American University International Law Review

Volume 36 | Issue 1 Article 1

2020

Global Legal Constraints: How the International System Fails Small-Scale Farmers and Agricultural Biodiversity, Harming Human and Planetary Health, and What to Do About It

Susan H. Bragdon

GLOBAL LEGAL CONSTRAINTS: HOW THE INTERNATIONAL SYSTEM FAILS SMALL-SCALE FARMERS AND AGRICULTURAL BIODIVERSITY, HARMING HUMAN AND PLANETARY HEALTH, AND WHAT TO DO ABOUT IT

SUSAN H. BRAGDON*

* Susan H. Bragdon is an international lawyer, natural resource ecologist, and U.S. patent agent with 25+ years of experience working with governments, United Nations agencies and multilateral institutions and donor organizations on policy and science related to sustainable food systems, biological diversity, small-scale farmers, and agroecology. Susan is currently a policy advisor to the Oxfam Novib programme Sustaining Diversity=Harvesting Sustainability (https://www.sdhsprogram.org/) and serves as Director of the Seeds for All, an organization with a mission to support and expand agroecology and regenerative agriculture by amplifying the voices and participation of small-scale farmers and building democratic, participatory and inclusive governance at all levels (https://www.seedsforall.org/).

I. INTRODUCTION

Small-scale farmers (SSF) and agricultural biodiversity have a critical, yet often overlooked, role in healthy, nutritious diets and ensuring the resilience of agricultural production systems in the face of climate change.[1] Dietary diversity is one guarantee of an adequate supply of essential micronutrients.[2] Without diversity in diet, people can have enough food to eat, yet still suffer the hidden hunger of malnutrition. Diversity of diet, founded on diverse farming systems, delivers better nutrition and greater health with additional benefits for human productivity and livelihoods.[3] The world's agrobiodiversity base can be a source of affordable, nutritious food, if, as a global community, we reflect its importance in policies and actions.[4]

Industrialized food systems characterized by monocultures and high-cost inputs (from environmental, public health and economic standpoints) have displaced SSF and eroded agricultural biodiversity and the diversified systems of agriculture, of which both are a part.[5] This trend has caused the "homogenization" of the global food supply[6]

---

1. *See* Susan H. Bragdon, *Living Links Connecting the United Nations Sustainable Development Goals: Small-Scale Farmers and Agricultural Biodiversity*, 21 SAN DIEGO INT'L L.J. 155, 184–85 (2019) (highlighting the importance of small-scale farmers for agricultural biodiversity, sustainability in farming and achievement of the U.N. Sustainable Development Goals (SDGs)).

2. *See* EMILE A. FRISON, INT'L PANEL OF EXPERTS ON SUSTAINABLE FOOD SYS., FROM UNIFORMITY TO DIVERSITY: A PARADIGM SHIFT FROM INDUSTRIAL AGRICULTURE TO DIVERSIFIED AGROECOLOGICAL SYSTEMS 39 (Nick Jacobs ed., 2016) (stating that diversified farming would lead to the consumption of both macro and micronutrients).

3. *See* Bragdon, *supra* note 1, at 160–61, 178 (finding that diversity of diet would have nutritional benefits as well as increase human productivity and livelihood).

4. *See* FRISON, *supra* note 2, at 61, 65, 70 (noting that agroecological practices have increased because of consumer needs, however, governments should support these practices to make them sustainable).

5. *See* Jonathan A. Foley et al., *Solutions for a Cultivated Planet*, 478 NATURE 337, 337–39 (2011) (pointing out that while the majority of land is used to grow food for animals, it should instead be used to grow more food for human consumption in a sustainable manner).

6. *See* Ashkan Afshin et al., *Health Effects of Dietary Risks in 195 Countries, 1990-2017: A Systemic Analysis for the Global Burden of Disease Study 2017*, 393 LANCET 1958, 1961 (2019) (emphasizing the suboptimal consumption of healthy foods and nutrients and the high intake of unhealthy foods globally); *see also* Paul R. Ehrlich & Edward O. Wilson, *Biodiversity Studies: Science and Policy*, 253 SCIENCE 758, 759–61 (1991) (noting that the destruction of natural habitats is

and an historic shift in the global burden of disease, so much so that it is now primarily diet-related.[7]

Reversing these alarming, interconnected trajectories—SSF displacement, the erosion of agricultural diversity, the homogenization of the global food supply, and the epidemic of diet-related disease—requires understanding the global institutions and rules which enable them. Only then can these forces be countered with concrete action and policy change. Today's food systems are embedded in a globalized world where a neoclassical economic perspective has taken root.[8] The greatest threats to SSF, the resources they depend upon, and to SSF's role in the production of sustainable and healthy diets, are global policies which embody the fundamental tenets of the neoclassical school.[9] Simply put, these tenets reflect the belief in the primacy of markets and private industry to provide all kinds of goods and services, essentially unfettered and without regulation,[10] perpetuate a myth of government inefficiency and ineptitude,[11] and dismantle and reorient government through the

---

decreasing biodiversity and thus leading to a less diverse food system); Lori Ann Thrupp, *Linking Agricultural Biodiversity and Food Security: The Valuable Role of Agrobiodiversity for Sustainable Agriculture*, 76 INT'L AFF. 265, 269–73 (2002) (explaining that developments in agriculture have resulted in food insecurity and lack of diversity because only a fraction of the edible plant species are commercially important and subsequently produced).

7. *See* Afshin et al., *supra* note 6, at 1961, 1963, 1967–68 (highlighting the increase in dietary related deaths around the world).

8. *See* Boyd A. Swinburn et al., *The Global Syndemic of Obesity, Undernutrition, and Climate Change:* The Lancet *Commission Report*, 393 LANCET 791, 797 (2019) (presenting the global obesity problem as an example of the neoliberal economic governance model, embraced by governments and international organizations, that fails to sufficiently address health risks).

9. *See* Carmen G. Gonzalez, *Trade Liberalization, Food Security, and the Environment: The Neoliberal Threat to Sustainable Rural Development*, 14 TRANSNAT'L L. & CONTEMP. PROBS. 419, 470–72 (2004) (claiming that neo-liberal reforms, specifically embodied by the World Bank, IMF, and WTO, have increased agro-specilization and rural poverty and inequality).

10. *See* HA-JOON CHANG, BAD SAMARITANS: THE MYTH OF FREE TRADE AND THE SECRET HISTORY OF CAPITALISM 56–62 (Bloomsbury Press, 2009) (2007) (discussing pre-neoliberal protectionist practices, the global conversion to free-trade and free-market economic policies, and explaining how highly industrialized countries have driven countries with developing economies to adopt these economic policies in the neoliberal era).

11. June Sekera, *The Public Economy: Understanding Government as a Producer. A Reformation of Public Economies*, 84 REAL-WORLD ECON. REV. 36, 49

support of outsourcing, privatization, and internalization of market mechanisms and metrics.[12]

Global markets affect most aspects of food systems—including SSF and agricultural biodiversity.[13] The belief in the primacy of the market and of private industry, and their infusion into the operations of the state, influences the policies and decisions of intergovernmental processes and the implementation of treaties, regardless of their ostensible stated purpose.[14] An amalgam of international institutions and laws arising at different points in time, with varying and often conflicting intent, reflect these neoclassic economic principles.[15] The expression of these principles may be, in whole or in part, in a particular regime.[16] These principles are also evident in the implementation of rules, both within and between institutions, where a *de facto* institutional hierarchy emerges favouring the neoclassical economic approach.[17]

Supported by economic instruments such as trade and intellectual property (IP) rules and donor conditions, the modern system of agriculture described above is steadily spreading across the globe,

---

(2018) [hereinafter Sekera, *The Public Economy*].

12. *See id.* at 49–50.

13. *See* Bragdon, *supra* note 1, at 158.

14. *See* Susan H. Bragdon & Carly Hayes, *Reconceiving Public-Private Partnerships to Eradicate Hunger: Recognizing Small-Scale Farmers and Agricultural Biological Diversity as the Foundation of Global Food Security*, 49 GEO. J. INT'L L. 1271, 1274, 1301, 1305 (2018) (noting that international agencies and governments are influenced by and have created partnerships with large corporations and, therefore, promote market-friendly policies).

15. *See, e.g.*, Kathleen McAfee, *Selling Nature to Save it? Biodiversity and Green Developmentalism*, 17 ENV'T & PLAN. D: SOC'Y & SPACE 133, 140–41 (1999) (discussing the Convention on Biological Diversity that usually leads to debate between Northern and Southern countries that have differing interests and approaches to solving problems of climate change).

16. *See generally* Duncan Snidal, *Political Economy and International Institutions*, 16 INT'L REV. L. & ECON. 121, 123–24 (1996) (introducing the regime theory that is centered around cooperation between states and its inability to address the lack of international organization's lack of enforcement).

17. *See* Ha-Joon Chang, *Breaking the Mould: An Institutionalist Political Economy Alternative to the Neo-Liberal Theory of the Market and the State*, 26 CAMBRIDGE J. ECON. 539, 542–44 (2002) (stating that interventions or state actions are seen as rights and obligations once they become highly accepted in a society, making the discussion of policies in international forums difficult because developed countries view certain policies as rights or obligations while developing countries see it as intervention since both sides favor free trade or market values).

causing the displacement of SSF and the erosion of biological diversity.[18] For instance, treaties with the objective of the conservation and sustainable use of agricultural biodiversity, explicitly mentioning farmers' rights and the rights of indigenous and local communities, are handicapped by embracing transactional mechanisms—an implied buyer and seller—as the primary means to generate benefits needed to support these communities and resources.[19]

The denigration, dismantling, and privatization of the state impedes both agreement on, and enforcement of, human rights instruments of direct relevance to SSF and agricultural biodiversity.[20] The market cannot make or enforce rights or obligations; it is the role of government to recognize and enforce human rights. The influence of this orientation is clear, even in relatively young forum such as the High-Level Political Forum on Agenda 2030 (and its 17 Sustainable Development Goals).[21] The predominance of neo-classical economics provides the rationale and justification for influence and dominance of this particular economic approach across very different global rules and institutions.[22]

Despite a growing body of research and evidence, awareness of the importance of SSF and agricultural biodiversity to the health of both people and the planet is low, outside of specialized advocacy organizations.[23] There is significant and growing experience with

18. *See* Bragdon, *supra* note 1, at 177–78 (explaining that new production norms ignore the importance of dietary diversity, small scale farmers, and diverse farming methods that would ensure good nutrition and sustainability).

19. *See, e.g.*, International Treaty on Plant Genetic Resources for Food and Agriculture art. 9, Nov. 3, 2001, 17 T.I.A.S. 313, 2400 U.N.T.S. 383 (expressing the rights of farmers to share in benefits, participate in decision making and protecting farmers' traditional knowledge).

20. *See* McAfee, *supra* note 15, at 133–34 (highlighting the post neoliberal version of environmental economics as the main influence of debates in international agreements).

21. *See* John Ruggie (Special Representative of the Secretary-General on the Issue of Human Rights and Transnational Corporations and other Business Enterprises), *Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework*, at 6–7, U.N. Doc. A/HRC/17/31, annex (Mar. 21, 2011) [hereinafter *Guiding Principles on Business and Human Rights*] (describing the state's duty of protecting human rights).

22. *See* G.A. Res. 67/290, at 1, 3 (Aug. 23, 2013) (recognizing the need for intervention of an intergovernmental actor to the implementation and achievement of sustainable goals).

23. *See* McAfee, *supra* note 15, at 134–36, 138–39, 143 (the neoclassical

policies such as community-supported agriculture, public procurement from farm to school, farmers to restaurant, hospital or other institutions, and fair-trade movements—all of which can support SSF, agricultural biodiversity and the role they play in sustainable, healthy diets.[24] Experience in and evidence of agroecology's success[25]—of which SSF and agricultural biodiversity are an integral part—is increasing, as is the spread of agroecological movements.[26]

Nonetheless, increased awareness and experience are important, but are only part of what is needed to keep SSF and agricultural biodiversity on-farm, and *in situ* sustainably producing healthy food as a critical part of a food system that nurtures people and planet.[27] Improving conditions within individual communities or regions will

---

approach is at the core of the environmental-economic theory that institutions and agencies use).

24. *See* Miguel A. Altieri, *Agroecology: The Science of Natural Resource Management for Poor Farmers in Marginal Environments*, 93 AGRIC. ECOSYSTEMS & ENV'T 1, 17–20 (2002) (recognizing the lack of implementation of agroecological practices found in small farming communities on a large scale); *see also* J. N. Pretty et al., *Resource-Conserving Agriculture Increases Yields in Developing Countries*, 40 ENVTL. SCI. & TECH. 1114, 1114, 1118 (2006) (uncovering the obstacles in finding ways to integrate agricultural sustainability and productivity with other means of ensuring food security); Manuel Gonzalez de Molina, *Agroecology and Politics. How to Get Sustainability? About the Necessity for a Political Agroecology*, 37 AGROECOLOGY & SUSTAINABLE FOOD SYS. 45, 55–56 (2013) (stating that there is an urgent need for agroecology policies that can be implemented broadly).

25. *See* Altieri, *supra* note 24, at 20–21 (highlighting the importance of transfer of agricultural technology between farmers and external agencies); *see also* Pretty et al., *supra* note 24, at 1118 (noting the need to improve supply of agricultural technologies to improve biodiversity); Gonzalez de Molina, *supra* note 24, at 49, 51, 55–56 (recognizing the importance of policies that promote sustainable agroecosystems).

26. *See* ALL. FOR FOOD SOVEREIGNTY IN AFR. & TANZ. ORGANIC AGRIC. MOVEMENT, AGROECOLOGY: THE BOLD FUTURE OF FARMING IN AFRICA 5, 82 (Michael Farrelly et al. eds., 2016) (highlighting the case studies that have proven agroecology's success in creating food sovereignty); *Agroecology Knowledge Hub: The Ten Elements of Agroecology*, FAO, http://www.fao.org/agroecology/knowledge/10-elements/en/ (lasted visited June 13, 2020) (identifying important elements of agroecology).

27. *See* PARVIZ KOOHAFKAN & MIGUEL A. ALTIERI, GLOBALLY IMPORTANT AGRICULTURAL HERITAGE SYSTEMS: A LEGACY FOR THE FUTURE 5–6 (2011) (explaining that small scale farmers in the current system have to compete in commodity driven markets that are intensive and often subsidized puts them at risk of their livelihood); Pretty et al., *supra* note 24, at 1114 (illustrating the result of small-scale farmers' success in developing farming practices that promote sustainability, efficiency, and productivity).

not influence the evolution, much less the transformation, to a better food system for all, if they are divorced from the global context.

Agroecological movements such as Via Campesina have been enormously effective in many respects,[28] yet agroecological movements face significant challenges in developing comprehensive strategies to engage with the breadth of global institutions and rules that impact their ability to scale up and diffuse more broadly. This is not to minimize the importance of local action, but to recognize their geographic, and likely temporal, limitations, if the global institutions and macro-level policies and rules are not fundamentally reoriented and changed. This includes addressing issues of power, how these institutions and their policies are shaped, and how these institutions work to the benefit (or detriment) of specific constituents.

Section Two of this paper provides details how neo-classical economic theory forms the foundation for the existing forces of market supremacy, profit seeking, the disaggregation of complex problems, corporate concentration, and state capture.[29] This is the sometimes invisible backdrop against which international institutions and rules affecting SSF's and agricultural biodiversity operate. A comprehensive analysis of the evolution and status of all global institutions affecting SSF and agricultural biodiversity is beyond the scope of this chapter.

