.N. Doc. A/HRC/RES/39/12, at 3 (Oct. 8, 2018).

98 *Id.* at art. 3.

99 *Id.* at art. 15.

100 *Id.* at art. 15(4)(5), 17, 19 (Oct. 8, 2018).

101 *Id.* at art. 19, 20.

102 *Id.* at art. 18(3).

103 The Committee on the Elimination of All Forms of Discrimination against Women’s general recommendation No. 34 (2016) on the rights of rural women provides additional guidance on resource access for rural women. Comm. On the Elimination of Discrimination against Women, General Recommendation No. 34 (2016), U.N. Doc. CEDAW/C/GC/34 (Mar. 7, 2016). Likewise, the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) calls on States to ensure indigenous peoples’ right to free, prior, and informed consent on development projects as well as properly valuing Indigenous Peoples’ knowledge and practices through closing education gaps and expanding work opportunities. U.N. Special Rapporteur on the right to food, *Interim Report*, *supra* note 65, at ¶¶ 40, 42.

104 LA VIA CAMPESINA, DECLARATION ON THE RIGHTS OF PEASANTS—WOMEN AND MEN (2009). See also Marc Edelman, *Linking the Rights of Peasants to the Right to Food in the United Nations*, 10(2) L., CULTURE & THE HUMANITIES, 196 (2014) (analyzing the efforts of *La Via Campesina* to have the United Nations adopt an instrument on peasants’ rights).

105 *What Is La Via Campesina? The International Peasant’s Voice*, VIA CAMPESINA. <https://viacampesina.org/en/international-peasants-voice/> (ostensibly the largest social movement in the world, *La Via*

Peasant Agriculture Feeds the World and Protects Biodiversity

As a starting point, it is important to make clear that peasant agriculture, not industrial farms, feeds the world and protects biodiversity. Although trade and agricultural policies heavily favor large industrial farms, peasants are the main or sole food providers for more than 70% of the world's population. Moreover, they produce this food using less than 25% of the world's agricultural land (and even less water and fossil fuels), while inflicting far less damage to soils and forests.¹¹⁰ By contrast, the industrial food chain—which as noted above is a significant source of greenhouse gas emissions and a major cause of topsoil degradation and deforestation—uses at least 75% of the world's agricultural resources to produce food for less than 30% of the world's population.¹¹¹

The so-called “peasant food web” also nurtures 9 to 100 times the biodiversity used by the industrial food chain, across plants, livestock, fish, and forests.¹¹² The FAO reports that “[m]uch of the world's BFA is managed in, or associated with, smallholder cropping or mixed systems, pastoralist systems or small-scale forest, aquaculture or fishing systems.”¹¹³ As stated by the ETC Group, “Peasants have the knowledge, innovative energy and networks needed to respond to climate change; they have the operational scope and scale; and they are closest to the hungry and malnourished.”¹¹⁴ While these statistics provide reason for hope, the “peasant food web” has for decades been under sustained attack—displaced by destructive industries, undermined by trade policies, and denied necessary infrastructural and State support. As such, peasant agriculture is in desperate need of protection and fortification. As outlined below, the potential benefits of the agroecological strategies employed by peasant agriculture also merit far greater study and support.

The Benefits and Potential of Diversified Agroecological Food Systems

Agroecology is a science, a set of principles and practices, and a socio-political movement that stands in sharp contrast to industrial agriculture.¹¹⁵ As a practice, agroecology is characterized by “diversifying farms and farming landscapes, replacing chemical inputs with organic materials and processes, optimizing biodiversity, and stimulating interactions between different species, as part of holistic strategies to build long-term soil fertility, healthy agroecosystems and secure and just livelihoods.”¹¹⁶ Agroecology also promotes “fair, short distribution networks rather than linear distribution chains and builds a transparent network of relationships ... between producers and consumers.”¹¹⁷ As a political framework, agroecology highlights the connections between food sovereignty, locally adapted agricultural

110 ETC GROUP, WHO WILL FEED US?, *supra* note 14, at 17; see also *Putting Family Farmers First to Eradicate Hunger*, FAO (Oct. 16, 2014), www.fao.org/news/story/en/item/260535/icode/ (stating that “family farms produce about 80 percent of the world's food”).

