Africa's Food Security in a Broken Global Food System: What Role for Plant Breeders' Rights?

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The food security discourse has moved from the historic emphasis on increased food production and the eradication of hunger to a holistic and multidisciplinary outlook under the food system model. However, the importance of the legal dimensions of the food system discourse has yet to be fully felt or demonstrated within the diverse disciplinary and policy spaces for understanding the food security and food system interface. This article focuses on contemporary developments in Africa on plant breeders’ rights (PBRs) – an important aspect of law and policy on innovation over plant genetic resources for food and agriculture. It observes that the focus of recent legal developments on PBRs in Africa diverges from the centrality of smallholder farmers as the principal food and agricultural producers on the continent. Critically focusing on Africa’s emergent policy reversal in favour of PBRs, the article underscores how legal developments are integral to fully understanding the dynamics of food security within a fractured global food system, especially as they relate to the African continent.

Keywords: plant breeders’ rights, PBR, food security, plant genetic resources, agriculture, Africa

1 INTRODUCTION

An estimated 1 billion people – about one-sixth – of humankind are undernourished or hungry. Most of the world’s hungry people are in Sub-Sahara Africa and South Asia.1 Ironically, farming is the livelihood of the majority of them. As such, among the ranks of the world’s poor and hungry are smallholder2 traditional or subsistent farmers, pastoralists and artisanal fisherpersons in indigenous and local communities (ILCs). Oddly, about 80 per cent of the 1 billion hungry people in the world depend

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on these impoverished smallholder farmers for their food. These farmers and other categories of impoverished peoples are among the world’s most food insecure, owing, in part, to distortions in global monetary and economic policies, notably the structural adjustment programme. In FAO’s over-rehearsed definition, ‘food security is a situation in which all people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active healthy life’. In a way, the present global hunger profile is a marker of global food insecurity, which is a major consequence of a skewed global food system. The issue of food insecurity has remained visible in the international development agenda. For example, in recognition of the link between poverty and food insecurity, the ‘eradication of extreme poverty and hunger’ is uppermost in the 2000 United Nations Millennium Development Goals (MDG), which has 2015 as its target date. For most practical and realistic purposes, the MDG was aspirational. It has since generated a momentum on the urgency to address the needs of the world’s poor and vulnerable in which hunger and food insecurity are central. 2015 has arrived. Poverty, hunger and food insecurity have neither been eradicated nor halved. Indeed, they are perhaps more dire now than ever as the world’s population is projected to hit the 9 billion mark by 2050. Undoubtedly, the momentum generated by the MDG would shape the post 2015 initiatives on poverty, hunger, food insecurity and other interconnected development goals within and beyond the MDG framework.

From the early nineteenth century through to World War II and after, the food security debate has continued to evolve. From hunger eradication, food supply and the productionist template, the discourse has shifted into a more comprehensive food system approach. Without excluding poverty eradication and increased food production, the food system approach maps a whole gamut of complex issue linkages around the production and supply of food. Essentially, a food system framework seeks to strike a balance between competing knowledge systems in agricultural production. It embraces the essence of agro-biotechnology or industrial agriculture, as well as underscoring the importance of agro-ecological imperatives or traditional systems of agricultural production. A food system approach to food security and hunger eradication
grounds the multidisciplinary and critical essence of global political economics of food and agriculture. It is an endeavour located in diverse disciplinary aspects of social and natural sciences, sustainable development and environmental studies, as well as nutrition, health and international trade and policy spaces. Within these multidisciplinary explorations, the food system model goes beyond the often productionist orientation of food security analyses to address the deeper structural environmental and natural resource depletion factors on demand and complexities of the evolving global demands for food from every stage in the food value chain.