Rather, Section Three will use examples from three distinct areas of international law, as well as examples from the implementation of Agenda 2030 and the SDGs, to illustrate how the application of neoclassical economics both constrains the ability of global institutions and rules to support SSF and agricultural biodiversity, and also enables the spread of industrialized agriculture to the detriment of human and planetary health.[30] Finally, Section Four will discuss how our existing orientation can be changed: leveraging new kinds of alliances; asserting new views of how government can be a

28. *See, e.g.*, KOOHAFKAN & ALTIERI, *supra* note 27, at 5–8 (noting the importance of institutional support for biodiversity in farming and agricultural heritage systems); MICHAEL T. LEWIS, NAVIGATING SYSTEM TRANSITION IN A VOLATILE CENTURY 31–35 (2017) (stating that food sovereignty, decentralized democratic food systems, and mobilizing against a system that is focused on profits are the core values of La Via Campesina).

29. *See infra* Section II.

30. *See infra* Section III.

constructive positive force in protecting SSF and agricultural biodiversity, in recognition of their critical in the health, and ultimately, survival of our people and planet.[31]

II. THE EFFECT OF MARKET SUPREMACY AND THE DENIGRATION OF THE STATE

The prestige of market-thinking rose with the end of the Cold War.[32]As philosopher Michael Sandel wrote in *The Atlantic Monthly*:

> "The years leading up to the financial crisis of 2008 were a heady time of market faith and deregulation – an era of market triumphalism. The era began in the early 1980s, when Ronald Reagan and Margaret Thatcher proclaimed their conviction that markets, not government, held the key to prosperity and freedom. And it continued into the 1990s with the market-friendly liberalism of Bill Clinton and Tony Blair, who moderated but consolidated the faith that markets are the *primary means for achieving the public good*."[33]

Market triumphalism was paralleled by a "gradual dismantling of the public sector as both a regulator and a provider of goods and services."[34] As U.S. President Reagan said in his 1988 State of the Union address: "My friends, some years ago, the Federal Government declared war on poverty, and poverty won."[35] The United States and parts of Europe, for example, saw a proliferation of for-profit schools, hospitals and prisons.[36] Even war was outsourced to private military contractors.[37] Sandel continues: "These uses of markets to allocate health, education, public safety, national security, criminal justice, environmental protection, recreation, procreation and other social goods were for the most part unheard of 30 years ago. Today, we take

---

31. *See infra* Section IV.

32. *See* Michael J. Sandel, *What Isn't for Sale?*, ATLANTIC MONTHLY, Apr. 2012, https://www.theatlantic.com/magazine/archive/2012/04/what-isnt-for-sale/308902/.

33. *Id.* (emphasis added).

34. *See* Susan H. Bragdon, *Reinvigorating the Public Sector: The Case of Food Security, Small-Scale Farmers, Trade and Intellectual Property Rules*, 59 DEVELOPMENT 280, 281 (2016).

35. *See Transcript of Reagan's State of the Union Message to Nation*, N.Y. TIMES (Jan. 26, 1988), at A16.

36. Bragdon, *Reinvigorating the Public Sector*, *supra* note 35, at 281.

37. *Id.*

them largely for granted."[38]

Under names such as 'Reinventing Government' in the US and 'New Public Management' in Europe, government administrators are encouraged to work within a market model, and even required to use a "market solution where markets had never been."[39] By making exchange between sellers and buyers the embodiment of economic value, neoclassic economics removes the basis for the consideration of government as a producer in its own right.[40] Suddenly, the public sector is reduced to "an arena for innumerable individual exchanges."[41] This is accompanied by widespread privatization and contracting out of public services.[42]

The reconceptualization of government in business terms has had deleterious effects on public welfare.[43] Yet, this re-orientation goes further, casting the government as a villain in the operation of the economy.[44]

What does this mean for food systems and particularly SSF and agricultural biodiversity? Four things flow from the neoclassical economic view of private industry, market supremacy, and a dismantled and reoriented public sector, which, taken together, have a

38. Sandel, *supra* note 32, at 4.

39. *See* JAMES K. GALBRAITH, THE PREDATOR STATE: HOW CONSERVATIVES ABANDONED THE FREE MARKET AND WHY LIBERALS SHOULD TOO xii (2009).

40. *See* Sekera, *The Public Economy*, *supra* note 11, at 37.

41. *See* HUGH STRETTON & LIONEL ORCHARD, PUBLIC GOODS, PUBLIC ENTERPRISE, PUBLIC CHOICE: THE THEORETICAL FOUNDATIONS FOR THE CONTEMPORARY ATTACK ON GOVERNMENT 158 (1994) (comparing the way public choice theorists try to understand the government to how economists traditionally focused on allocation and exchange in economics to illustrate the common flaws in both approaches).

42. *See* JUNE SEKERA, GLOB. DEV. & ENV'T INST. AT TUFTS UNIV., OUTSOURCED GOVERNMENT – THE QUIET REVOLUTION: EXAMINING THE EXTENT OF GOVERNMENT-BY-CORPORATE-CONTRACTOR 1–2 (2017) (describing how there are two times more contract workers providing government goods and services than federal workers, and how contractors receive about 40% of the federal budget's discretionary spending) [hereinafter SEKRA, OUTSOURCED GOVERNMENT].

43. *See* James Midgley, *Growth, Redistribution, and Wealth: Toward Social Investment*, 73 SOC. SERV. REV. 3, 3–4 (1999) (explaining that the reconceptualization of government in business terms leads to spending cuts in social welfare programs).

44. *See* Sekera, *The Public Economy*, *supra* note 11, at 39–42 (claiming "mainstream" economists describe public goods and collective action in terms of "problems" that "prejudice students against government").

negative impact on SSF and agricultural biodiversity specifically, and on the public interest in general:

1. Profit-seeking through markets in the absence of a vibrant public sector emphasizes food as a commodity, and not as a human right,[45] and does not appropriately value and support SSF and agricultural biodiversity;

2. Contrary to Agenda 2030 and the SDGs, seeking and creating markets ignores relationships and complexity. Instead of addressing the root causes of interconnected issues such as poverty and malnutrition, complex systems are disaggregated into discrete issues to be solved by distinct products or services developed through market-mechanisms;[46]

3. Agribusiness grows in power and concentration affecting, amongst other things, farmers' livelihoods, choice and the source, culturally sensitive access to markets, direction and focus of innovation;[47]

4. The state is increasingly captured by private interests as governments, both individually and collectively, increasingly meet the needs of the wealthy few rather than of the majority, perverting the public purpose of government and allowing private enrichment at public expense.[48]

Private industry[49] is understandably interested in making profits and therefore seeks out an ability to pay and market-demand.[50] Generally

45. *See* Clive Stannard, *The Multilateral System of Access And Benefit Sharing: Could It Have Been Constructed Another Way?*, *in* CROP GENETIC RESOURCES AS A GLOBAL COMMONS: CHALLENGES IN INTERNATIONAL LAW AND GOVERNANCE 243, 252–53, 258 (Michael Halewood et al. eds., 2012) (stating that the focus on monetary gain has been detrimental for developing countries in need of food).

46. *See* SEKERA, OUTSOURCED GOVERNMENT, *supra* note 43, at 6.

47. *See* FAO, THE FUTURE OF FOOD AND AGRICULTURE: TRENDS AND CHALLENGES 108 (2017), http://www.fao.org/3/a-i6583e.pdf (noting how farmers' inability to use the same supermarket channels as agribusiness chains and agribusiness's reduced labor requirements lead to harm to farmers' livelihoods).

48. *See, e.g.*, *id.* at 108–109 (describing how low-income populations eat "empty calorie" foods linked to diet-related diseases more frequently due to their inability to afford the healthier foods that higher income populations consume).

49. The use of the term 'private industry" rather than "private sector" is purposeful and meant to distinguish large corporations and agribusiness from private sector actors such as small-scale farmers.

50. *See, e.g.*, Paul Chambers, *Technology and the Profit Motive* 117 J. ROYAL

speaking, it does not focus on human need per se, or the overall public interest.[51] Instead, private industry production is usually oriented toward the larger and more profitable markets, in order to achieve economies of scale and higher profit.[52] As the supremacy of market ideology has taken hold and spread globally, food has been increasingly treated as a commodity; access to affordable, nutritious food as a basic human right becomes obscured.[53]

With the provision of food viewed as primarily a market transaction, private industry focuses on the efficient production of a commodity and optimizing all of the factors in the supply chain.[54]

Private food producers are unlikely to reflect an understanding of the complexity and diversity of SSF physical and social environments. Market actors fail to consider access to goods and services by those most in need, nor do they focus on those most at risk, or on issues surrounding inequality and social justice.[55] Whether acting as a promulgator of law and policy, or as a provider of goods and services, government is intended to play this role in society.[56]

Private industry can be part of the calculation in delivering support to SSF and agricultural biodiversity, but only in the context of small and medium enterprises, and in local and regional markets, with a robust, accountable public sector and regulatory bodies.[57] Two

---

SOC. ARTS 188, 189–190 (1969) (arguing that a profit motive is needed to make technological advances in the food industry).

51. *See id.* at 189 (claiming that to even say that profit does not matter is hypocritical because in order to work for the sake of public interest, one must provide good products, and when one provides good products, one makes a good income, so that would be a factor in the majority of people's motivation).

52. *See id.* at 189–90.

53. *See* Stannard, *supra* note 46, at 252–53, 258.

54. *See* FAO, *supra* note 48, at 108.

55. *See* Kenneth Iain Macdonald, *The Devil is in the (Bio)diversity: Private Sector "Engagement" and the Restructuring of Biodiversity Conversation*, *in* CAPITALISM AND CONSERVATION 46–48 (Dan Brockington & Rosaleen Duffy, eds. 2011) (describing how biodiversity conservation has been the instrument of capitalism, among other political projects, rather than environmental agendas).

56. G.A. Res. 70/1, Transforming Our World: The 2030 Agenda for Sustainable Development, ¶¶ 41, 45 (Sept. 25, 2015).

57. *See, e.g.*, Bhuwon Sthapit, *Emerging Theory and Practice: Community Seed Banks, Seed System Resilience and Food Security*, *in* COMMUNITY SEED BANKS IN NEPAL PAST, PRESENT, FUTURE 16, 33 (Pitambar Shrestha et al. eds., 2012) (arguing that a community seed bank, as opposed to individual to individual transactions, fosters rules and regulations of local institutions and establishes legitimacy within a

examples of how this might work include local procurement policies to create incentives to protect agricultural biodiversity and human or environmental health, or a public agency could facilitate and support an identified public purpose (e.g., providing a network of community seed banks).[58]

Market-based solutions are often tied to technological solutions, where technologies are developed and disseminated to solve problems, creating disaggregation.[59] The technological and market-based approaches in agriculture have historically had a linear approach characterized by inputs and outputs, where farmers are customers or clients, buying or being given seed and fertilizer.[60] Newer versions of the technology-fix/market-based-solution approach, such as those presented by biotechnology, are part of this same framework, and yield similar results.[61] This approach presumes the underlying problem is a technical one that therefore can be solved by a technical solution.[62] Technology fixes generally ignore the social, political, and economic forces underlying a food system that works for the majority of people, and thus they harm planetary health as well.[63] For example, the technology-based effort to biofortify crops neither addresses what puts diversified cropping systems at risk, nor does it address what is

community and with the government).

58. *See id.* (describing how a seed bank in Nepal promoted agricultural biodiversity at an intersection of private and local sectors).

59. *See* J.W. Dellimore & J.H. Dellimore, *Select Technological Issues in Agro-Industry*, 28 SOC. & ECON. STUD. 54, 81–82 (1979).

60. *See* Carol Markwei et al., *Summary for Decision Makers of the Sub-Saharan Africa Report*, *in* AGRICULTURE AT A CROSSROADS: SUB-SAHARAN AFRICA 61, 84 (2009), http://www.fao.org/3/i2230e/i2230e04.pdf (adding that farmers who do not invest in technology typically must pay for expensive inputs yet produce poorly made outputs, creating a weak business sector and limiting the farmers to strictly local markets); *see also* DUNSTAN S.C. SPENCER ET AL., INTERACADEMY COUNCIL, AFRICAN AGRICULTURAL PRODUCTION AND PRODUCTIVITY IN PERSPECTIVE 19 (2004) (showing farmers' reliance on the input-output system in most African countries); Carl K. Eicher et al., *Crop Biotechnology and the African Farmer*, 31 FOOD POL'Y 504, 517, 523 (2006) (describing how old and well-established the input-output market is in Africa, and how the seed and fertilizer input delivery systems require improvement through technical pathways).

61. *See* Eicher et al., *supra* note 61, at 523.

62. *See* J. EDWARD TAYLOR & TRAVIS J. LYBBERT, ESSENTIALS OF DEVELOPMENT ECONOMICS 230–32 (2015) (explaining that there are several constraints stopping poor farmers from adopting agricultural technology).

63. *See* FAO, *supra* note 48, at 39–41 (describing the significant impacts of agricultural production on climate change).

compromising the ability of farmers to produce a balanced diet.[64] In fact, it ignores the risk of uniformity both to dietary diversity and the resiliency of agricultural production systems.[65] In this way, the focus of the technology fix is narrowed to insufficient nutrients, and a nutrient-enriched product is produced by the market, without regard for the impacts of that production process.[66] As described by Eric Holt-Giménez in his book *A Foodie's Guide to Capitalism*:

> "When hidden hunger is reduced to a problem of micronutrient deficiencies, addressing hunger serves a political and economic function. First, it gives power and profit to whichever corporation provides the micronutrients. Second, it masks the way the global food system has destroyed traditional sources of nutrients and impoverished people's diets . . . It also allows governments and industry to depoliticize . . . nutrient deficiencies by recasting them as technical problems to be solved by technical solutions rather than structural measures like land reform, promotion of agroecological approaches to farming, market reforms and living wages."[67]

Multinational firms dominate agricultural markets and corporate concentration is growing:

> "Consolidation across the agri-food industry has made farmers ever more reliant on a handful of suppliers and buyers, further squeezing their incomes and eroding their ability to choose what to grow, how to grow it and for whom . . . .Increasing market concentration has also narrowed the scope of innovation, reinforcing a focus on input traits and major crops promising greater returns on investment . . . Furthermore, consolidation is driving the reduction in seed and livestock genetic diversity, while amplifying the risk of disease proliferation in increasingly centralized and homogenized systems . . . Rather than putting food systems on a path to sustainability, consolidation reinforces the logic of the industrial model."[68]

---

64. *See* Sally Brooks, *Philanthrocapitalism, 'Pro-Poor' Agricultural Biotechnology and Development*, *in* NEW PHILANTHROPY AND SOCIAL JUSTICE: DEBATING THE CONCEPTUAL AND POLICY DISCOURSE 101, 105–07 (Behrooz Morvaridi, ed. 2015) (calling a biofortification technique "generic," "inherently scalable," and void of evidence of efficacy and environmental safety).

65. *See id.* at 106–07 (exploring the issue through the lens of Golden Rice).

66. *See* ERIC HOLT-GIMÉNEZ, A FOODIE'S GUIDE TO CAPITALISM 194 (2017) (introducing the concept of Nutrionism and its pitfalls).