111 ETC GROUP, WHO WILL FEED US?, *supra* note 14, at 17.

112 *Id.* at 6.

113 FAO BIODIVERSITY REPORT, *supra* note 15, at 380.

114 ETC GROUP, WHO WILL FEED US?, *supra* note 14, at 6.

115 See COLIN ANDERSON ET AL., CENTRE FOR AGROECOLOGY, WATER & RESILIENCE, BUILDING, DEFENDING AND STRENGTHENING AGROECOLOGY: A GLOBAL STRUGGLE FOR FOOD SOVEREIGNTY, *supra* note 13.

116 Agroecology, IPES-FOOD, www.ipes-food.org/topics/Agroecology (last visited May 28, 2020).

117 CIDSE, *Economic Dimension of Agroecology, The Principles of Agroecology—Towards Just, Resilient and Sustainable Food Systems* (Mar. 30, 2018), <https://agroecologyprinciple.atavist.com/the-principles-of-agroecology-#chapter-3408922>.

systems, and the right to food.¹¹⁸ As asserted in the *Declaration of the International Forum for Agroecology, 2015*—a social movement-led initiative—agroecology is

[A] key form of resistance to an economic system that puts profit before life Our diverse forms of smallholder food production based on Agroecology generate local knowledge, promote social justice, nurture identity and culture, and strengthen the economic viability of rural areas. As smallholders, we defend our dignity when we choose to produce in an agroecological way Families, communities, collectives, organizations and movements are the fertile soil in which agroecology flourishes.¹¹⁹

In addition to promoting social justice and nurturing identity and culture, there is growing evidence to suggest that diversified agroecological systems “keep carbon in the ground, support biodiversity, rebuild soil fertility and sustain yields over time, providing a basis for secure farm livelihoods.”¹²⁰ The ETC Group asserts that,

[w]ith the right policies, land and rights, peasant-led agroecological strategies could double or even triple rural employment, substantially reduce the pressure for urban migration, significantly improve nutritional quality and availability, and eliminate hunger while slashing agriculture’s greenhouse gas (GHG) emissions by more than 90%.¹²¹

Notably, the Intergovernmental Panel on Climate Change (IPCC) 2019 Special Report on Climate Change and Land states with high confidence that agricultural practices that include indigenous and local knowledge can help overcome the combined challenges of climate change, food insecurity, and biodiversity conservation.¹²²

Diversified agroecological food systems can also improve resilience to global crises such as the COVID-19 pandemic.¹²³ As noted above, the vulnerability of the industrial food system stems in part from its long supply chains and its dependence on external inputs.¹²⁴ The agroecological principles of replacing external chemical inputs with organic materials and processes, and of creating short distribution networks that bring producers and consumers closer together, can help turn small-scale farms into vital assets for providing food while protecting the environment and promoting food sovereignty.

118 U.N. Special Rapporteur on the right to food, *Interim report*, *supra* note 65, at ¶ 38.

119 La Via Campesina, *Declaration of the International Forum for Agroecology*, (Mar. 4, 2015), <https://viacampesina.org/en/declaration-of-the-international-forum-for-agroecology/>.

120 IPES-Food, *From Uniformity to Diversity*, *supra* note 8, at 2.

121 ETC GROUP, *WHO WILL FEED US?*, *supra* note 14, at 48.

122 Intergovernmental Panel on Climate Change [IPCC], Summary for Policymakers, *Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems*, Finding C.4.3 at 31 (2019).

123 See Brooke Porter, *Pandemic Challenges the Global Food System and Brings Us Closer to Agroecology*, *OVER GROW THE SYSTEM* (Apr. 17, 2020), <https://webcache.googleusercontent.com/search?q=cache:2fwMqRleGpgJ:https://overgrowthsystem.org/pandemic-challenges-global-food-system-brings-us-closer-agroecology/+&cd=1&chl=en&ct=clnk&gl=us>.