Encompassed in food system narratives are considerations about social justice, human dignity, support and protection of vulnerable stakeholders (for example, small-holder farmers) from the threatening influences of bigger actors such as transnational agribusiness. These narratives call attention to the ecological and sustainable development deficits of rising food waste amidst the increase in the number of the world’s hungry. They also integrate contemporary challenges, notably neoliberal ideological myopia, new technologies, changing population demographics, nutritional transition, and climate change, to mention a few, into the policy space for the discourse of the global food system. A food system narrative opens a critical approach to measuring efficiency in agricultural production, shifting it from the traditional market economic scale of emphasis to one that seeks a balance between economic and ecological efficiency. The latter accommodates diverse positive externalities in the realm of sustainable ecological practices, social justice, poverty eradication, access to knowledge, and innovation in agriculture, especially in the use of plant genetic resources for food and agriculture (PGRFA).

Despite the holistic and multidisciplinary outlook of the food system model, there is a noticeable deficit in other disciplines over the incorporation of the legal dimensions of food system discourse in substantive ways. The same is equally true of the limited scope of discussions in legal literature that hardly engages integrated and inherently multifaceted dimensions of the food system narrative. Yet most of the broader social science and development approaches to food security and the food system can be reasonably advanced within a reconcilable, facilitative and responsive legal regime. Mindful of the need to improve on the identified deficit, this article focuses on contemporary developments in Africa on plant breeders’ rights (PBRs) – an important aspect of law and policy on innovation over PGRFA. It aims to spotlight the importance of integrating legal development in illuminating and complementing the food security and food system discourse. Without discountenancing other sites of law’s interfaces with the food system, such as trade and environmental law regimes, PBRs represent a unique form of law, specifically intellectual property rights (IPRs) interface with...
agriculture, food security and the food system, which has significant ramifications for the role of smallholder farmers in the eradication of poverty and hunger. The article examines the extent to which recent developments on PBRs in Africa diverge from or align with the centrality of smallholder farmers as the principal food and agricultural producers on that continent. It explores the implications of the continent’s apparent proactive posture over PBRs on African agriculture as it squares the reasons advanced for PBRs with the farmer-centred tenor of African agriculture within the broader context of global food security and food system analysis.

Following this introduction, the rest of the article has four sections. Section 2 outlines the concept of PBRs, while Section 3 focuses on recent legal developments on the subject in Africa in their historical context. Section 4 distils core legally entrenched arguments in support of PBRs and examines the extent to which such arguments are tenable in the African context. Section 5 concludes on a reflective note on food security and sustainability of African agriculture not only in the context of stronger PBRs but also of agricultural biotechnology. It conjectures on the nature of a desirable legal intervention on food and agriculture that is most suited to the African context. It advocates the need to integrate legal dimensions with the emergent multidisciplinary food system approach to the food security situation, especially as they relate to the African continent.

2 PLANT BREEDERS’ RIGHTS: CONCEPT AND JURIDICAL FRAMEWORK

Plant breeders’ rights (PBRs) is a regime of intellectual property which, as the name indicates, caters to the rights of breeders. Like most aspects of intellectual property, including patents, utility models and, to some extent, copyrights and trade marks, PBRs is a creation of statute. In some jurisdictions, the same concept is known as plant variety protection (PVP) rights, which may be inexact to the extent that such laws are more concerned with protecting the rights of breeders than the protection of plant varieties.

According to Graham Dutfield, the plant variety regime is ‘designed specifically to protect plant varieties whose seeds could otherwise be easily saved, replanted and sold’. At the heart of this rights regime is the empowerment of scientific plant breeding practices. Such practices designate a marked shift from the rudimentary or natural tendency of farmers both to cross close crop relatives with identical strains and to rely on observations from naturally occurring mutations in PGRFA as the basis of their selections and development of pure crop lines. PBRs legitimize an artificial yet legally significant demarcation between farmers and breeders in a hierarchy of power in which farmers’ dealings with plant genetic resources (PGRs) are considered natural and not innovative enough to be a subject of right. An important facet of plant breeding is hybridization, which refers to dedicated and deliberate crossings of non-related or unlike mates with diverse trains resulting in hybrid vigor.

is the characteristic of hybrid harvests to outperform their parents while they remain incapable of replicating or passing such potency in succession.19 By their nature, hybrids inherently preserve the rights of breeders, as hybrid harvests are not viable propagating materials. Farmers therefore cyclically rely on breeders for hybrid seeds. PBRs provide a legal protection for breeding activities over such varieties that are not amenable to hybridization.20 It is an artificial regime that relies on the force of law to forbid traditional farmers from saving or exchanging seeds of such varieties except under breeder approved terms.