67. *See id.*

68. *See* INT'L PANEL OF EXPERTS ON SUSTAINABLE FOOD SYS., TOO BIG TO FEED: EXPLORING THE IMPACTS OF MEGA-MERGERS, CONSOLIDATION AND

There is no international anti-trust law or regime to address the scale of, let alone break up, agricultural monopolies, and national governments' reluctance to enforce anti-trust (anti-competitive) law illuminates the degree to which governments are controlled by industry rather than governments regulating industry.[69] Furthermore, concentration of power and wealth in a small number of companies strengthens those companies' ability to shape the regulatory context in which they operate in their favor, providing significant price-setting power.[70] Due to the large economies of scale that they are able to achieve through lack of regulation and limited transparency into their operations, monopolistic entities are easily able to crowd smaller producers out of the market, negatively impacting SSF and producer livelihoods.[71]

The different interests between the wealthy and the non-wealthy, and the disproportionate power of the wealthy over national policy, is well-documented in both the United States and in Europe.[72] Nowhere is this more evident than in the negotiation of trade agreements.[73] Large corporations are part of a process that allows corporate "citizens" to view and weigh in on trade agreements as they are being

---

CONCENTRATION OF POWER IN THE AGRI-FOOD SECTOR 5, 77 (Chantal Clément & Mick Jacobs eds., 2017) [hereinafter IPESFS].

69. *See* Jonathan B. Baker et al., *Unlocking Anti-Trust Enforcement* 127 YALE L.J. 1916, 1916–19 (2018) (using the United States to illustrate the dangers of not having anti-trust enforcement).

70. *See* SOPHIA MURPHY ET AL., OXFAM, CEREAL SECRETS: THE WORLD'S LARGEST GRAIN TRADERS AND GLOBAL AGRICULTURE 11 (2012), https://www-cdn.oxfam.org/s3fs-public/file_attachments/rr-cereal-secrets-grain-traders-agriculture-30082012-en_4.pdf, (adding that the immense size and price-setting power of large companies makes entry for newcomers difficult).

71. *See id.*

72. *See* Benjamin I. Page et al., *Democracy and the Policy Preferences of Wealthy Americans*, 11 SOC. POL'Y PERSP. 51, 68 (2013) (emphasizing that the evidence supports the long-held belief that the wealthy disproportionately participate in politics); *see also* Daron Acemoglu & James T. Robinson, *Persistence of Power, Elites, and Institutions*, 98 AM. ECON. R. 267, 287 (2008) (describing how the wealthy are more likely to invest their de facto political power in lobbying and bribery due to their small numbers and large expected gains).

73. *See generally* Susan H. Bragdon et al., *The Wrong Conversation About Trump's Tariffs*, COMMON DREAMS (Dec. 22, 2018), https://www.commondreams.org/views/2018/12/22/wrong-conversation-about-trumps-tariffs (summarizing how ordinary people have little influence on trade policies while corporations are given a seat at the negotiating table).

negotiated, while public interest organizations cannot.[74] This influence has allowed large corporations in multiple sectors to dominate global markets and profit handsomely. As noted by Professor Wu, corporate concentration and influence cast aside "the safeguards that . . . protect democracy against a dangerous marriage of private and public power."[75]

III. THE INTERNATIONAL LEGAL SYSTEM

A. THE BIODIVERSITY TREATIES

Technological advances in the 1970s led to an expansion of the scope and breadth, and international cooperation in, the recognition of plant-related intellectual property rights (IPR).[76] The economic gain was enjoyed primarily by private industry,[77] and there was no corresponding economic instrument to reward SSF and Indigenous and Local Communities, who had been conserving and developing genetic resources for thousands of years, and who provided the foundation for innovation subsequently protected through IP.[78]

---

74. *See id.*

75. *See* Tim Wu, Opinion, *Be Afraid of Economic 'Bigness.' Be Very Afraid*, N.Y. TIMES (Nov. 10, 2018), https://www.nytimes.com/2018/11/10/opinion/sunday/fascism-economy-monopoly.html.

76. *See Overview: The TRIPS Agreement*, WTO, https://www.wto.org/english/tratop_e/trips_e/ intel2_e.htm (last visited July 26, 2020) (providing an overview of the multilateral Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement); Fulya Batur & Tom Dedeurwaerdere, *The Use of Agrobiodiversity for Plant Improvement and the Intellectual Property Paradigm: Institutional Fit and Legal Tools for Mass Selection, Conventional and Molecular Plant Breeding*, 10 LIFE SCI. SOC'Y & POL'Y, at 6, 8 (2014) (providing an overview of the reduced intellectual property right exemptions under the International Union for the Protection of New Plant Varieties Convention and TRIPS).

77. *See* COMM'N ON INTELLECTUAL PROP. RIGHTS, INTEGRATING INTELLECTUAL PROPERTY RIGHTS AND DEVELOPMENT POLICY: REPORT OF THE COMMISSION ON INTELLECTUAL PROPERTY RIGHTS, 58 (2002), http://www.iprcommission.org/papers/pdfs/final_report/ciprfullfinal.pdf (highlighting the fact that private sector investment in agricultural research has increased while public investment has decreased).

78. *See* Batur & Dedeurwaerdere, *supra* note 77, at 5–6 (describing the influence of traditional mass selection activities and the dissemination of agricultural knowledge throughout time on the genetic improvement of crops); COMM'N ON INTELLECTUAL PROP. RIGHTS, *supra* note 78, at 7, 11–12 (highlighting the fact that,

Adopted at the Earth Summit in Rio de Janeiro in 1992, the Convention on Biological Diversity[79] (CBD) responded by establishing a parallel tool: contracts for access and benefit-sharing (ABS).[80] This tool was designed to allow "provider" countries—in particular, the custodians and developers of agricultural resources—to capture the economic value of the resources' diversity.[81] Article 15, the ABS provision of the CBD, asserts a country's national sovereignty over its natural resources and hence its ability to regulate access to genetic resources under its jurisdiction.[82] The treaty article uses terms such as "prior informed consent" and "mutually agreed terms" that imply a bilateral negotiation between a user and a provider, whereby contractual arrangements are made for access and benefit-sharing.[83]

In practical effect, the CBD codified the creation of a market in genetic resources.[84] Reflecting neoclassical economics, governments acting together effectively reduced their role in generating support for the conservation and sustainable use of biological diversity by creating "an arena for innumerable individual exchanges."[85]

The bilateral negotiation, between a country of origin and one

---

despite the link between indigenous technological capacity and economic growth, few U.S. patents were granted to applicants from developing countries).

79. Convention on Biological Diversity, *opened for signature* Jun. 5, 1992, 1760 U.N.T.S. 79 [hereinafter CBD].

80. *See id.* art.15 (Access to Genetic Resources); SUSAN H. BRAGDON, QUAKER UNITED NATIONS OFFICE, THE EVOLUTION OF RIGHTS AND RESPONSIBILITIES OVER AGRICULTURAL BIODIVERSITY 20 (2017), https://quno.org/sites/default/files/resources/Evolution%20of%20Rights%20and%20Responsibilities_1.pdf [hereinafter BRAGDON, EVOLUTION OF RIGHTS & RESPONSIBILITIES].

81. *See* BRAGDON, EVOLUTION OF RIGHTS & RESPONSIBILITIES, *supra* note 81, at 20.

82. *See* CBD, *supra* note 80, art. 15(1) ("Recognizing the sovereign rights of States over their natural resources, the authority to determine access to genetic resources rests with the national governments and is subject to national legislation.").

83. *See id.* art. 15(4)–(5); *see also* BRAGDON, EVOLUTION OF RIGHTS & RESPONSIBILITIES *supra* note 81, at 20.

84. *See* BRAGDON, EVOLUTION OF RIGHTS & RESPONSIBILITIES, *supra* note 81, at 20.

85. *See* STRETTON & ORCHARD, *supra* note 42, at 158 (highlighting the fact that economists and public choice theorists ignore both the persons making exchanges and the goods they exchange).

applying the use of genetic resources, raised concerns regarding the potential impact on agricultural biological diversity, in this case the genetic resource component of agricultural biodiversity.[86] The concerns were two-fold:

1) Bilateral arrangements might inhibit the exchange of plant genetic resources for food and agriculture (PGRFA) when all countries, developed and developing alike, are highly interdependent for food security;[87] and

2) Determining a resource's country of origin as defined in the CBD would be problematic because PGRFA have been moving around the world throughout the history of agriculture, and the heritage of new varieties is often unclear.[88]

The International Treaty for Plant Genetic Resources for Food and Agriculture (IT) was negotiated in response to this development, with one of the goals to establish a multilateral system of ABS (MLS).[89] Despite being a multilateral system, the basis for benefit-sharing of the IT is the same as the CBD.[90] Governments kept to the confines of a contractual approach—this time through a standard material transfer agreement—tying an act of access to the MLS to benefit-sharing resulting from commercial use.[91]

---

86. *See* SUSAN H. BRAGDON, QUAKER UNITED NATIONS OFFICE, THE FOUNDATION OF FOOD SECURITY: ENSURING SUPPORT TO SMALL-SCALE FARMERS MANAGING AGRICULTURAL BIODIVERSITY 14 (2017), http://quno.org/sites/default/files/resources/FS%20foundation_FINAL_UPDATED.pdf [hereinafter BRAGDON, FOUNDATION OF FOOD SECURITY] (describing how the representatives negotiating the CBD had little understanding of PGRFA, raising questions regarding farmer's rights and *ex situ* protections).

87. *Id.* at 15.

88. *See id.* at 14–15 (identifying the movement of PGRFA internationally and throughout history as creating challenges for determining a resource's country of origin).

89. *See* International Treaty on Plant Genetic Resources for Food and Agriculture, *supra* note 19; BRAGDON, FOUNDATION OF FOOD SECURITY, *supra* note 87, at 14–15 (explaining the theory of ABS benefiting providers of genetic resources underlies both the IT and CBD).

90. *See* BRAGDON, FOUNDATION OF FOOD SECURITY, *supra* note 87, at 13 (highlighting that while the CBD applies to all types of non-human genetic resources, it still has the same objectives as the IT).

91. *See id.* at 15 (describing the IT's establishment of the benefit-sharing fund and the distribution of benefits to organizations engaging in the sustainable use of PGRFA and conservation).

ABS, under the IT MLS, also has not generated monetary benefits.[92] The IT's Benefit-Sharing Fund (BSF) is part of an overall funding strategy adopted in 2006 that seeks to attract financial resources from all possible sources.[93] The BSF's purpose is to provide funding for the on-farm conservation and development of crop genetic resources in developing countries and to improve food security by helping developing country farmers cope with climate change and other threats to food production.[94] The BSF is the only part of the funding strategy under the direct control of its Governing Body; without monetary benefits from the MLS, it is dependent on voluntary contributions.[95] Notably, as of 2018, no direct payments for access from the MLS have been made.[96] The Benefit-Sharing Fund has been funded through voluntary contributions only.[97] It distributed $20 million USD to 61 projects in 55 developing countries over three project cycles.[98] A fourth call for proposals is in in process and expects to disburse $5 million USD.[99] This is a long way from the five-year goal of $160 million USD for the Benefit-Sharing Fund established in 2011.

---

92. *See id.* at 17 (describing the IT's Benefit-Sharing Fund receiving its $22 million entirely through voluntary contributions and the Fund's anticipated future financial difficulties).

93. *See The Funding Strategy*, Subheading to *Benefit-Sharing Fund*, FAO, http://www.fao.org/plant-treaty/areas-of-work/benefit-sharing-fund/policy-guidance/en/ (last visited June 17, 2020).

94. *See* FAO, BENEFIT-SHARING FUND: CROP DIVERSITY FOR FOOD SECURITY 1, 3, 5 (2015), http://www.fao.org/3/a-bb146e.pdf (providing an overview of the purpose of the BSF).

95. *See id.* at 11 (highlighting the Governing Body's control over the BSF and the BSF's dependence on voluntary contributions); FAO, *The Funding Strategy for the Implementation of the International Treaty*, ¶ 2.1 (2017), http://www.fao.org/3/I8698EN/i8698en.pdf, [hereinafter FAO, *Funding Strategy*].

96. *See* FAO, Rep. of the Eighth Session of the Governing Body on The Benefit-Sharing Fund 2018-219, at 2–3, 24, U.N. Doc. IT/GB-8/19/9.1/Inf.1 Rev.1 (2019), http://www.fao.org/3/na914en/na914en.pdf, [hereinafter Item 9.1].

97. *See* FAO, *Financial Statements 2018-2019 for the Core Administrative Budget (Including Reserve Funds), as Well as Special Funds for Agreed Purpose, Special Funds to Support the Participation of Developing Country Contracting Parties and the Benefit-Sharing Fund*, http://www.fao.org/3/na914en/na914en.pdf, [hereinafter *Financial Statements 2018-2019*] (calculating that BSF funding exclusively consisted of voluntary contributions and the interest accrued on those voluntary contributions).

98. *See Fourth Call for Proposals Under the Benefit-Sharing Fund Opens*, FAO (Dec. 15, 2017), http://www.fao.org/plant-treaty/news/news-detail/en/c/1073028/.

99. *See id.*

Another part of the IT's Funding Strategy is the Global Crop Diversity Trust. Established in 2004, this Trust was designed to bring together and secure gene banks that are tasked by the international community with conserving this legacy for humanity *ex situ*.[100] The Global Crop Diversity Trust is an independent organization under international law.[101] With the exception of allowing the Governing Body of the IT to nominate four board members and presenting an annual report of its activities to the Governing Body, the Trust maintains full independence in managing its operations and activities and in making decisions relating to the raising and investment of funds, and all operations, including decisions relating to the allocation of grants from the Trust.[102] Despite this autonomy, and because of its considerable contribution to *ex situ* conservation, the Trust is recognized as an essential element of the Funding Strategy of the IT in relation to the *ex situ* conservation and availability of PGRFA.[103]

The Crop Trust established a Donor's Council of public and private donors to provide a forum to express their views on the Trust's activities and operations.[104] For a government to be a member of the Council it must pay at least $25,000 USD.[105] A private donor must contribute at least $250,000 USD for representation.[106] Some of the current Donor Council Members include Bayer, DuPont, Syngenta,

100. *See* Shakeel Bhatti, *The International Treaty on Plant Genetic Resources*, *in* DESIGNING THE MICROBIAL RESEARCH COMMONS: PROCEEDINGS OF AN INTERNATIONAL SYMPOSIUM 137, 140 (Paul F. Uhlir ed., 2011).

101. *See Our Mission*, GLOB. CROP DIVERSITY TR., https://www.croptrust.org/our- mission/ (last visited June 17, 2020) (providing an overview of the Crop Trust mission and its focus on crop diversity); *see also Establishment*, GLOB. CROP DIVERSITY TR., https://www.croptrust.org/about-us/governance-policy/establishment/ (last visited June 17, 2020) (listing the earliest signing or acceding of parties to the Establishment Agreement taking place in 2004).

102. *See Governance & Policy*, GLOB. CROP DIVERSITY TR., https://www.croptrust.org/about-us/governance-policy/ (last visited June 18, 2020).

103. *See id.* (detailing the overall organization and composition of the four organs of the Crop Trust).

104. *See id.*; *The Plant Treaty*, GLOB. CROP DIVERSITY TR., https://www.croptrust.org/about-us/governance-policy/the-plant-treaty/ (last visited June 18, 2020).

105. *The Donor's Council*, GLOB. CROP DIVERSITY TR., https://www.croptrust.org/about-us/governance-policy/donors-council/ (last visited June 18, 2020) (describing the purpose and composition of the Donor's Council).