124 Food Sovereignty, Friends of the Earth Int’l et al., *Statement to the Extraordinary Meeting of G20 Agriculture Ministers*, (April 21, 2020) https://fian.org/files/files/G20_agricultural_workers_and_peasant_farmers_COVID-19.pdf.

Case studies from around the globe suggest that agroecological transitions are succeeding, at least at the local level. In 2018, the International Panel of Experts on Sustainable Food Systems (IPES-Food) published the results of its investigation of 7 case studies that showed that “in spite of the many barriers to change, people around the world have been able to fundamentally rethink and redesign food systems around agroecological principles.”¹²⁵ These case studies—which looked at localized initiatives in the United States, Nicaragua, Mexico, Tanzania, China, France, Spain, and Cuba—revealed that “it is possible for communities, regions, and whole countries to fundamentally redesign their food and farming systems. The change process can be initiated from a variety of entry points, and does not always begin on the farm with input substitution.”¹²⁶

With changes in “production practices, in knowledge generation and dissemination, in social and economic relations, and in institutional frameworks,” the report concludes, “the multiple ‘lock-ins’ of industrial food systems can be overcome and new sustainable food systems can start to emerge.”¹²⁷ Moreover, IPES-Food adds, “diversified agroecological systems can also pave the way for diverse diets and improved health.”¹²⁸ An in-depth study undertaken by the Food Sovereignty Alliance, India and the Catholic Health Association of India in the southern Indian states of Telangana and Andhra Pradesh provides a case in point. The study analyzed the traditional food systems of marginal farmers and agropastoralists from several marginalized communities and found that traditional food systems that are embedded in local ecological and cultural contexts were sufficiently rich and diverse in nutrients so as to counter malnutrition, including deficiencies of micronutrients, such as Vitamin A.¹²⁹

On the question of whether agroecological systems can improve yields, IPES-Food concludes that indeed they can and that they perform “particularly strongly under environmental stress, and deliver production increases in the places where additional food is desperately needed.”¹³⁰ The next section looks at Tanzania’s Chololo Ecovillage project—a case study developed by IPES-Food and the Alliance for Food Sovereignty in Africa—as a case in point.¹³¹

The Chololo Ecovillage Project

Situated in the semi-arid drylands of Central Tanzania, the 5,500-person village of Chololo faces food insecurity, recurrent drought, and deep vulnerability to climate change.¹³² Led by Tanzania’s Institute for Rural Development Planning, the Chololo Ecovillage project was undertaken by a partnership of six organizations with the aim of adopting a holistic approach

¹²⁵ IPES-Food, *Breaking Away from Industrial Food and Farming Systems: Seven Case Studies of Agroecological Transition 2* (October 2018) [hereinafter “*Breaking Away from Industrial Food and Farming Systems*”].

¹²⁶ *Id.*

¹²⁷ *Id.*

¹²⁸ IPES-Food, *From Uniformity to Diversity*, *supra* note 8, at 2.

¹²⁹ See CHAI, *Exploring the Potential of Diversified Traditional Food Systems to Contribute to a Healthy Diet*, *supra* note 6.

¹³⁰ See IPES-Food, *From Uniformity to Diversity*, *supra* note 8, at 2.

¹³¹ IPES-Food, *Breaking Away from Industrial Food and Farming Systems*, *supra* note 125, at 47.

¹³² *Id.* at 39.

to address the multiple challenges that the community faced.¹³³ The first phase of the project, which spanned from 2011 to 2014, worked with the community to identify, introduce, and evaluate a range of agroecological innovations spanning agricultural, livestock, water, energy, and forestry sectors.¹³⁴

The project began with a participatory process to assess the village's specific vulnerabilities, revealing the following concerns:

- Increasing drought, which makes the rain less frequent and less predictable, thereby affecting agricultural productivity and household incomes;
- Deforestation, which leads to a loss of vegetation and animal pasture and a shortage of fuel wood and timber, which in turn increases women's workload;
- Flooding and strong winds that lead to soil erosion, crop losses, and land degradation;
- Human diseases, livestock diseases, and crop pests; and
- Inadequate ground water recharge, leading to a shortage of water for domestic use, livestock, and crop production.¹³⁵