Barring any additional prescriptions in specific national contexts, there are, statutorily, three cardinal technical criteria for eligibility for PBRs. The first is that the candidate variety has to be distinct from any other recognized or pre-existing variety. The second is that the variety must be uniform: it must display identical features or characteristics. The third is that a candidate variety must display the same predictable characteristics through successive propagation.21 A combination of these three prerequisites vests newness on the status of the candidate variety. A breeder that meets all of these criteria has enormous proprietary powers. Among such powers is the exclusive right to produce, condition for sale and other marketing rights such as stocking or exporting of protected varieties. Perhaps most importantly, recent expansion of breeders’ rights confers on them the right to exercise lien over a farmer’s harvest that results from planting a breeder’s protected varieties in certain circumstances.22

Quite unlike the essentially informal farming practices that involve modest and less intrusive forms of artificial selection, PBRs are concerned with rewarding breeding practices that focus on germplasm (‘genetic information encoded in the seed’)23 as the basis for agricultural innovation albeit within the limits of sexual compatibility. It sanctions the shift from ordinary natural selection practices by farmers to more targeted techniques such as hybridization, and a proprietary regime that makes a constituent genetic material more important than the whole plant. As such, it fits well into the logic that recognizes breeders as creators or producers of new plant varieties. PBRs promote the identification and incorporation of exotic traits on farmer established varieties and thus pave the way for more radical and extreme proprietary forms of agricultural biotechnology which use rDNA methods to conduct transgenic propagation across taxonomic boundaries through circumventing sexual reproduction essence.24

From its European origin, intellectual property rights did not extend to life forms until the early twentieth century pursuant to developments in national regimes in the United States and other European countries, especially over PVP rights. In most of Africa, intellectual property law is transmitted as part of its colonial legacy,25 which, for the most part,

19. Ibid.  
22. Ibid, art 14(2).  

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reflects the reluctance to extend it to life forms, including PGRs. However, the extension of intellectual property to PGRs in Africa is owed to the two major international initiatives on the subject. The first is pursuant to the essentially European initiative of 1961, which provides for reciprocal recognition of PVP rights among members of the International Union for the Protection of New Varieties of Plants, more often known by its French acronym, UPOV. Even then, only a handful of African countries, including Kenya and South Africa, became parties to the earlier 1978 Act of the UPOV.

Current global momentum for stretching intellectual property to life forms is owed to the 1994 World Trade Organization’s (WTO) Agreement on Trade-Related Aspects of Intellectual Property (TRIPS). Unlike the UPOV, WTO membership — a precondition for being a party to TRIPS — is far wider in scope and encompasses all but a few African countries. TRIPS reflects a revolutionary recalibration of traditional intellectual property jurisprudence by, among other things, extending the scope of its application not only to life forms but also to every field of technology and innovation, including pharmaceuticals and agriculture — hitherto domains in which developing countries, including African countries, did not support the application of intellectual property because of its perceived barrier to access and escalation of costs of essential medicines, seeds and agro-allied products.