106. *See id.*

Unilever, and the Bill and Melinda Gates Foundation.[107]

The mission and the objectives of the Global Trust are laudable. Yet it is notable that when it comes to conserving agricultural biodiversity *ex situ*, wealthier governments and private industry did not turn to market mechanisms, but instead built a self-sustaining, permanent Global Crop Diversity Endowment Fund of $850 million USD.[108] Furthermore, unlike the functioning of the MLS, which is accountable to the governments who are parties to the IT, governance of Crop Trust is not accountable to the parties, and has a cost of entry to representation of its Donor Council that is out of reach for many developing countries, small and medium private industry, social movements and organizations representing the interests of SSF.[109] The sad result is that in the absence of direct payments from the MLS, the Benefit-Sharing Fund has struggled to attract voluntary contributions to support farmers in developing countries while the Global Trust has fared much better.[110] As of 2018, $440 million USD has been pledged to the Trust.[111]

It is understandable why the Crop Trust chose to structure its relationship with the IT as it did. First, since 2004, Working Groups under IT have been discussing how to make the MLS function better, and while some progress has been made, no agreement has been reached.[112] One could argue that the intergovernmental process

107. *See Our Donors*, GLOB. CROP DIVERSITY TR., https://www.croptrust.org/about-us/donors/ (last visited Aug. 30, 2020) (listing Crop Trust's donors).

108. *See The Endowment Fund*, GLOB. CROP DIVERSITY TR., https://www.croptrust.org/our-mission/crop-diversity-endowment-fund/ (last visited June 18, 2020) (explaining goals and mission of the Fund).

109. *See Governance & Policy*, *supra* note 103 (laying out leadership structure of Crop Trust and its status as an independent organization under international law).

110. *Compare Financial Statements 2018-2019*, *supra* note 98 (showing lower voluntary contributions to Benefit-Sharing Fund), *with* SIR PETER CRANE, Chair of Executive Board, GLOB. CROP DIVERSITY TR., FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2019 4, 12–13 (2020), https://cdn.croptrust.org/wp/wp-content/uploads/2020/04/CropTrust_FinancialStatement_2019.pdf (demonstrating higher contributions for Global Crop Diversity Fund).

111. *See Our Donors*, *supra* note 108.

112. *See* FAO, Rep. of the Eight Meeting of the Ad Hoc Open-Ended Working Grp. to Enhance the Functioning of the Multilateral Sys., ¶¶ 9–12, U.N. Doc. IT/OWG-EFMLS-8/18/Report (2018) [hereinafter Rep. of the Ad Hoc Working Group] (laying out the Working Group's goal of adapting coverage of Multilateral Systems); *see also* FAO, *Development of the Funding Strategy for the International*

intended to improve the MLS is not working, perhaps going as far as to say the process is broken.[113] Second, the "endowment approach" of the Crop Trust is an implicit acknowledgment that the financial resources required to fund conservation exceed potential benefit flows from market transactions related to the commercialization of these resources.[114]

The inability of governments to collectively find ways to mobilize support for the conservation and sustainable use of PGRFA and recognition of Farmer's Rights under International Undertaking,[115] the non-binding predecessor to the IT, particularly in support of the needs of developing countries, reflects the neoclassic economic dismissal of the non-market public economy of government.[116] In effect, this results in a collective hollowing out of government's roles.[117] The neoclassical mindset guided governments negotiating the IT to go down the more limited, contractual road paved by the CBD.[118] As noted by Clive Stannard:

> "This direction inevitably led to a single-minded focus on benefit sharing, in general, to the detriment of international arrangements for the sound management of the genetic resources themselves, and to a specific focus on the mandatory sharing of monetary benefits derived from commercial use which became the almost exclusive topic of the negotiations and culminated in the negotiation of the Standard Material Transfer Agreement

---

Treaty on Plant Genetic Resources For Food and Agriculture, ¶ 12, U.N. Doc. CGRFA/IC/OWG-1/05/7 (2005) [hereinafter *Development of the Funding Strategy*] (establishing the Multilateral System as a priority for the Working Group).

113. *See* BRAGDON, FOUNDATION OF FOOD SECURITY, *supra* note 87, at 22 (arguing that MLS has failed to generate benefits).

114. *See The Endowment Fund*, *supra* note 109 (explaining that all support for the Fund comes directly from investment income earned).

115. *See id.* (describing the Fund's reliance on private donors and market forces); *see also* BRAGDON, FOUNDATION OF FOOD SECURITY, *supra* note 87, at 11–13 (stating the limited success governments have had at creating coherence on use of PGRFA).

116. *See* Sekera, *The Public Economy*, *supra* note 11, at 37 (explaining the economic theory of the government as a non-producer).

117. *See* John D. Donahue, *Review*, 27 J. POL'Y ANALYSIS & MGMT. 690, 690–91 (2008) (reviewing DAVID G. FREDERICKSON AND H. GEORGE FREDERICKSON, MEASURING THE PERFORMANCE OF THE HOLLOW STATE (2006)) (describing how measurements of productivity and performance management can be used to cut down government).

118. *See* Stannard, *supra* note 46, at 251–52 (explaining how concerns about public goods and collections was seen as problematic in the context of the CBD).

(SMTA). . . ."[119]

The governing body established by the Treaty has been examining the functioning of the MLS through different working groups since 2004.[120] The current incarnation of the governing body is called the Ad-Hoc Open-ended Working Group to Enhance the Functioning of the MLS (MLS Group).[121] During the first meeting of the MLS Group in Geneva in December 2014, consultants reported a "mismatch" between the projections and expectations for the IT BSF.[122] The MLS Group continues to discuss ways to make the system work to generate robust and predictable flow of monetary benefits.[123] Without detracting from the non-monetary benefits—including facilitated access to PGRFA in the MLS—there is consensus on the concept of a subscription service.[124]

The subscription service generally concerns access to both genetic resources and sequence data, and sharing of related monetary benefits.[125] Commercial users or governments representing

119. *Id.* at 252.

120. *See, e.g.*, FAO, Rep. of Ad Hoc Open-Ended Working Grp. to Enhance the Functioning of the Multilateral Sys. on Background on the Work Undertaken by the Ad Hoc Advisory Committee on the Funding Strategy, and Its Further Development, First Meeting, at 1, U.N. Doc. IT/OWG-EFMLS-1/14/3 (2014) [hereinafter Background on the Work] (recalling the Ad Hoc Working Group's examination of the MLS); *see also Development of the Funding Strategy*, *supra* note 113, at 1–3 (reviewing the Open-Ended Funding Strategy Working Group's examination of the MLS).

121. *See* Background on the Work, *supra* note 121, at 1.

122. *See* FAO, Rep. of Ad Hoc Open-Ended Working Grp. to Enhance the Functioning of the Multilateral Sys. on Its Synoptic Study 1: Estimating Income to Be Expected From Possible Changes in the Provisions Governing the Functioning of the Multilateral Sys., at 6–9, U.N. Doc. IT/OWG-EFMLS-2/14/3 (2014) [hereinafter Synoptic Study 1] (exploring the difference between theoretical potential income, and expected income under real world circumstances).

123. *See* FAO, Interim Rep. of Ad Hoc Open-Ended Working Grp. to Enhance the Functioning of the Multilateral Sys. on Its Ninth Meeting, at 16, U.N. Doc. IT/OWG-EFMLS-9/19/Interim Report (2019) [hereinafter Interim Report] (discussing the growth plan for the MLS).

124. *See* FAO, Rep. of Ad Hoc Advisory Committee on the Funding Strategy and Resource Mobilization on its Eleventh Meeting, Annex 2: Operations Manual: Benefit-Sharing Fund, at 5, U.N. Doc. IT/GB-8/ACFSRM-11/19/2 Add.2 (2019) [hereinafter Annex 2] (the Governing Body finalized a negotiation process to enhance the functioning of the Multilateral System, with the subscription system a "key component" of the enhancement to the Multilateral System).

125. *See* FAO, Commentary of the Ad Hoc Open-Ended Working Grp. to

associations of commercial users would commit to making annual payments to the Benefit-Sharing Fund, based on their annual seed sales and for a fixed period of time.[126] During that period, they would have facilitated access to the genetic resources in the MLS and to genetic sequence data.[127] Because the rate of payment would be based on seed sales, the need to track the use of materials or sequence data in the creation of new products is eliminated.[128] Alternative sources of PGRFA outside the MLS as well as emerging technologies may present further challenges generating monetary benefits through the MLS.[129]

As a limited transactional approach—an exchange between users and providers predicated on commercial value being shared—it is not surprising that ABS fails to provide sufficient monetary benefits to support both the conservation and sustainable use of biological diversity, and other actors, including farmers, conserving, using and maintaining these resources on-farm and *in situ.*[130] As reported by Manuel Ruiz in his review of 25 years of experience with ABS, despite tens of millions of dollars spent on capacity-building, awareness-raising, and legal and policy research through 'innumerable projects and initiatives,'[131] there have been few measurable monetary benefits.[132] Furthermore, Ruiz notes that benefits for the conservation

---

Enhance the Functioning of the Multilateral Sys. on Structural Elements for the Development of a Subscription Model/System, at 1, U.N. Doc. IT/OWG-EFMLS-4/14/4 (2015) [hereinafter Commentary of Ad Hoc] (outlining the Subscription Model).

126. *See* Michael Halewood et al., *Plant Genetic Resources for Food and Agriculture Opportunities and Challenges Emerging from the Science and Information Technology Revolution*, 217 NEW PHYTOLOGIST 1407, 1417 (2018).

127. *Id.*

128. *See id.*

129. *See* D. H. Augenstein, *The Crisis of International Human Rights Law in the Global Market Economy*, 44 NETH. Y.B. INT'L L. 41, 58 (2013) (describing how increasingly globalized economies create new challenges for a Multilateral System).

130. *See* Manuel Ruiz Muller, *Access to Genetic Resources and Benefit Sharing 25 Years On: Progress and Challenges*, at 4–5, ICTSD (2018) (explaining the limited monetary benefits that can be offered by the existing framework of a system like ABS).

131. *See id.* at 1; *see also Access and Benefit Sharing*, GLOB. ENVTL. FACILITY, https://www.thegef.org/topics/access-and-benefit-sharing (last visited June 19, 2020) (describing over $60 million in activities and capacity building projects from the ABS).

132. *See id.*

of biodiversity are even less evident.[133] Insightfully, Ruiz observes the abbreviation of ABS from "access to genetic resources and fair and equitable benefit-sharing to "access and benefit- sharing" marginalized regard for equity and fairness in discourse on ABS.[134]

This diminished regard for the role and capacity of government, and misplaced faith in the role of private industry to provide support for agricultural biodiversity and its custodians, has led to undue focus and resources spent on this inherently limited approach.[135] An international review of the functioning of ABS in practice found that despite a multibillion- dollar industry,[136] there are few bioprospecting initiatives with commercial intent, and little monetary benefit accumulated.[137] Even where benefits have accrued, the question remains whether they are "fair and equitable" under a bilateral system given the asymmetries in negotiating power.[138]

B. TRADE AND IPR

Trade and IP rules have exerted substantial influence on the evolution of the modern food system, impacting the type, availability and affordability of food around the world.[139] These policy and legal frameworks are therefore not just about trade or IPR; they are about food systems.[140]

There are significant parallels between the evolution of multilateral trade rules and IPR regimes as they relate to agriculture and food

133. *See id.*

134. *See id.* at n.1.

135. *See* Florian Rabitz, *Access Without Benefit-Sharing: Design, Effectiveness and Reform of the FAO Seed Treaty*, 11 INT'L J. COMMONS 621, 623–25 (2017) (laying out how feedback loop of ABS can lead to limited benefits on biodiversity).

136. *See* SARAH LAIRD & RACHEL WYNBERG, ACCESS AND BENEFIT SHARING IN A TIME OF SCIENTIFIC, TECHNOLOGICAL AND MARKET CHANGE: ESSENTIAL LESSONS FOR POLICY–MAKERS 4 (2017).

137. *See* CHRISTIAN PRIP & KRISTIN ROSENDAL, PBL NETH. ENVTL. ASSESSMENT AGENCY, ACCESS TO GENETIC RESOURCES AND BENEFIT-SHARING FROM THEIR USE (ABS) – STATE OF IMPLEMENTATION AND RESEARCH GAPS viii (2015).

138. *See* DANIEL F. ROBINSON, BIODIVERSITY, ACCESS AND BENEFIT-SHARING: GLOBAL CASE STUDIES 31–32 (2015).

139. *See* Corinna Hawkes, *Uneven Dietary Development: Linking the Policies and Processes of Globalization with the Nutrition Transition, Obesity and Diet-Related Chronic Diseases*, GLOBALIZATION & HEALTH, at 3–4 (2006) (arguing that liberalization of the agricultural market has greatly shifted food sources).

140. *See* Bragdon, *Reinvigorating the Public Sector*, *supra* note 35, at 289.

systems.[141] Established in 1995, the World Trade Organization (WTO) subjected agriculture to multilateral trading rules for the first time through its Agreement on Agriculture (AoA).[142] Similarly, the WTO's Agreement on Trade-related Aspects of Intellectual Property (TRIPS), signed in 1994 and adopted in 2001, was the first time intellectual property was brought within the framework of global trade rules.[143]

The long-term objective of the AoA is to "establish a fair and market-oriented agricultural trading system."[144] The underlying premise of this approach is that removing state support and protection for agricultural production is the best way to achieve food security in the long term.[145] TRIPS sets out minimum standards for intellectual property that all WTO State Members must incorporate into their national laws.[146] TRIPS embodies what, at the time of its signing, was a relatively novel and counter-intuitive notion that trade restrictions—such as embargos on 'counterfeit' goods that imitate copy-righted or trademarked product—are required to promote trade liberalization.[147]

The arguments for trade liberalization and stronger and harmonized IPR are rooted in a broader debate about the proper relationship between the state and the market.[148] Advocates for trade liberalization

141. *See* MERCEDES CAMPI & MARCO DUENAS, INTELLECTUAL PROPERTY RIGHTS AND INTERNATIONAL TRADE OF AGRICULTURAL PRODUCTS 2 (2014) (explaining historic connection between industries that use plants and grains and multilateral trade rules).

142. *See* Carmen G. Gonzalez, *Institutionalizing Inequality: The WTO Agreement on Agriculture, Food Security, and Developing Countries*, 27 COLUM. J. ENVTL. L. 433, 440 (2002).

143. *See* WTO, Ministerial Declaration of 14 November 2001, WTO Doc. WT/MIN(01)/DEC/1, 41 ILM 746 (2002) [hereinafter Doha Declaration] (providing background on TRIPS); *Intellectual Property: Protection and Enforcement*, WTO, https://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm7_e.htm (last visited June 19, 2020) (describing the origin of intellectual property rules in the multilateral trading system).

144. Gonzalez, *supra* note 143, at 459–60.

145. *See id.* at 469–73 (describing the benefits of four different types of food-related entitlements that could be the basis of government programs aimed at improving food security for vulnerable populations: production-based, labor-based, trade-based, and transfer-based entitlements).

146. *See Intellectual Property: Protection and Enforcement*, *supra* note 144.

147. Susan Bragdon & David Downes, *Recent Policy Trends and Developments Related to the Conservation, Use and Development of Genetic Resources*, *in* ISSUES IN GENETIC RESOURCES NO. 7, at 9 (1998).