These problems were exacerbated by the traditional dependency on rain-fed agriculture, a limited awareness of climate change issues, and the use of "slash and burn" agriculture, among other factors.¹³⁶ Food shortages that resulted from the above were also leading villagers to migrate to urban areas or travel to other districts to seek work as agricultural laborers.¹³⁷

Having identified the villagers' main concerns, the project then built on local knowledge and traditional practices to encourage villagers to adopt a series of agroecological "technologies" which were "aimed at making the most of the limited rainfall, improving soil fertility, reducing farmers' workload, and improving the quality of local seeds."¹³⁸ These technologies included

the use of ox-drawn tillage implements which reduced farmers' workloads and improved rainwater harvesting; water conservation measures such as contour ridges, *fanya juu* bunds, grass strips and gully healing to capture rainwater and prevent soil erosion; the use of farmyard manure to improve soil fertility; the use of improved early-maturing, high-yielding seed varieties of maize, sorghum, millet, cowpeas and groundnuts; and the adoption of optimal planting, spacing, thinning and weeding practices as well as intercropping and crop rotation in order to control weeds and improve yields.¹³⁹

The beneficial impacts of Chololo's agroecological transition were significant. The agricultural innovations successfully increased crop yields in the range of 37.5 to 70% for crops

133 Institute of Rural Development Planning, *Chololo Ecovillage: A Model of Good Practice in Climate Change Adaptation and Mitigation 4* (2014) [hereinafter "*Chololo Ecovillage*"]. The Chololo Ecovillage is part of the EU's Global Climate Change Alliance. *Id.*

134 *Id.* at 5.

135 *Id.*

136 IPES-Food, *Breaking Away from Industrial Food and Farming Systems*, *supra* note 124, at 39.

137 *Id.*

138 *Id.* at 41.

139 *Id.*

such as maize, sorghum, pearl millet, sunflower, and groundnuts.¹⁴⁰ Increased yields in turn meant more household food security and greater income from the sales of cash crops.¹⁴¹ The following impacts were also noted by the end of the project's first phase (2011–2014):

- Fifty-four percent of farmers and livestock keepers were using climate adaptation innovations (an increase from 19% during year one of the project);
- Ninety-seven percent of the community had a good understanding of climate change;
- Sixty-two percent of households were eating three meals per day (an increase from 29 percent);
- Households experienced an average income increase of 18%; and
- The average period of food shortage decreased 62% (from 7.3 to 2.8 months).¹⁴²

The project also engendered changes in social and economic relations. The need to improve livelihoods was central to the project, as were approaches that allowed women to take a leading role and become income providers.¹⁴³ Women's growing earning capacities, and their reduced financial dependency on their husbands, were a documented impact.¹⁴⁴ Significantly, the project also led to more women holding leadership positions in village institutions and committees.¹⁴⁵

These beneficial outcomes of the project have in large part been attributed to its multi-sectoral approach¹⁴⁶ and to its "participatory approach to knowledge generation and dissemination," which included a series of community workshops to "explore the village's background and history, livelihood resources and hazards, climate vulnerability and capacity."¹⁴⁷ Farmer-to-farmer outreach, farmers' field days, and community assessment meetings were used to disseminate knowledge, evaluate and reflect on the technologies used, and ensure an uptake of good practices.¹⁴⁸ The holistic design of the project was also intentionally aligned with Tanzania's climate adaptation policy to help ensure the greatest impact.¹⁴⁹

In March 2015, a 54-month long second phase of the project was launched. The so-called Eco-Act (Ecovillage Adaptation to Climate Change in Central Tanzania) project, or Chololo 2.0, aims to build on Chololo Ecovillage's success by scaling out its practices to three more villages and increasing their capacity to adapt to climate change while reducing

¹⁴⁰ *Id.* at 40, 42. The data collected compared the yields between transitioning farmers and a control group during a normal rain year. The research adds that, "Participants that had a high technology uptake achieved significantly higher yields (ranging from 100% to 157% increase over the control group) in a drought year." *Id.* at 40.