Article 27 of TRIPS requires all member states of the WTO to provide in their domestic laws elaborate patent protection without discrimination as to field of technology. In relation to PBRs, Article 27.3(b) prescribes that ‘[m]embers shall provide for the protection of plant varieties either by patents or by an effective sui generis system or any combination thereof’. A direct significance of this provision is its endorsement of patents or PVP rights or both regimes in relation to innovation over PGRs in one swoop. It is notable that the 1978 Act of the UPOV allowed for only PVP rights and not patents. Opening up patent rights conveniently responds to the desires of agro-biotechnology or genetic engineering companies inclined to obtain broad patent rights on genes and plant species. Insertion of patented genes into a plant becomes a basis to assert intellectual property (patent) rights against classical property rights of farmers over their plants as demonstrated in the 2004 Canadian case of Monsanto Canada Inc. v Percy Schmeiser. In response to this trend, the UPOV naturally preempted the outcome of TRIPS negotiations. The UPOV Act was revised in 1991 leveraging on progress in the science of plant breeding in a manner that transformed PBRs in the likeness of patent rights in order to reposition breeders vis-à-vis agro-biotech patent holders, perceived as threats to the economic survival of conventional breeders. Along these lines, recent and continuing convergences of the world’s leading agro-biotech companies not only involve acquisitions of plant breeding concerns but have resulted in just ten multinational top seed companies controlling an estimated

28. Comoros, Equatorial Guinea, Eritrea, Ethiopia, Liberia, São Tome & Príncipe, Somalia, South Sudan and Sudan are the African countries that have yet to join the WTO.
29. Dutfield (n 16) 36.
50–75 per cent of the global seed market.\textsuperscript{32} Coupled with the dense patent thickets that characterize the operations of these transgenic seed conglomerates, conceivably, the sustainability of plant breeding and PBRs as a viable practice and legal concept in a fast changing agricultural landscape is debatable.

Yet the increased sophistication of the criteria for PBRs and the expansive range of breeders’ rights came at the price of marginalizing the ability of farmers to optimally perform in the new regime. As noted above, prescriptions of distinctiveness, uniformity and stability are hardly in sync with the epistemological orientation of ILC farmers’ dealings with PGRs. The 1991 Act of the UPOV not only expanded the scope of breeders’ rights, it did so at the expense of farmers. The 1991 Act extended the exclusive term of PBRs to align it with those of patents and beyond the tenure allowed under the 1978 Act.\textsuperscript{33} While the latter permits farmers to freely use seeds of a protected variety for further cultivation, the UPOV Act of 1991 vests constrained discretion on members to determine whether to allow farmers to use for probating purposes only (not for sale or exchange) in their own holdings the harvests resulting from the use of proprietary varieties.\textsuperscript{34} States must exercise such discretion in a manner that safeguards the overarching interests of the breeder.

Section 27 of TRIPS makes no reference to the UPOV. States, including African countries, have discretion to determine a suitable \textit{sui generis} regime of PBRs. Given that the TRIPS Agreement was the brainchild of the US and its European allies, most of whom were founding members of the UPOV, their natural inclination is to leverage the UPOV as the convenient, pre-existing and established PBRs regime.\textsuperscript{35} They have tenaciously pursued the proselytization of the UPOV, especially the 1991 version, even though countries had an open window to join the 1978 version until 1999, after which new members of the UPOV were required to accede only to the 1991 version. Yet TRIPS does not prescribe the UPOV for any country.

3 DEVELOPMENTS ON PLANT BREEDERS’ RIGHTS IN AFRICA

3.1 The AU Model Law

The African Union (AU) was very much upfront in rejecting the UPOV scheme as a preferred pathway for developing a PBRs regime on that continent. Under the umbrella of the then Organization of African Unity, it was observed that industrialized countries and ‘the UPOV secretariat are promoting the UPOV convention 1991 as the appropriate \textit{sui generis option}’ but that ‘African countries are increasingly rejecting
the UPOV 1991, as it has proved to be a tool for allowing foreign monopolies over local biodiversity.36 The AU capitalized on concerns over the relationship between the TRIPS Agreement and a number of non-trade instruments, including the Convention on Biological Diversity (CBD)37 and the then ongoing negotiations of the International Treaty on Plant Genetic Resources for Food and Agriculture (Plant Treaty).38 Those concerns provided the momentum for the articulation of African response around the convergence of interests over the protection of plant variety, the conservation of biological diversity, and the protection of traditional knowledge, access and benefit-sharing over genetic resources and farmers’ rights. The AU was mindful of the limitations of the UPOV regime, its narrow focus on breeders and apparent disregard for farmers. It was also conscious of the need to reconcile obligations under the TRIPS Agreement (which is silent on traditional knowledge), the CBD (which provides impetus for traditional knowledge) and the Plant Treaty (which accommodates farmers rights).