148. *See* Anne Orford, *Food Security, Free Trade, and the Battle for the State*, 11 J. INT'L L. & INT'L REL. 1, 64–65 (2015) (describing the roughly two-hundred-year

as the best means to ensure food security espouse a belief in a form of governance that allows the maximum freedom for the laws of the market to unfold.[149] Anne Orford notes: "The production of food and the relation of this production to land and labour are at the heart of politics, and yet the conscious attempt to institute democratic control over these features of social life is made to seem illegitimate—a barrier to trade, protectionist."[150]

Ironically, as former developing countries, nearly all of today's industrialized countries used the protectionist tools currently denied by trade rules to developing countries.[151] Industrialized countries' approach to trade and IPR effectively denies developing countries the very flexibility they used in the course of their own economic development when they established a system of intellectual property rules or support to agricultural production.[152] Many have questioned whether industrialized nations would have been able to reach their current stage of development if they did not have the flexibility they are trying to deny developing nations today.[153] The WTO agreements were the first step in an ambitious approach to not just diminish the role of the state, but also to remake the role, with its primary focus on regulation in support of market interests.[154]

There is abundant literature on the relationship amongst trade, IP,

---

history of legal debates concerning appropriate limitations to state power on market forces).

149. *See id.* at 4 (noting that this "maximum freedom" is an essential part of the idealized model for a "free trade state").

150. *Id.* at 24.

151. CHANG, *supra* note 10, at 61.

152. *See* Ha-Joon Chang, *Intellectual Property Rights and Economic Development: Historical Lessons and Emerging Issues*, 2 J. HUM. DEV. 287, 291 (2001) (noting that Switzerland did not have a patent law until 1907 and the Netherlands abolished its 1817 patent law in 1869, on the ground that patents were politically-created monopolies inconsistent with its free-market principles and did not introduce a patent law again until 1912).

153. *See* HA-JOON CHANG, KICKING AWAY THE LADDER 19 (2002) (describing what Chang views as a hypocritical policy stance wherein developed, industrialized nations advocate trade and technology policies for developing nations that are diametrically opposed to policies the developed nations themselves used during their industrial ages).

154. *See id*. at 15 (describing the "Neo-Liberal policy reform" stances employed by most developing nations); Orford, *supra* note 149, at 55 (noting the ambitions toward changing state interactions in the global market system that resulted from the WTO negotiations).

and food and nutrition security,[155] some with explicit or implicit reference to SSF and agricultural biodiversity.[156] This Article will

155. *See, e.g.*, D. Ravi Kanth, *Major North Countries Targeting South over Agriculture*, THIRD WORLD NETWORK (Mar. 13, 2019), https://www.twn.my/title2/susagri/2019/sa748.htm. (describing the opposing trade interests and approaches between developing nations, like the United States and Australia, and developing nations, naming China and India prominently in the dispute); ACHIEVING SUSTAINABLE DEVELOPMENT GOAL 2: WHICH POLICIES FOR TRADE AND MARKETS? (Int'l Ctr. for Trade & Sustainable Dev. ed., 2008), http://www.indiaenvironmentportal.org.in/files/file/Achieving%20Sustainable%20Development%20Goal%202.pdf (advocating for reforms to global trade policies in order to reform food systems with an emphasis on equity and effectiveness); D. Ravi Kanth, *China-India Renew Battle to End US-EU Agri-Support Policies*, THIRD WORLD NETWORK (July 9, 2018), https://www.twn.my/title2/wto.info/2018/ti180707.htm, (covering the negotiations between the WTO and China and India regarding the elimination of "trade-distorting domestic support" from developed nations); Alison Slade, *The Objectives and Principles of the WTO TRIPS Agreement: A Detailed Anatomy*, 53 OSGOODE HALL L.J. 948, 950 (2016) (opining on the novelty of identifying objectives and principles behind an international IP treaty in the preamble section of the TRIPS Agreement); Graham K. MacDonald et al., *Rethinking Agricultural Trade Relationships in an Era of Globalization*, 65 BIOSCIENCE 275, 275 (2015) (exploring the impacts of globalization in agricultural trade in relation to import-export imbalances and environmental impacts); OLIVIER DE SCHUTTER, FRIEDRICH EBERT STIFTUNG, INTERNATIONAL TRADE IN AGRICULTURE AND THE RIGHT TO FOOD 6 (2009), https://www.europarl.europa.eu/cmsdata/191691/20130715ATT69800EN-original.pdf (explaining the interaction between the WTO's Agreements and the obligations imposed upon the WTO's members to obey certain regulations under international law with respect to the right to obtain enough food for survival purposes); Gregory D. Graff et al., *The Public–Private Structure of Intellectual Property Ownership in Agricultural Biotechnology*, 21 NATURE BIOTECHNOLOGY 989, 989 (2003) (suggesting that international collaborative models for IP protection and management in the public sector may be beneficial on a global scale). *See generally* Leland L. Glenna et al., *Intellectual Property, Scientific Independence, and the Efficacy and Environmental Impacts of Genetically Engineered Crops*, 80 RURAL SOCIOLOGY 147, 147 (2015) (explaining the impacts of neoliberalism on IP law, scientific research, and environmental and agricultural sustainability and reform).

156. *See, e.g.*, Olivier De Schutter (Special Rapporteur on the Right to Food), *Interim Rep. on Seed Policies and the Right to Food: Enhancing Agrobiodiversity and Encouraging Innovation*, ¶¶ 24–25, U.N. Doc. A/64/170 (July 23, 2009) (noting that the "green revolution" model of agricultural development involves providing "small-scale farmers" with access to biodiverse crop seeds and the challenges that states face in employing this model in such a way that economically benefits small-scale farmers and improves global food security); BRAGDON, FOUNDATION OF FOOD SECURITY, *supra* note 87, at 6–7 (explaining the history of "the evolution of rights and responsibilities over agricultural biodiversity at the international level" going back to the Neolithic period, but with particular emphasis on more modern

instead analyze both the theory and practice of how trade and IP rules affect SSF and the sustainable production of healthy, diverse diets. The alarming trends in hunger, malnutrition, and obesity make clear that the world is not trading its way to better food and nutrition security

developments and the impact of technology on how the global community perceives these discussions); *Bragdon*, *Reinvigorating the Public Sector*, *supra* note 35, at 280–81 (concluding that "trade liberalization and globally harmonized IPRs are insufficient means for ensuring global food security," in particular for "small-scale farmers (SSF)"); SUSAN H. BRAGDON & CHELSEA SMITH, QUAKER UNITED NATIONS OFFICE, SMALL-SCALE FARMER INNOVATION 1 (2015), https://quno.org/sites/default/files/timeline/files/2016/SSF%20Innovation%20WEB.pdf (discussing the uniqueness of SSF (small-scale farmer) innovation systems); Innovation and Access to Knowledge Programme Team, *Towards a More Coherent International Legal System on Farmers' Rights: The Relationship of the FAO ITPGRFA, UPOV and WIPO*, 17 SOUTH CTR. POL'Y BRIEF, Mar. 2015, https://www.southcentre.int/wp-content/uploads/2015/04/PB17_More-Coherent-International-Legal-System-on-Farmers%E2%80%99-Rights_EN.pdf (exploring the interrelatedness of the International Treaty on Plant Genetic Resources for Food and Agriculture, the International Union for the Protection of New Varieties of Plants and the World Intellectual Property Organization, particularly as pertains to Farmers' Rights and agricultural biodiversity); CARLOS M. CORREA, QUAKER UNITED NATIONS OFFICE, TRIPS-RELATED PATENT FLEXIBILITIES AND FOOD SECURITY: OPTIONS FOR DEVELOPING COUNTRIES POLICY GUIDE 2 (2012), https://quno.org/sites/default/files/resources/ENGLISH_TRIPS-Related%20Patent%20Flexibilities%20and%20Food%20Security_CORREA.pdf (uncovering a pressing need for "genetic variability" in agricultural production in order to bolster global food security); Tung-Yi Kho, *Intellectual Property Rights and the North-South Contest for Agricultural Germplasm: A Historical Perspective*, 1 AGRARIAN SOUTH: J. POL. ECON. 255, 256 (2012) (describing intellectual property ownership developments in "agricultural seed and germplasm" and its impact on agricultural biodiversity); KARLA D. MAASS WOLFENSON, COPING WITH THE FOOD AND AGRICULTURE CHALLENGE: SMALLHOLDERS' AGENDA. PREPARATIONS AND OUTCOMES OF THE 2012 UNITED NATIONS CONFERENCE ON SUSTAINABLE DEVELOPMENT (RIO+20) 2 (2013), http://www.fao.org/3/a-ar363e.pdf (suggesting that promoting the well-fare of small-scale farmers will solve the global environmental and social problems in relation to ecologically sustainable systems); *Rome, Italy*, FAO, http://www.fao.org/countryprofiles/index/en/?iso3=ITA, (last visited June 10, 2020) (Italy's FAO "Country Profile" notes Italy's commitment to support small-scale farmers within its borders); TIINA HUVIO ET AL., SMALL-SCALE FARMERS IN LIBERALISED TRADE ENVIRONMENT 15 (Tiina Huvio et al. eds., 2005) (suggesting that trade liberalization, as it pertains to small-scale farmers, involves the integration of "agricultural productivity, hunger, and poverty" into the calculus); Peter Rosset, *The Multiple Functions and Benefits of Small Farm Agriculture in the Context of Global Trade Negotiations* 43 DEVELOPMENT 77, 77–78, 81–82 (2000) (arguing that trade liberalization and the Agreement on Agriculture currently under negotiations at the WTO could "severely undercut the remaining viability of small farm production").

for all.[157] This begs the question: "Is the problem with the assumptions underlying the free-market philosophy as applied to agricultural trade, or is it an issue with the rules themselves, including how they are made, interpreted and implemented?"

Jennifer Clapp, a leading political economist, provides a thorough analysis of the dominant neoclassical arguments in the light of food security concerns.[158] The first premise of trade liberalization identified is the theory of comparative advantage. Comparative advantage posits that a country should produce what is in its comparative advantage to produce, and trade for what it is not able to efficiently produce.[159] For comparative advantage to work in practice, two other presumptions must hold: (1) that the market is competitive and, (2) that there is a level playing field amongst participants in the system.[160]

The theory of comparative advantage says nothing about nutrition and dietary diversity as a key component of food security, and hence does not incorporate the effect on SSF and agricultural biodiversity.[161] Rather, it equates production and sufficient calories with food security.[162] Application of comparative advantage pushes countries

157. *See* Sarah E. Clark et al., *Exporting Obesity: US Farm and Trade Policy and the Transformation of the Mexican Consumer Food Environment*, 18 INT'L J. OCCUPATIONAL & ENVTL. HEALTH 53, 53 (2012) (describing obesity as "an epidemic" in countries like the United States and its trade partners); W. Snowdon & A.M. Thow, *Trade Policy and Obesity Prevention: Challenges and Innovation in the Pacific Islands*, 14 OBESITY REVS. 150, 150 (2013) (suggesting that current trade policies and agreements may contribute to an "obesogenic food environment" and discussing the impacts of this reality on the Pacific Islands' food supply and trade possibilities).

158. *See* JENNIFER CLAPP, UNITED NATIONS, TRADE LIBERALIZATION AND FOOD SECURITY: EXAMINING THE LINKAGES 6 (2014), http://quno.org/sites/default/files/resources/QUNO_Food%20Security_Clapp.pdf (suggesting that there are "many caveats" to the "dominant neoclassical economic arguments for agricultural trade" that need to be discussed in relation to concerns about food security, that dominant trade theories use "an outdated notion of food security" that could stand a "more nuanced" approach, and that "trade theory and policy tends to prioritize efficiency" rather than social goals).

159. *See id.* at 7 (noting that "the theory of comparative advantage" is one of three components to the neoclassical trade theory, with the other two components noting a "moral imperative to distribute food" from regions of abundance to regions with a deficit as well as "dangerous risks to food security associated with restricting trade in food.").

160. *Id.* at 15.

161. *Id.* at 25.

162. *Id.*

into product specialization.[163]

Product specialization is problematic on multiple levels when it comes to SSF and the production of diverse, nutrient-dense crops.[164] First, it creates a bias toward cash crops and non-edibles, such as coffee or horticultural products, for export over production for domestic food markets.[165] Second, product specialization incentivizes countries to rely on international trade to meet domestic food needs, resulting in rising import dependence and declining local production.[166] A net food importing country, particularly a developing country, is vulnerable to price spikes or shortages due to unforeseen weather events, pests, and diseases.[167] Third, product specialization can cause an irreversible loss of diversity and SSF knowledge.[168] Generally, once a country specializes in its production of goods, it has little choice but to trade because adjustment back to a more diverse economy is difficult and time-consuming.[169] Even if the seeds, knowledge, and fertile land were still available, it would take a season to produce a crop.[170]

Application of competitive advantage is antithetical to climate resilience and the diversified farming systems that are the foundation for healthy diets. The negative impacts are further exacerbated by the influence of highly concentrated agribusiness, and the power disparities within and between countries in the making and

163. *See* Peter K. Schott, *Across-Product Versus Within-Product Specialization in International Trade*, 119 Q.J. ECON. 647, 648 (2004) (illustrating comparative advantage pushing countries to specialize "in unique subsets of goods" by discussing the Hecksher-Ohlin factor proportions framework's assertion that the Philippines specialized in labor-intensive product production whereas Japan specialized in capital-intensive product production because of unique abundances in those two countries).

164. *See* Jeffrey D. Michler & Anna L. Josephson, *To Specialize or Diversify: Agricultural Diversity and Poverty Dynamics in Ethiopia*, 91 WORLD DEV. 214, 222 (2017) (suggesting that "agricultural diversification, not specialization," could reduce poverty levels).

165. *See id.* at 214 (noting that product specialization "will always be profit maximizing.").

166. *See* CLAPP, *supra* note 159, at 21–22 (noting that once countries specialize in the production of specific commodities it often too difficult to re-diversify the domestic agricultural economy, forcing reliance on trade).

167. *See* NAT'L INTELLIGENCE COUNCIL, NICR 2013-05, NATURAL RESOURCES IN 2020, 2030, AND 2040: IMPLICATIONS FOR THE UNITED STATES 11 (2013).

168. *See* Bragdon & Hayes, *supra* note 14, at 1279.

169. *See* Herman E. Daly, *The Perils of Free Trade,* 269 SCI. AM. 50, 51 (1993).

170. Bragdon & Hayes, *supra* note 14, at 1279.

implementation of the rules. Under this influence, agribusiness's concentration led to a 'product specialization' characterized by the spread of high-input agricultural methods at the expense of diversified and more environmentally-sustainable low-input systems.[171] Without improvement in local agriculture, many countries became completely dependent upon food imports.[172] *Furthermore,* as will be discussed below, comparative advantage is a fiction in a system of rules that codify substantial imbalances in agricultural subsidies.[173]

Despite years of continuing negotiations, the AoA[174] and regional trade agreements, such as the North American Free Trade Agreement (NAFTA), have not levelled the playing field between grossly imbalanced levels of agricultural subsidies. Instead, these agreements have opened up domestic markets to products from countries with heavily-subsidized agricultural sectors.[175] Because of their artificially low prices, foreign subsidized products undercut the ability of domestic producers to compete in their own markets.[176] Under NAFTA, trade liberalization caused the unemployment of an estimated two million Mexican maize farmers and the replacement of diverse farming systems with systems supporting processed foods.[177] NAFTA triggered an immediate surge of direct investment from the United States into Mexico's food processing industry.[178] Between 1999 and

171. *Id.* at 1278.