¹⁴¹ Institute of Rural Development Planning, *Chololo Ecovillage*, *supra* note 133, at 10.

¹⁴² IPES-Food, *Breaking Away from Industrial Food and Farming Systems*, *supra* note 124, at 40.

¹⁴³ *Id.* at 45. Chicken rearing and dairy cattle and goats were identified as the most beneficial sub-sectors for women. *Id.* at 46. The chicken and goat keeping improvements introduced by the project led to on average a 64% increase in women's incomes. *Id.* at footnote 39.

¹⁴⁴ *Id.* at 46.

¹⁴⁵ *Id.* (noting that, "By 2014, 50% of village leadership positions were held by women, compared to 40% in 2012").

¹⁴⁶ See Institute of Rural Development Planning, *Chololo Ecovillage*, *supra* note 133, at 31 (noting while discussing the reasons for the project's success that "Working across agriculture, livestock, water, energy and forestry, the project touches every key aspect of people's lives").

¹⁴⁷ IPES-Food, *Breaking Away from Industrial Food and Farming Systems*, *supra* note 124, at 43.

¹⁴⁸ *Id.* at 39–40.

¹⁴⁹ *Id.* at 40.

poverty.¹⁵⁰ Chololo 2.0 also aims to build the capacity of local authorities to implement climate change strategies and create a knowledge management system to share the project's learnings nationally.¹⁵¹

Case studies such as the Chololo Ecovillage project suggest that a shift toward diversified agroecological systems—when accompanied by processes that center the agency, knowledge, and priorities of community members—can yield benefits on multiple fronts and put food systems on a more sustainable and just footing. Moreover, and as IPES-Food notes,

[w]hile industrial systems often improve one outcome (e.g. productivity) at the expense of others (e.g. environmental degradation, nutrient availability), diversified agroecological systems are showing major potential to reconcile the various priorities. The evidence is particularly impressive given how little funding and support has been dedicated to the agroecological alternative to date.¹⁵²

Conclusion

The achievement of SDG 2 is critical to the health of our communities and our planet. Regrettably, we are falling far short of achieving this paramount Goal, as revealed by the lack of progress across multiple targets and indicators. As this chapter has shown, how we produce our food and how we treat those who feed us has profound implications for food security, climate change, agro-biodiversity, public health, and human rights. For SDG 2 and related Goals to succeed, States must ensure food as a human right and they must invest in a radical transformation of our food system to move away from destructive industrial practices and toward diversified agroecological food systems.

The goals of ensuring food security, sustainable production methods, and farmer livelihoods may not always be easy to reconcile, but these interdependent goals can be achieved by a deep structural shift to food systems that are sustainable, resilient, nourishing, and just. The creation of these food systems will in large measure be context-specific and actualized at the local or regional level.¹⁵³ They will also require supporting public policies and investments. The human rights instruments cited in this chapter provide the building blocks for this transition and their implementation must be central to any SDG 2 strategy.

150 *Breaking News: Chololo 2.0 Gets the Go Ahead*, CHOLOLO ECOVILLAGE (Mar. 26, 2015), <https://chololocovillage.wordpress.com/2015/03/26/breaking-news-chololo-2-0-gets-the-go-ahead/>; IPES-Food, *Breaking Away from Industrial Food and Farming Systems*, *supra* note 125, at 39.

151 IPES-Food, *Breaking Away from Industrial Food and Farming Systems*, *supra* note 124, at 39; Biovision, *Climate-Resilient "Ecovillage" in Chololo, Tanzania 2* (2018).

152 See IPES-Food, *From Uniformity to Diversity*, *supra* note 8, at 11. See also Biovision, IPES-Food, Institute of Development Studies, *Money Flows: What Is Holding Back Investment in Agroecological Research for Africa?* 4 (April 2020) (noting that while "[a]pproximately 30% of farms around the world are estimated to have redesigned their production systems around agroecological principles," funding for agroecology-focused research in Africa remains marginal).