In 2000, the AU made a bold attempt to reconcile the competing interests under the above-mentioned instruments from African regional perspectives. The result of that effort was the framework African Union Model Law for the Protection of the Rights of Local Communities, Farmers and Breeders, and for Regulation of Access to Biological Resources (Model Law).39 As the title of the instrument indicates, unlike the UPOV (which takes on PBRs in isolation), the African approach underscores the interconnectedness of breeders’ rights with farmers’ rights and the intersecting but pivotal interests of local communities not only in the production of protectable knowledge but in the ‘fair and equitable sharing of benefits arising from the use of biological resources, knowledge and technologies’.40 Far ahead of its time, the Model Law is presently the foundation of the ongoing initiative for an AU Policy Framework for the Coordinated Implementation of the 2010 Nagoya Protocol (to the CBD) on Access to Genetic Resources and Equitable Sharing of Benefits Arising from their Utilization.41

The Model Law departs from UPOV 91 and maps a vision of plant breeders and farmers’ rights that is anchored on the communal and collective nature of production of knowledge and dealings with genetic resources. According to the undergirding philosophy of the Law, the interactions of local communities with their biological resources, knowledge and technologies depict the very communal nature of the

40. Ibid, 34.
41. In 2011, the AU General Assembly, via decision (Assembly/AU/Dec.352 (XVI)), identified biodiversity as a priority area and encouraged member states to sign on to the Nagoya Protocol. Following the conclusion of the Protocol, the Model Law naturally became the starting point for the implementation of the Protocol on the continent. Part of the General Assembly work on the implementation of Nagoya is to commission a study that reviewed the Model Law in light of Nagoya to assist countries with the implementation of the Protocol. See A Gap Analysis on African Model Law on the Protection of the Rights of Local Communities, Farmers and Breeders and for the Regulation of Access to Biological Resources (2012) [on file with the author]. The Gap Analysis is part of the component working documents for the ongoing initiative on the AU Policy Framework for the Coordinated Implementation of the Nagoya Protocol.
livelihood systems in Africa ‘that have evolved over generations of human history’ and are the subject of ‘a priori rights which take precedence over rights based on private interests’. The Law restates Africa’s objection over the extension of intellectual property on life forms. Specifically, it recognizes the role smallholder farmers, notably women, have in the conservation and useful application of genetic resources (including agriculture) in Africa and the need for their active participation and the incorporation of gender equity in law and policy-making in agricultural production and the utilization of biological resources.

The explanatory note to the Model Law remarks that the Law includes elaborate provisions on PBRs designed to recognize ‘Africa’s long tradition of community innovation and breeding’ and to ensure that it is ‘not undermined by new forms of commercial breeding and innovation’ undertaken mainly by foreign interests. This approach, according to the AU, ‘meets the obligation of TRIPS 27.3(b) for [a] sui generis option while not undermining the obligations under the CBD to the majority of African population’. The Model Law ‘recognizes that farmers have always been breeders’ and it aims at ensuring ‘that exclusively commercial breeders do not impinge on the customary practices of farmers’. It allows for farmers’ use of breeders’ proprietary varieties to develop farmer varieties in a manner consistent with the 1960 and 1978 Acts of the UPOV, even as its provision on exemptions and restrictions on breeders’ rights place it in conflict with the 1991 Act of the UPOV.