172. *See* Martin Khor, THE IMPACT OF TRADE LIBERALISATION ON AGRICULTURE IN DEVELOPING COUNTRIES: THE EXPERIENCE OF GHANA (2008); *see also* JENNIFER CLAPP, HUNGER IN THE BALANCE: THE NEW POLITICS OF INTERNATIONAL FOOD AID 38 (2012) (noting that imports, including food aid, can change local diets and create long-term dependencies on imported commodities).

173. *See* Chris Smaje, *Comparative Disadvantage*, SMALL FARM FUTURE (July 11, 2018), https://smallfarmfuture.org.uk/2018/07/comparative-disadvantage/ (suggesting that the theory of comparative advantage is not applicable to today's global economy).

174. Agreement on Agriculture art. 20, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 U.N.T.S. 422, 422–23.

175. *See* Gonzalez, *supra* note 143, at 440 (noting that the Agreement on Agriculture is the first agreement since 1947 that agriculture commodities have been subject to multilateral trading rules).

176. Bragdon & Hayes, *supra* note 14, at 1280.

177. *See* A.P. Thirlwall, *The Rhetoric and Reality of Trade Liberalization in Developing Countries*, 3 RIVISTA ITALINA DELGI ECONOMISTI 3, 16–17 (2014).

178. *See* Ramon Vera Herrera, *The Global South Has Free Trade to Thank for Its Obesity and Diabetes Epidemic*, GUARDIAN (April 6, 2015, 10:06 AM), https://www.theguardian.com/commentisfree/2015/apr/06/global-south-has-free-

2004, three-quarters of the country's foreign investment in Mexico went into the production of processed foods, sales of which went up by 5 to 10 percent per year.[179] After visiting Mexico in 2012, Olivier de Shutter, the UN Special Rapporteur on the Right to Food, reported that "[t]he overweight and obesity emergency that Mexico is facing could have been avoided, or largely mitigated, if the health concerns linked to shifting diets had been integrated into the design of the country's trade policies."[180]

The peril of relying on comparative advantage was revealed in the food crisis of 2007 to 2008, and in India and Mozambique in 2010 when world food prices increased dramatically and caused social unrest in both developed and developing countries.[181] During the summer of 2007, 29 countries cut back on food exports to ensure their populations had enough to eat.[182] Several countries in South Asia had limited or banned exports of rice. In other countries, exports of wheat and even sunflower seeds had been restricted.[183] The effects of social unrest, as millions fell into poverty, proved to be lasting and compounded into more dangerous work and less nutritious diets for those affected.[184]

In theory, IP systems strike a balance between providing incentives to innovators and to the wider public interest, by making useful products available to society.[185] In practice, IP systems protecting plants, genetic information, and biological processes reflect the economic structure and concerns of agriculture, and agribusiness, in

---

trade-to-thank-obesity-diabetes-epidemic.

179. *See id.*

180. *See* Olivier De Schutter (Special Rapporteur on the Right to Food), *Rep. on Mission to Mexico*, ¶ 11 U.N. Doc. A/HRC/19/59/Add.2 (July 23, 2009).

181. *See* Bragdon & Hayes, *supra* note 14, at 1279.

182. Keith Bradsher & Andrew Martin, *Food Crisis Deepens as Countries Restrict Exports*, N.Y. TIMES (June 30, 2008), https://www.nytimes.com/2008/06/30/business/worldbusiness/30iht-trade.4.14106348.html.

183. *See, e.g.*, David Montero, *Asia Limits Rice Exports and as Prices and Uncertainty Rise*, CHRISTIAN SCI. MONITOR (Apr. 22, 2008), https://www.csmonitor.com/World/Asia-Pacific/2008/0422/p12s01-woap.html.

184. *See, e.g.*, Mark Hughes, *Global Food Crisis*, INFOPLEASE (Feb. 11, 2017), https://www.infoplease.com/math-science/earth-environment/global-food-crisis.

185. *See* PATTA SCOTT-VILLIERS ET AL., PRECARIOUS LIVES: FOOD, WORK AND CARE AFTER THE GLOBAL FOOD CRISIS 7 (2016) (telling the stories of those affected by the global food crisis).

industrialized countries.[186] The adoption of TRIPS and the revision of Union for the Protection of New Varieties of Plants (UPOV) in 1991 expanded the global scope of the recognition of plant-related IP which was occurring in industrialized countries.[187] Two questions emerge concerning plant related IP systems as tools of the market: do they strike a balance between innovators and the wider public interest in food and nutrition security; and can they simultaneously support the economic interests they were created to bolster, and the interests of SSF and agricultural biodiversity?[188]

Expansion of the individual rights component of IP policy and a contraction of focus on broader social good have characterized IP systems over the last forty years.[189] This trend is demonstrated in both plant-related patents as well as plant variety protection laws,[190] as seen in the evolution of UPOV.[191]

---

186. *See* STAFF OF S. COMM. ON THE JUDICIARY, SUBCOMM. ON PATENTS, TRADEMARKS, & COPYRIGHTS, 85TH CONG., AN ECONOMIC REVIEW OF THE PATENT SYSTEM 36–38 (Comm. Print 1958) [hereinafter SENATE ECONOMIC REVIEW] (noting that the patent system stimulates talents and the development of technology); *What is Intellectual Property?*, WIPO (Mar. 31, 2020), https://www.wipo.int/about-ip/en/.

187. *See* RAMESH CHANDRA, ISSUES OF INTELLECTUAL PROPERTY RIGHTS 32 (2004) (providing an overview of the historical development of intellectual property as it relates to living things, including agriculture).

188. *See TRIPS and Public Health*, WTO, https://www.wto.org/english/tratop_e/trips_e/pharmpatent_e.htm (background regarding compulsory licenses for medicines as an amendment to the TRIPS agreement); *see also* WIPO, *Introduction to Plant Variety Protection Under the UPOV Convention*, ¶16, WIPO/IP/BIS/GE/03/11 (2003) [hereinafter WIPO Introduction to UPOV] (sharing an overview of the UPOV convention and the protections it provides for plant breeding and development).

189. *See* SENATE ECONOMIC REVIEW, *supra* note 187, at 36 (asking the questions rhetorically and providing a response); Hannu Wager, *Biodiversity, Traditional Knowledge and Folklore: Work on Related IP Matters in the WTO*, 3 INTERCULTURAL HUM. RTS. L. REV. 215, 219 (2008) (focusing on the relationship between the TRIPS agreement and genetic resources and associated traditional knowledge).

190. *See* Zhiqian Wan & Mark Perry, *Breeding Exemption in Plants Under Intellectual Property Rights*, *in* FREE TRADE AGREEMENTS: HEGEMONY OR HARMONY 99–109 (Lillian Corbin & Mark Perry eds., 2019) (providing context to the development of various legal regimes under the International Convention for the Protection of New Varieties of Plants).

191. *See id.*; Nicholas Short, *The Political Economy of the Research Exemption in American Patent Law*, 26 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 573, 610–12 (2016) (balancing encouraging research against economic incentives in

UPOV created a new kind of intellectual property protection for new plant varieties called breeders' rights.[192] The protection gave plant breeders exclusive rights to sell invented, novel, and distinct, varieties for a specified period of time.[193] This was the first formal recognition that plants had value beyond being physical commodities, and recognized the product of breeders as valuable.[194] The 1991 revision of UPOV is characterized by a widening of the scope of rights granted to breeders, a narrowing of the breeders' exemption and a lengthening of the duration of plant variety protection.[195]

Questions arise as to what kind of innovation these systems encourage, discourage, or displace and whether, particularly in the context of corporate consolidation, they encourage innovation at all. IP systems do not support SSF innovation. In fact, the United Nations Conference on Trade and Development found that privatization and patenting of agricultural innovation has been displacing not only SSF and traditional knowledge of seed, but also the right to save and replant seeds harvested from their crops.[196] By and large, SSF do not use IP tools, which for the most part accommodate the needs of well-resourced actors and not the collective interests of rural communities.[197] The creation of new, locally-suitable crop varieties, by mixing new and traditional varieties, is arguably the most critical innovative activity supporting food and nutrition security.[198] Yet IP

intellectual property law); Jerome H. Reichman, *Intellectual Property in the Twenty-First Century: Will Developing Countries Lead or Follow?*, 46 HOUS. L. R. 1115, 1135–36 (2009) (suggesting that the development of patent law creates intricate and overlapping patent laws that may hold up scientific development and result in excessive litigation).

192. *See* International Convention for the Protection of new varieties of Plants, Dec. 2, 1961, 815 U.N.T.S. 89 [hereinafter UPOV Convention].

193. *See* WIPO Introduction to UPOV, *supra* note 189, at 3 (outlining the development of the UPOV Convention).

194. *See* UPOV Convention, *supra* note 193, arts. 1–2.

195. *See id.* at arts. 5, 19.

196. *See* WIPO Introduction to UPOV, *supra* note 189, at 1.

197. *See* SANDER HEHANUSSA & BURGHARD ILGE, UPOV 91 AND TRADE AGREEMENTS: COMPROMISING FARMERS' RIGHT TO SAVE AND SELL SEEDS, https://www.upov.int/edocs/pubdocs/en/upov_pub_221 (discussing the UPOV changes and its effects on breeder's rights); BRAGDON, FONDATION OF FOOD SECURITY, *supra* note 87, at 14.

198. *See* Irene Musselli Moretti (Associate Expert, UNCTAD), *Study on Tracking the Trend Towards Market Concentration: The Case of the Agricultural Input Industry*, U.N. Doc. UNCTAD/DITC/COM/2005/16, at iv, (Apr. 20, 2006).

systems do not address the concerns of SSF, the central actors in this system of innovation.[199] The UN Special Rapporteur on the Right to Food says that patents and plant breeders' rights, taken together, "reward and encourage standardization and homogeneity, when what should be rewarded is agrobiodiversity, particularly in the face of the emerging threat of climate change."[200]

Escalated by corporate consolidation, protection for plant-related IPR led to innovation focused on a narrow range of crops, technologies and approaches.[201] This generated path dependencies that weaken research on traditional crop varieties and social innovation strategies.[202] Focus on profits and market expansion resulted in research and development (R&D) spending centered on crops and technologies with the highest commercial returns, and in negligible regard for investment in innovation related to crops that are most important for SSF and the production of diverse, nutrient-rich diets.[203] Additionally, the R&D agendas and patent monopolies of the "Big Four"[204]—ASF, Bayer-Monsanto, DowDuPont and ChemChina-Syngenta—impede public interest in innovation for agricultural systems producing diverse healthy foods without harming the environment.[205]

Finally, it is doubtful that the IP system supports innovation in any substantial way because highly concentrated markets, generally

199. *See* GRAHAM DUTFIELD, INTELLECTUAL PROPERTY TOOLS FOR PRODUCTS BASED ON BIOCULTURAL HERITAGE 10 (Nina Behrman & Frances Reynolds eds., 2011).

200. *See* Bragdon, *Reinvigorating the Public Sector*, *supra* note 35, at 281.

201. *See id.* (noting that while SSF are the main creators of locally suitable crop varieties the IPR system fails to address their concerns).

202. *See* Olivier De Schutter (Special Rapporteur on the Right to Food), *Interim Report on Seed Policies and the Right to Food: Enhancing Agrobiodiversity and Encouraging Innovation*, U.N. Doc. A/64/170, at 14 (July 23, 2009).

203. *See* J. Piesse & C. Thirtle, *Agricultural R&D, Technology and Productivity*, 365 PHIL. TRANSACTIONS ROYAL SOC'Y B 3035, 3042–47 (2010).

204. *See* Gil Gullickson, *10 Ag Mergers and Acquisitions From 2017*, SUCCESSFUL FARMING (Dec. 20, 2017), https://www.agriculture.com/news/business/10-mergers-and-acquisitions-for-2017 (the big four are: BASF, Bayer-Monsanto, DowDuPont, and ChemChina-Syngenta).

205. *See* Hope Shand, *The Big Six: A Profile of Corporate Power in Seeds, Agrochemicals & Biotech*, HERITAGE FARMS COMPANION 10, 10, 12–13 (2012) (detailing the impediment to scientific research caused by the industry's practice of proprietary claims).

speaking, often work against innovation.[206] In the agri-food sector, R&D spending remains high. However, a closer look reveals disincentives to innovate, as dominant firms acquire innovators, often squelching innovation, and engage in other "defensive modes of R&D" rather than investing in the development of new ideas themselves.[207]

Neoclassical economic thought today is a sharp departure from its philosophical origins as it relates to trade and IP.[208] For liberal economists, particularly in the 19th century, free trade was promoted as a means to challenge entrenched aristocratic privilege and industrial monopolies, and to empower the manufacturing and working classes.[209] The goal was to reform government so that it would better represent a range of interests.[210] Today, trade agreements are negotiated in secret, like a private contract.[211] Agri-business—with unprecedented, concentrated power[212]—plays a major role in shaping the conduct of trade negotiations and the enforcement of

206. *See* WALTER ADAMS & JAMES W. BROCK, THE BIGNESS COMPLEX: INDUSTRY, LABOR, AND GOVERNMENT IN THE AMERICAN ECONOMY 49 (2004) (using the American automotive industry as an example of a domineering group stifling innovation).

207. *See id.* (describing defensive R&D tactics).

208. *See* Anthony Howe, *Free Trade and the Repeal of the Corn Laws*, LIBERAL DEMOCRAT HISTORY GRP. (2004), https://liberalhistory.org.uk/history/free-trade-and-the-repeal-of-the-corn-laws/ (noting the origin of free trade characteristics expressed in the agricultural sector); Jomo Kwame Sundram & Rudiger von Arnim, *Trade Liberalization and Economic Development*, 323 SCIENCE 211, 211 (2009) (explaining the economic theory of "new trade" that emphasizes variety).

209. *See, e.g.*, Howe, *supra* note 209 (noting that the origin of promoting free trade was based in disputes over land ownership which was then dominated by the noble class at the expense of the people).

210. *See id.* (adding that there was a general rejection of monopoly in all forms).

211. *See* Orford, *supra* note 149, at 63; JOHN BRAITHWAITE & PETER DRAHOS, GLOBAL BUSINESS REGULATION 510 (2000) (noting that even though some limited forms of transparency are developing the general culture of trade negotiations remains secretive).

212. *See* ELSADIG ELSHEIKH, HAAS INSTITUTE, THE ERA OF CORPORATE CONSOLIDATION AND THE END OF COMPETITION: BAYER-MONSANTO, DOW-DUPONT, AND CHEMCHINA-SYNGENTA 3–4 (Mark Abizeid ed., 2018) (highlighting the major impact of the three corporate mergers that, if approved, would leave only three multinational corporations thus greatly reducing competition); IPESFS, *supra* note 69, at 6–7 (expanding on the potential impact of these 'mega-mergers' across food systems).

agreements.[213] The terms of the negotiations are neither made public nor made available to civil society organizations and social movements. Even lawmakers have limited opportunity to intervene in the negotiations.[214] As noted by Orford: "The agenda that is being furthered by free trade agreements entrenches the relationship between states and transnational corporations that favours those corporations over local peoples and communities. Such agreements attempt to limit the capacity of governments to intervene in the economy for the benefit of their people. . . ."[215]

Language, often fiercely negotiated, providing flexibility for governments to support SSF and agricultural biodiversity is ineffectual in the face of the forces described in this Section.[216] Exploring the experience with the AoA and TRIPS, these limitations are clear.[217] The current round—called the Doha Development Round (DDA) because of its strong language about the need to place the needs of developing countries at the heart of its work program—was launched by Member States in 2001.[218] The Ministerial Declaration launching the round also has strong language on a government's right to take action to protect 'human, animal or plant life or health, or of the environment at the levels it considers appropriate,' and adds that the WTO agreements must ensure 'all people benefit from the opportunity and welfare gains of trade.'[219]

213. *See* ELSHEIKH, *supra* note 213, at 8 (describing the impact of the agribusinesses network of influencers on United States and European Union law); IPESFS, *supra* note 69, at 5, 77 (adding that concentration of power has created a "global governance of food systems").