153 See, e.g., Jennifer Blesh et al., *Development Pathways Toward "Zero Hunger,"* 118 *World Development* J. 1 (2019) (arguing that "the pathway to achieving Zero Hunger should center on place-based, adaptive, participatory solutions that simultaneously attend to local institutional capacities, agroecosystem diversification and ecological management, and the quality of local diets").

With great urgency, States must also take immediate steps to protect those who are most vulnerable to food insecurity, including as a result of the COVID-19 pandemic. As the World Food Programme notes, the pandemic is pushing millions of people to the brink of starvation.¹⁵⁴ In line with their human rights obligations, States must “urgently establish or strengthen social protection mechanisms and emergency food assistance programs that protect the most vulnerable” while ensuring that “food- and farmworkers—including migrant labourers and those in the informal sector—have access to safe and dignified working conditions.”¹⁵⁵

In this vein, the FAO has called for States to ensure that economic stimulus initiatives target health, agriculture, and food sectors with a view to building the resiliency of food systems.¹⁵⁶ The agency notes that if economic stimulus measures fail to ensure that

all people at all times have physical, social and economic access to sufficient, safe and nutritious food ... the pandemic will not only kill people due to the viral disease, but lives will be lost and health severely impaired due to hunger.¹⁵⁷

In many ways, the COVID-19 pandemic is a “wakeup call for food systems that must be heeded.”¹⁵⁸ As artfully stated by FIAN International, “The world can lurch from crisis to crisis, or we can begin now to start building the resilient, sustainable food system the world desperately needs.”¹⁵⁹ But this transition cannot succeed unless it is supported by institutional and governance structures that ensure the right to food and support the rights of peasants and other people working in rural areas to access productive resources and define their own food systems. Even in this catalytic moment of multiple and intersecting crises, we have all the tools we need to achieve the Zero Hunger Goal. All that remains is the political will to do so.

Summary Recommendations

To achieve the Goal of ending hunger, achieving food security, improving nutrition, and promoting sustainable agriculture:

- States’ actions must be informed by their human rights obligations.
 - This includes respecting, protecting, and fulfilling the right to food, and ensuring the rights of peasants and other people working in rural areas;
 - It also includes taking immediate steps to protect those who are most vulnerable to food insecurity, including as a result of the COVID-19 pandemic.

¹⁵⁴ See *supra* notes 50–51 and accompanying text.

¹⁵⁵ IPES-Food, *COVID-19 and the Crisis in Food Systems*, *supra* note 36, at 7–8.

¹⁵⁶ FAO COVID-19 STIMULUS REPORT, *supra* note 53, at 3, 8.

¹⁵⁷ *Id.* at 3–4.

¹⁵⁸ IPES-Food, *COVID-19 and the Crisis in Food Systems*, *supra* note 36, at 1. COVID-19 is not the first wake-up call. The food and financial crises of 2007–2008 saw basic food prices shoot up, pushing millions more into food insecurity. The international community did not, however, learn the lessons offered by the crisis then. Narula, *Reclaiming the Right to Food*, *supra* note 10, at 420.

¹⁵⁹ Food Sovereignty, Friends of the Earth Int’l et al., *Statement to the Extraordinary Meeting of G20 Agriculture Ministers*, *supra* note 124.

- States and non-State actors must invest in a radical transformation of our food system to move away from destructive industrial practices and toward diversified agroecological food systems.
- These transitions must uphold the right of people to determine their food and agricultural systems, also known as the right to food sovereignty, which in turn entails advancing more just and equitable trade policies and dismantling the corporate capture of the food chain.¹⁶⁰

¹⁶⁰ See also HLPE, *FOOD SECURITY AND NUTRITION: BUILDING A GLOBAL NARRATIVE TOWARDS 2030, EXECUTIVE SUMMARY* (2018) for a comprehensive set of recommendations to guide decision-makers as they develop policies to ensure the right to food and achieve the SDGs, especially SDG 2.