Without question, the provisions of the Model Law were against the tide of expectations of developed countries in their vision of how to implement Article 27.3(b) of TRIPS by developing countries, including Africa. As expected, the World Intellectual Property Organization (WIPO) and the UPOV opposed the Model Law. Objections centred over the Model Law’s affirmation of African opposition to patent on life forms, its recognition of community rights and prioritization of the latter over private rights in biological resources. Furthermore, the preeminence that the Model Law, arguably, attached to farmers’ rights over breeders’ rights elicited the indignation of WIPO, the UPOV and developed countries. Despite raising awareness and generating momentum over a constructive approach to PBRs, 15 years after, Africa has failed to live up to the vision the AU enunciated in the Model Law. Between 2000 and 2015, developments at regional and specific national levels on the continent point to the wholesale embracing of the 1991 Act of the UPOV.

3.2 America’s AGOA and the European Union’s EPAs

A recent study traces the trajectories through which Africa submitted to the pressure to reverse its earlier resolve against the 1991 Act of the UPOV. According to the study,

42. Model Law AU Explanatory Booklet (n 36) 33 [2].
43. Ibid, 10.
44. Ibid, 29.
45. Model Law AU Explanatory Booklet (n 36) 33 art 31.
both the US and the European Union (EU), with the support of the UPOV secretariat, adopted multipronged approaches to influence Africa’s new interest in the UPOV. For the US, African countries are not direct targets of free trade agreements (FTAs) that commit US partners to higher standards (i.e. beyond TRIPS) of intellectual protection, including the adoption of the 1991 UPOV Act for PBRs. Rather, through the use of the African Growth and Opportunities Act (AGOA),48 the US extends a special regime of tariff exemption to exports from prequalified African countries. Stronger intellectual property protection, which includes the UPOV default standard of PBRs, is a prerequisite to certify a country’s law and trade practices as not constituting a barrier to US trade and investment in order to enable such a country to be AGOA-eligible.49

Correlating to AGOA are the EU’s elaborate Economic Partnership Agreements (EPAs) with the African, Caribbean and Pacific (ACP) group of countries under the framework of the 2000 Cotonou Agreement.50 Like AGOA, Cotonou allows for waivers of WTO-mandated tariffs for EU-bound exports from ACP countries. The EPA serves as a vehicle for the EU to promote the TRIPS Agreement with no equivocation over the preference of UPOV 91 as the standard of protection for PBRs with regional partners to the EPA. In 2008 and 2014, the EU completed permanent EPAs with the Caribbean Forum (Cariforum) and the Southern African Development Community (SADC) subgroups of the ACP respectively. It is currently negotiating and has recently concluded EPAs (under the Cotonou framework) with other economic regions within Africa, namely the Economic Community of West African States (ECOWAS),51 the Economic and Monetary Community of Central African Countries, the Common Market for Eastern and Southern Africa and the East African Community.52

Article 46 of the Cotonou Agreement is the definitive basis for intellectual property provision and negotiations of the EU–EPAs with ACP countries. It requires parties ‘to ensure an adequate and effective level’ of protection of intellectual property rights under the TRIPS Agreement. The language of adequate and effective level of intellectual property finds its way into the text of the EU Cariforum EPA. Based on the two completed EPAs under the Cotonou framework (i.e. the Cariforum, SADC and ECOWAS EPAs), it is clear that there is no textual uniformity with regard to the intellectual property provisions of these agreements.53 Each EPA appears to be unique with regard to its negotiation history and circumstance. However, on PBRs and farmers’ rights, the EPAs send mixed signals. While the Cariforum EPA requires that the PVP right be in accordance with the TRIPS Agreement, it urges parties to accede to the 1991 Act of the UPOV,54 thereby affirming preference for the UPOV standard. In the next breath, it permits parties to provide for an exception to breeders’ rights in order to facilitate the exercise of farmers’ rights to ‘save, use and exchange protected

49. AGOA s 104 (a)(1)(c)(ii).
51. ECOWAS–EPA with the EU under the Cotonou framework was concluded in February 2014 and approved by Heads of States in July 2014 and opened for signature in January 2015. Many countries, including Nigeria (Africa’s largest economy), Gambia, Sierra Leone, etc., have yet to sign the agreement.
53. The ECOWAS EPA has no definitive provision on IP.
farm-saved seeds or propagating material’, a provision that creates some friction with UPOV 1991. The SADC–EU makes reference to recognition of the peculiar role of agriculture in the SADC region for food security, rural employment, inclusive rural development, sustainable development and the well-being of households. Even though silent on the UPOV, it also provides for ‘adequate, effective and non-discriminatory protection of intellectual property’.