214. *See* BRAITHWAITE & DRAHOS, *supra* note 212, at 203, 209, 510 (emphasizing the very limited access to the negotiation process despite their importance to a large number of actors); Orford, *supra* note 149, at 63.

215. *See* Orford, *supra* note 149, at 64.

216. *See id.* at 54–55 (elaborating on the impediments to supporting SSF and agricultural biodiversity).

217. *See id.* (accounting the conflict between the predicted increase in food prices and the underlying liberal market foundation of the AoA).

218. *See* Agreement on Agriculture, *supra* note 175, at 56 (when established implementation period of the AoA lasted six years (1995-2000) for developed countries and 10 years (1995-2004) for developing countries. Article 20 of the AoA included a provision for the continuation of the agricultural policy reform process. The launching of the Doha Round and the inclusion of negotiations on agricultural trade liberalization are in line with Article 20).

219. *See* Doha Declaration, *supra* note 144.

Nevertheless, despite almost 20 years of discussions, AoA negotiators have been unable to make significant progress on reducing the imbalance in domestic agricultural subsidies, even though these subsidies contribute to the spread of industrial agriculture, the displacement of SSF and agrobiodiversity, and the harm of human and planetary health.[220]

The DDA calls for the TRIPS Council to look at the relationship between TRIPS, the CBD, and the protection of traditional knowledge (TK) and folklore in its review of 27.3(b) of TRIPS.[221] It further instructs the Council that its work on these topics be guided by TRIPS' objectives (Article 7) and principles (Article 8), and that the Council must take development issues fully into account.[222] Alison Slade observes that "[b]y transcending treaty and forum boundaries, these provisions not only influence interpretative practice, they also encourage a convergence of policy objectives that facilitates greater coherency within the international system, and links intellectual property with other areas of socio-economic importance."[223]

Since 2001, the ongoing discussions at the TRIPS Council about codifying some CBD-related language into TRIPS demonstrate that the language of Articles 7 and 8 and the DDA instructions did not cause greater coherence in the international system, nor did they create a better connection between IP and socio-economic objectives.[224] Despite the regular examination of the relationship between the TRIPS and the CBD, no clear consensus on how this relationship should be reflected has emerged.[225] Indeed, a majority of WTO members support

220. *See, e.g.*, IPESFS, *supra* note 69, at 65 (describing the variety of current environmental and public health risks created by the industrial food system as widespread and escalating).

221. *See* Doha Declaration, *supra* note 144.

222. *See* TRIPS: Agreement on Trade Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, art. 7–8, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994) [hereinafter TRIPS Agreement].

223. *See* Alison Slade, *Articles 7 and 8 of the TRIPS Agreement: A Force for Convergence Within the International IP System*, 14 J. WORLD INTELL. PROP. 413, 413 (2011) (noting this means that Article 7 and 8 are able to create a new legal and policy perspective inclusive of all participating nations).

224. *See id.* at 429 (recognizing the current weak link between IP and other areas but also that their inclusion in ACTA indicates a more concrete relationship).

225. *See id.* at 430–31 (concluding the current ability for Articles 7 and 8 to form a consistent policy thread is significant but undefined).

a move to negotiate on proposed changes to TRIPS to bring it into line with, and be supportive of, the CBD.[226] The DDA notwithstanding, getting a mandate for such a negotiation seems unlikely, particularly when the TRIPS Council, with 164 Parties,[227] a subset of the CBD's 196 Parties[228], is unwilling to grant observer status to the CBD, reflecting asymmetries of power between the two treaties.[229]

Some may argue that WTO stagnation indicates that industrialized countries are not able to assert their power without check, also demonstrating the limitations of corporate influence on governments.[230] On the contrary, entrenched interests, unable to completely dominate in global, multilateral fora, are able to bypass global agreements by pursuing regional and bilateral trade that ultimately subvert globally agreed upon language.[231]

---

226. *See* Trade Negotiations Comm., *Draft Decision to Enhance Mutual Supportiveness Between the TRIPS Agreement and the Convention on Biological Diversity*, WTO Doc. TN/C/W/59 (Apr. 15, 2011) [hereinafter TRIPS 29bis].

227. *See WTO Members and Observers*, WTO, https://www.wto.org/english/thewto_e/whatis_e/ tif_e/org6_e.htm.

228. *List of Parties*, CONVENTION ON BIOLOGICAL DIVERSITY, https://www.cbd.int/information/parties.shtml (last visited June 10, 2020).

229. *See International Intergovernmental Organizations Granted Observer Status to WTO Bodies*, WTO, https://www.wto.org/english/thewto_e/igo_obs_e.htm (last visited June 10, 2020) (reflecting the pending status of international IGOs including CBD).

230. *See* Press Release, Mike Moore, Director-General of the World Trade Organization, *The WTO is Not a World Government and No One Has Any Intention of Making it One, Moore Tells NGOs* (Nov. 29, 1999), https://www.wto.org/english/news_e/pres99_e/pr155_e.htm (postulating that WTO and GATT systems are a force for peace and guard against disorder).

231. *See, e.g.*, PETER DRAPER ET AL., ECIPE, MEGA-REGIONAL TRADE AGREEMENTS: IMPLICATIONS FOR THE AFRICAN, CARIBBEAN, AND PACIFIC COUNTRIES 33, Paper No. 2/2014, (2014) (noting that governments can retain significant autonomy to pursue policy measures outside of TPP talks); DEAN BAKER ET AL., INNOVATION, INTELLECTUAL PROPERTY, AND DEVELOPMENT: A BETTER SET OF APPROACHES FOR THE 21ST CENTURY 36 (2017) (adding that there has been a movement towards "TRIPS-plus Provisions" typically made in bilateral agreements); INTERNATIONAL LABOR ORGANIZATION, A FAIR GLOBALIZATION: CREATING OPPORTUNITIES FOR ALL 5 (2014) (arguing that developing countries do not have the same advantages as developed countries); GRAIN, NEW TRADE DEALS LEGALIZE CORPORATE THEFT, MAKE FARMERS' SEEDS ILLEGAL 2 (2016), https://www.grain.org/en/article/5511-new-trade-deals-legalise-corporate-theft-make-farmers-seeds-illegal (providing an update on free trade agreements made outside the WTO that are harmful to SSFs); BEN LILLISTON, BIG MEAT SWALLOWS THE TRANS-PACIFIC PARTNERSHIP 3 (2014) (outlining how free trade agreements like NAFTA have permitted secret negotiations that circumvent international

C. HUMAN RIGHTS INSTRUMENTS

A rights-based orientation is more likely to yield the types of institutions, policies, and actions needed to fully support SSF and agricultural biodiversity than market-based tools, like trade and IP rules or biodiversity treaties that contain rights-based language only to rely on transactional systems to generate support.[232] Despite numerous agreements and writings that directly or indirectly support SSF and the management and development of agricultural biodiversity,[233] the monitoring and enforcement mechanisms in the human rights realm are weak compared to those in trade agreements.[234]

A global market economy governed by rules reflecting neoclassical economics presents challenges to all international human rights law, whether it is the Right to Food, Farmer's Rights of the IT, or implementation of the recently adopted Declaration on the Rights of Peasants.[235] Daniel Augenstein encapsulates the problem:

---

standards and are harmful to SSFs).

232. *See* Nicole Aylwin & Rosemary J. Coombe, *Marks Indicating Conditions of Origin in Rights-Based Sustainable Development*, 47 U.C. DAVIS L. REV. 753, 757–64 (2014) (finding that rights-based approaches take social and economic rights seriously).

233. *See* John H. Knox (Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment), *Report of the Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy, and Sustainable Environment*, U.N. Doc. A/HRC/34/49, at 1 (Jan. 19, 2017) (opining on the importance of biodiversity); OLIVIER DE SCHUTTER, THE WORLD TRADE ORGANIZATION AND THE POST-GLOBAL FOOD CRISIS AGENDA, PUTTING FOOD SECURITY FIRST IN THE INTERNATIONAL TRADE SYSTEM: BRIEFING NOTE 4, at 1, (2011), https://www.wto.org/english/news_e/news11_e/deschutter_2011_e.pdf (assessing the WTO's ability to protect the right to food); *Right to Food Timeline*, FAO, https://www.webcitation.org/68Cm7UmiN (last visited June 20, 2020) (showing that the Human Rights Council found a right to food in 2000); *Special Rapporteur on the Right to Food*, OHCHR, https://www.ohchr.org/EN/issues/food/Pages/FoodIndex.aspx (last visited June 20, 2020) (describing the right to food).

234. *See* James McBride & Andrew Chatzky, *How are Trade Disputes Resolved?*, COUNCIL FOREIGN REL. (Jan. 6, 2020), https://www.cfr.org/backgrounder/how-are-trade-disputes-resolved (noting the prevalence of trade dispute forums, agreements, cases, and settlements, as well as the strength of the WTO's arbitration forum).

235. *See* Margot E. Salomon & Colin Arnott, *Better Development Decision-Making: Applying International Human Rights Law to Neoclassical Economics*, 32 NORDIC J. HUM. RTS. 44, 47 (2014) (exploring the deficiencies in the ability to provide equal water access for all because neoliberal principles encourage the

> . . . [T]he exposure of the international legal order of states to the operations of global corporate power leads to a collusion of sovereign state interest and globalised corporate power to the detriment of victims of human rights violations in the global market economy. This collusion is rooted in a tension between the global human rights impacts of states' business-related domestic and foreign policies and their sovereign territorial rights to independently conduct their domestic and foreign affairs. [236]

Augestein goes on:

> The distinction between the 'territorial' and 'extraterritorial' that was once premised on the equal sovereign entitlements and responsibilities of states to protect human rights within their territory unleashes global market forces from the constraints of international law. This crisis of the state-centered conception of international human rights law – the 'business and human rights predicament'- stems less from a marginalization of sovereign states than from a transformation of their international relations in the global market economy.[237]

Heavily influenced by increasingly concentrated agribusiness, trade and IP rules reached into the domestic sphere of sovereign states in unprecedented ways, limiting the capacity of governments to intervene to on behalf of local people and communities, including SSF.[238] Despite the willingness of states to use extra-territorial regulation to promote global trade and IP rules, there is a reluctance to resort to such measures in the context of human rights.[239] This reluctance by the human rights sphere, combined with its disparate means of enforcement, effectively amounts to a hierarchy of

---

exclusion of this resource from the most impoverished members of society and that neoliberal principles often result in a failure to apply the requirements of human rights).

236. Augenstein, *supra* note 130, at 43.

237. *Id.* at 59.

238. *See id.* at 44 (noting the pressure that economic globalization asserts on governments in developed countries to promote capital flow and the pressure on governments in developing countries to maintain a competitive advantage by slowing the advancement of social and environmental protections at the cost of hurting SSFs and local communities).

239. *See* John Ruggie (Special Representative of the Secretary-General on the Issue of Human Rights and Transnational Corporations and other Business Enterprises), *Business and Human Rights: Further Steps Toward the Operationalization of the "Protect, Respect and Remedy" Framework*, ¶¶ 44–47, 50, U.N. Doc. A/HRC/14/27 (Apr. 9, 2010) [hereinafter Business and Human Rights].

international law, where powerful economic interests prevail over the public interest in sustainable agricultural practices that provide healthy and nutritious food.[240] Coherence across instruments is not possible in such an environment.[241]

The dilemma created by this situation can be seen in the adoption of a more recent human rights instrument of direct relevance to the ability of SSF to sustainably produce healthy, diverse diets: the U.N. Declaration on the Rights of Peasants and Other People Working in Rural Areas adopted by the United Nations General Assembly at its 73rd Session in December 2018.[242]

Australia, Hungary, Israel, New Zealand, Sweden, the United Kingdom and the United States all voted against the adoption of the Declaration.[243] There were 54 abstentions including most of the European Union countries,[244] along with countries such as Argentina, Brazil, Colombia, Japan, Singapore, and South Korea.[245]

The Declaration aims to better protect the rights of all rural populations, including peasants, fisherfolks, nomads, agricultural workers, and indigenous peoples.[246] For example, Article 16 calls for strengthening and protecting local livelihood options and the transition to sustainable modes of agricultural production,[247] while Article 17 concerns the right to land.[248]

Article 19 deals with the right to seeds, including the right to protect traditional knowledge relevant to plant genetic resources for food and agriculture, and the right to equitably participate in sharing the benefits arising from the use of plant genetic resources for food and

240. *See* Augenstein, *supra* note 130, at 55–56 (arguing that governments have responded to the development of the global market by promoting the economic interests of corporations over political interventions for the public good).

241. *See id.* at 44 (finding that the relationship between businesses and human rights has created an international legal order of cooperation between businesses and states to the detriment of human rights).

242. G.A. Res. 73/165 (Dec. 17, 2018).

243. *See* U.N. GOAR, 73rd Sess., 55th plen. mtg. at 25, U.N. Doc. A/73/PV.55 (Dec. 17, 2018).

244. *Id.* at 25.

245. *Id.*

246. *See* G.A. Res. 73/165, *supra* note 243, at 4–5.

247. *See id.* at 12.

248. *See id.* at 12–13.

agriculture.[249] Article 19 states that peasants have the right to maintain, control, protect and develop their own seeds and traditional knowledge.[250] While a declaration is not considered legally-binding, Article 19 has several provisions stating that "states shall":

- take measures "to respect, protect and fulfil the right to seeds of peasants and other people working in rural areas,"[251]
- "ensure that seeds of sufficient quality and quantity are available to peasants at the most suitable time for planting and at an affordable price," and[252]
- "ensure that seed policies, plant variety protection and other intellectual property laws, certification schemes and seed marketing laws respect and take into account the rights, needs and realities of peasants and other people working in rural areas."[253]

Article 19's language in this U.N. Declaration on the protection of traditional knowledge, to share equitably in benefits and the right to save, use, exchange, and sell farm-saved seed is consistent with the language of Article 9 of the IT on Farmers' Rights.[254] Ironically, with the exception of Israel and New Zealand, all those voting against the adoption of the Declaration are parties to the IT.[255] Many of those voting no, as well as many who abstained, expressed concerns about the creation of collective rights, stating human rights apply to individuals, not groups.[256] Concerns over collective rights were also expressed in conjunction with disagreement with the notion that categories of individuals should be created that merit special

249. *See id.* at 14.
250. *See id.*
251. *Id.*
252. G.A. Res. 73/165, *supra* note 243, at 14.
253. *Id.*
254. *See* International Treaty on Plant Genetic Resources for Food and Agriculture, *supra* note 19, art. 9.
255. *See Membership*, INTERNATIONAL TREATY ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE, FAO http://www.fao.org/plant-treaty/countries/membership/en/ (last visited July 28, 2020).
256. *See* Press Release, Approving 9 Drafts, Third Comm. Intensifies Fight Against Fistula, Genital Mutilation, Sexual Harassment Amid Debate Over Peasants' Rights, U.N. Press Release GA/SHC/4255 (Nov. 19, 2018), (providing the explanation from the representative of the United States as to why they voted no).

treatment.[257]

Disregarding other international law containing rights-based language such as the CBD and the IT, he United States explained its vote in part, saying "the rights to seeds, to return to the land, to use traditional farming, to biological diversity do not exist under international human rights law."[258] Sweden echoed this concern.[259] Ethiopia, also a party to the IT, explained its abstention stating that the human rights of peasants should be limited to the territory of the State.[260]

D. AGENDA 2030 AND THE SUSTAINABLE DEVELOPMENT GOALS

The 17 Sustainable Development Goals (SDGs) and Agenda 2030, adopted by the global community in September 2015, apply to all countries with the commitment "that no one is left behind."[261] As an agenda for planet, people, peace, partnership, and prosperity, Agenda 2030 provides a vision for people- and human rights-based, gender sensitive and planet-centered and sustainable development.[262] Target 17.14 of the SDGs commits all UN Member States to pursue policy coherence and a favorable environment for sustainable development by all actors and at all levels.[263] Therefore, the SDGs go beyond efforts like the DDA, which merely encourages an alignment of policy objectives and policy coherence, by actually requiring adherence.[264] SSF and agricultural biodiversity are critical to achieving key aspects of most of the SDGs.[265] The 2030 Agenda for Sustainable Development, and its 17 SDGs, therefore could serve as a unifying framework for supporting SSF, climate resiliency and diversified

257. *See id.*
258. *See id.*
259. *See id.*
260. *See id.*
261. G.A. Res. 70/1, *supra* note 57, at 4.
262. *See id.* at 2, 17.
263. *See id.* at 27.
264. *See id.*
265. *See* Bragdon, *supra* note 1, at 158; *see also* United Nations System Standing Committee on Nutrition [UNSCN], *Expert Group Meeting on Nutrition and SDGs under Review in Preparation for the High-Level Political Forum*, at 9 (June 20, 2018), https://www.unscn.org/uploads/web/news/Final-Report-of-EGM-on-nutrition.pdf (encouraging member states to acknowledge the importance of agricultural biodiversity to the SDGs and noting that agricultural biodiversity is practiced by small scale farmers who produce the majority of the world food supply).

farming systems, and diverse healthy diets. Thus far, however, Agenda 2030 and its SDGs are not delivering on this promise.[266]

Of particular relevance to SSF, agricultural biodiversity, and nutrition is the disconnect between SDG 2 "End hunger"[267] and SDG 15 "Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss."[268] Despite SDG 15's importance to the health of both people and the planet, the broad understanding of what constitutes agricultural biological diversity, and the critical role played by custodians of agricultural biological diversity, receives no explicit mention in the Sustainable Development Goals, including SDG 15.[269]

Further, progress on making this connection also has been minimal.[270] An Expert Group Meeting (EGM) was convened to review implementation of SDG 15 prior to its review at the High-Level Political Forum (HLPF) in July 2018.[271] The Background Document for the EGM noted that the goal is not just an environmental goal, it is also a social and economic one.[272] Nevertheless, the Background Document goes on to emphasize the 'protection of nature' as if synonymous with SDG 15.[273] The note mentions connections to other SDGs in many instances, but to SDG 2 only once.[274] More significantly,[275] the key messages sent to the HLPF for its consideration of SDG 15 (HLPF members are unlikely to read

266. *See* Cameron Allen et al., *Initial Progress in Implementing the Sustainable Development Goals (SDGs): A Review of Evidence from Countries*, 13 SUSTAINABILITY SCI. 1453, 1465 (2018) (acknowledging the transformative potential of the SDGs and highlighting implementation gaps resulting in the failure to effectively implement the SDGs in developing and developed countries alike).

267. *See* G.A. Res. 70/1, *supra* note 57, at 15–16.

268. *See id.* at 24–25.

269. *See id.*

270. *See id.*

271. *See* UN-DESA Division for Sustainable Development Goals, *Background Note on Expert Group Meeting on Preparation for HLPF 2018*, at 1 (May 14-15, 2018) [hereinafter EGM Background Note].

272. *See id.* at 19–20.

273. *See id.* at 4.

274. *See id.* at 7, 9.

275. *See* High-Level Political Forum on Sustainable Development, *Background Note on Lessons Learned from the First Cycle of the HLPF and Messages for 2019 HLPF Summit: What Should Heads of State and Government Know and How Can We Improve HLPF?*, 5 (2019) [hereinafter HLPF Background Note] (opining on the deluge of information that must be sifted through by HLPF participants).

background notes to multiple EGMs) makes no reference to SDG 2.[276]

The separation between the negotiations on Agenda 2030 and debates about financing for development also reveal the limitations of language.[277] This separation reflects developed countries' desire to ensure that discussion, decisions, and implementation of international finance policy take place in institutions and processes in which they dominate such as the International Monetary Financial Committee, the Development Committee of the World Bank, and the Organization for Economic Cooperation and Development.[278]

The Addis Ababa Action Agenda on Financing for Development (AAAA) was adopted in Addis Ababa in 2015 at the Third International Conference on Financing for Development, three months prior to the adoption of Agenda 2030.[279] The relationship between AAAA and Agenda 2030 was the subject of significant debate in Addis Ababa.[280] Prior Financing for Development outcomes had no formal links to the Millennium Development Goals,[281] the predecessor to the SDGs.[282] The tension between a 'stand-alone' and a 'fully integrated' outcome was resolved by agreeing that the two processes would continue in parallel, but with formal links.[283] Agenda 2030 states "[t]he Addis Ababa Action Agenda supports, complements, and helps contextualize the 2030 Agenda's means of implementation

276. *See* UN-DESA Division for the Sustainable Development Goals, *Sustainable Development Goal 15: Progress and Prospect. Outcome: Key Messages*, at 2, 3 (May 2018) [hereinafter EGM Key Messages] (mentioning SDG 15 but not SDG 2).

277. *See* Manuel F. Montes, *Five Points on the Addis Ababa Action Agenda*, 24 SOUTH CTR. POL'Y BRIEF, 1–3 (Mar. 1, 2016), https://www.southcentre.int/wp-content/uploads/2016/03/PB24_Five-points-on-Addis-Ababa-Action-Agenda_EN.pdf, (addressing the strong language and lack of action promoted by the Addis Ababa Action Agenda).

278. *See id.*

279. *See* G.A. Res. 69/313, at 1–2 (Aug. 17, 2015).

280. *See Addis: UN Negotiations Resume on Financing Framework to Advance Global Development*, U.N. NEWS (July 14, 2015), https://news.un.org/en/story/2015/07/504222-addis-un-negotiations-resume-financing-framework-advance-global-development (explaining the large points of debate).

281. *See* International Conference on Financing for Development, *Monterrey Consensus on Financing for Development*, at 4, U.N. Doc. A/CONF.198/11, annex (Mar. 18–22, 2002) [hereinafter Monterrey Consensus].

282. *See id.* at 5.

283. *See id.*

targets."[284]

The separation between the two Agendas advances the call for financing mechanisms—such as public-private partnerships (PPPs)—yet these mechanisms have failed to achieve development goals.[285] The AAAA states that "both public and private investment have key roles to play in infrastructure financing, including through . . . public private partnerships."[286] In general, PPPs have not achieved the promises they made in the form of efficiency, improved provision of traditionally "public goods," and increased economic gains (except for those accruing to the industry actors themselves).[287] A review of PPPs' successes, as measured by their contribution to achieving development goals, conserving biodiversity, protecting SSF livelihoods, and increasing the supply of affordable and nutrient-dense food, found them to be more harmful than helpful.[288]

PPPs are problematic for multiple reasons. On the private sector end of the partnership is the global, concentrated agri-food industry, with a high likelihood for conflicts of interest between corporate actors and the public interest in food systems that are healthy for people and the planet.[289] On the public sector end of the partnership, PPPs bring

284. G.A. Res. 70/1, *supra* note 57, at 28.

285. *Compare* EVERT-JAN QUAK & NICOLE METZ, FOOD & BUS. KNOWLEDGE PLATFORM, BUILDING PARTNERSHIPS WITH WHOM? QUICK SCAN OF THE KEY ACTORS IN FOOD SECURITY PUBLIC-PRIVATE PARTNERSHIPS 6–7 (2015), https://knowledge4food.net/wp-content/uploads/2015/05/150519_fbkp-stakeholder_analysis_PPP.pdf (highlighting OECD nations' reliance on PPPs to achieve development goals), *with* Karin Bäckstrand & Mikael Kylsäter, *Old Wine in New Bottles? The Legitimation and Delegitimation of UN Public–Private Partnerships for Sustainable Development from the Johannesburg Summit to the Rio+20 Summit*, 11 GLOBALIZATIONS 331, 332 (2014) (questioning the legitimacy and efficacy of PPPs) *and* Frank Biermann et al., *Multi—Stakeholder Partnerships for Sustainable Development: Does the Promise Hold?*, DEP'T OF ENVTL. POL'Y ANALYSIS, INST. FOR ENVTL. STUD., VRIJE UNIVERSITEIT, AMSTERDAM, (2007), at 2, (contesting the role and relevance of PPPs).

286. G.A. Res. 69/313, *supra* note 280, at 15–16.

287. *See* Bäckstrand & Kylsäter, *supra* note 286, at 332 (demonstrating the gap between actual and official legitimacy of PPPs).

288. *See* Bragdon & Hayes, *supra* note 14, at 1290–91 (stating that PPPs overly rely on bringing small farmers into the industrial value chain).

289. *See* OXFAM, MORAL HAZARD? 'MEGA' PUBLIC-PRIVATE PARTNERSHIPS IN AFRICAN AGRICULTURE 25–26 (2014), https://www-cdn.oxfam.org/s3fs-public/file_attachments/oxfam_moral_hazard_ppp- agriculture-africa-010914-embargo-en.pdf (showing the harmful environmental impacts of large scale PPPs); *see also* CLAPP, *supra* note 159, at 26–28 (focusing on the long-term food security

inherent risk due to lack of capacity, challenges to regulations,[290] and the small number of institutions able to represent groups such as SSF.[291]

PPPs in agricultural development are part of the shift in narrative about the role of government, away from public good and toward the supremacy of markets and industry.[292] The effect is to contract traditional areas of public research and extension, and to alter national and regional priorities and practice, thereby reducing opportunities for a more participatory, farmer-led approach.[293] If PPPs are to be effective in achieving the SDGs and supporting the sustainable production of affordable and nutrient dense food, the private sector part of the partnership must focus on SSF as private actors, and not corporate agribusiness.[294] Ultimately, one must challenge the assumption that the private sector and markets be allowed to operate freely in this context.

IV. THE WAY FORWARD

SSF and agricultural biodiversity are a foundation for healthy, sustainable food systems. Abandoning either to the spread of uniform, large-scale agriculture comes with irreversible cost to human and planetary health. The solution begins with exposing the inadequacy of the market-solutions and the dangers that agri-food-industry-influenced policies pose to these communities and resources.[295] This exposure creates opportunity to address the root causes of the hunger-

risks posed by excessive PPP use).

290. *See* OXFAM, *supra* note 290, at 15 (exploring the deleterious effects PPPs have in countries without strong governance, using sub-Saharan African countries as examples); Bragdon, *Reinvigorating the Public Sector*, *supra* note 35, at 286 (examining how liberalization and globalization can harm SSFs when the right policies are not in place to protect them).

291. *See* OXFAM, *supra* note 290, at 15 (highlighting how SSFs and their interests often get left behind when PPPs are formed).

292. *See id.*

293. *See* Kojo Sebastian Amanor, *From Farmer Participation to Pro-Poor Seed Markets: The Political Economy of Commercial Cereal Seed Networks in Ghana*, 42 IDS BULLETIN 48, 54 (2011) (covering how Ghana's implementation of PPPs alters local and regional priorities and policy frameworks); David Spielman et al., *Public-Private Partnerships in International Agricultural Research*, J. TECH. TRANSFER, at 5 (2006) (addressing exclusivity in PPPs).

294. *See* Bragdon & Hayes, *supra* note 14, at 1312.

295. *See supra* Introduction.

nutrition-health crisis through systemic, structural change, including the reinvigoration of accountable, democratic governance from the local to global levels.[296]

Negotiations to get the language "right" in multiple venues will have limited effect without systemic and structural change. It is in this context that international declarations, rules, and processes can begin to provide support for SSF and agricultural biodiversity and enable the wider diffusion of the agroecological approaches of which SSF and agricultural biodiversity are an integral part. Systemic change requires local action combined with influence at the global level of policies and institutions.[297]

Entrenched economic, social, and political forces have converged to support a uniform, industrial system of agriculture that undermines diversity and SSF, and the drives global dissemination of a food system that makes people sick.[298] It is not enough to pull into a farmers' market in an electric car and buy organic cheese directly from a local farmer. It is not enough to be content with improving agricultural production systems within one's own communities, hoping such improvement is part of an evolution to healthier food systems. The economic, social, and political challenges must be overcome in the international arenas where they arise. If not, the best we can hope for are geographic and time-limited 'islands of success.'[299]

Local action and consumer choice cannot transform a food system without changing macro-level policies and systems.[300] Dislodging entrenched interests requires broad-based alliances that extend beyond

296. *See* Jens Martens, *Revisiting the Hardware of Sustainable Development*, *in* RESHAPING GOVERNANCE FOR SUSTAINABILITY 11, 13 (2019) (advocating for more local and small-scale farmer control of the rules that govern them).

297. *See id.* at 11.

298. *See* Laura Michele et al., *SDG 2: Human Rights Risks of Multi-stakeholder Partnerships: The Scaling Up Nutrition Initiative*, *in* RESHAPING GOVERNANCE FOR SUSTAINABILITY 103, 103, 106 (2019) (highlighting the overreliance on biotechnological solutions).

299. *See* Martens, *supra* note 297, at 12 (advocating for more local and small-scale farmer control).

300. *See, e.g.*, David Boys, *Towards a New Approach to Public Infrastructure Provision*, *in* RESHAPING GOVERNANCE FOR SUSTAINABILITY 139, 139 (2019) (examining the movement toward re-municipalizing social and environmental priorities).

food systems, creating common cause with others affected by corporate concentration, privatization, de-regulation, and market-based solutions.[301] As noted in Section 2, market-based solutions have been imposed to the detriment of the public interest in the fields of health, education, public safety, criminal justice, environmental protection, and other social goods.[302] Those working for change in each of these arenas are potential allies in systems transformation. For example, there is renewed concern about corporate concentration with technology platforms and companies.[303] Those concerned are potential allies in negotiating global anti-trust rules in a venue that addresses asymmetries of power. Effecting change requires both opposing that which prevents change and building to extend the reach of that which works. Food has the potential to be a powerful unifier to join forces across issues with the shared goal of countering the forces that prevent change. Extending the reach of the positive experience in this Article and elsewhere necessitates increased awareness across geographies and cultures of the systemic challenges, and forging partnerships to influence policy from farm to fork.

It is a moment in time like never before. While experienced unevenly, hunger, malnutrition, and obesity are touching all parts of the world.[304] With the right people, in the right places, with the right tools and the right messages, it is possible to see the crucial connection between SSF and agricultural biodiversity and healthy, nutritious diets supported and implemented at a global scale.

301. *See id.*
302. *See supra* Section II.
303. *See* Cecilia Kang et al., *Google and Amazon Are at the Center of a Storm Brewing Over Big Tech*, N.Y. TIMES, (June 3, 2019), https://www.nytimes.com/2019/06/02/business/google-antitrust-investigation.html (examining the regulatory sphere of the technology industry).
304. *See* Swinburn et al., *supra* note 8, at 791.