Ongoing negotiations and texts of completed agreements of the EU–EPAs with the ACP under the Cotonou framework demonstrate a clear desire for higher intellectual property standards in Africa in general and a preference for the 1991 Act of the UPOV for PBRs in particular. This is the case despite mixed signals on farmers’ rights and unclear references to the role of agriculture for rural advancement and food security in the texts of the Cariforum and SADC EPAs. Moreover, both the AGOA and the EU–EPA schemes cement the understanding in policy circles that high standards of intellectual property and PBRs are the sine qua non for market access to the US and the EU and for foreign direct investments. This state of affairs chills whatever enthusiasm in African States there may have been, at national and regional levels, for a steadfast approach to the African Model Law vision of PBRs.

3.3 Regional and national responses: OAPI, ARIPO, SADC, etc.

This carrot-and-stick dynamic gives some clues about the three significant intergovernmental and sub-regional economic initiatives in Africa that depict the continents’ warm up to the 1991 Act of the UPOV. The first is the 17-member Organization Africaine de la Propriété Intellectuelle (OAPI), which is the platform for the centralized coordination of intellectual property registration in Francophone Africa under the auspices of the 1977 Bangui Agreement. As part of the attempt to comply with the TRIPS Agreement, under the proactive influence of France and the guidance of the UPOV, the Bangui Agreement was revised in 1999 with the addition of Annex X, which provided for a common regime of PBRs that culminated in the UPOV’s 2014 certification and affirmation of the OAPI as its second intergovernmental member, after the EU.

The second is the 19-member African Regional Intellectual Property Organization (ARIPO), which, for all practical purposes, is an Anglophone equivalent of the OAPI. The ARIPO operates under the auspices of the 1976 Lusaka Agreement (and associated protocols). In 2009, the ARIPO embarked on the development
of a protocol on PBRs under the guidance of the UPOV, which climaxed in the 2014 UPOV certification of the ARIPO’s Protocol on Plant Breeders’ Rights as conforming with ‘the substantive provisions of the 1991 Act’ of the UPOV.63 On 6 July 2015 the ARIPO Diplomatic Conference in Arusha Tanzania adopted the Arusha Protocol for the Protection of New Varieties of Plants, paving the way for the organization to potentially be the third intergovernmental member of the UPOV, after the EU and the OAPI.

The third significant initiative is courtesy of the 15-member Southern African Development Community (SADC), which, after years of deliberations, issued in 2012 a Draft Protocol for the Protection of New Varieties of Plants (Plant Breeders’ Rights) in the Southern African Development Region64 designed to conform to UPOV 1991.

In addition to these three major intergovernmental and regional economic initiatives on PBRs, a number of individual African countries have concluded or are in the process of concluding UPOV-compliant domestic laws in their bid to join the UPOV Act of 1991. A representative sample of such countries includes Uganda, Tanzania, Kenya, Ghana, Egypt, Ethiopia and South Africa. All the countries except Egypt, Ethiopia and South Africa are ARIPO members. In addition, Tanzania is an SADC member. These overlapping memberships raise concerns over jurisdictional complexity in individual countries in the aftermath of emergent sub-regional regimes on PBRs.

In addition to the aforementioned pressure premised on market access for African exports, arguments in support of Africa’s embracing of the UPOV Act of 1991 often border on propaganda and paternalism. Eschewing those sentiments, the next section isolates and synthesizes key legally entrenched official arguments in justification of incorporation of the 1991 UPOV PBRs standard in the regional and domestic intellectual property regime on the continent, as gleaned from the instrumental texts. It scrutinizes those arguments in the context of the relevant international legal regime and Africa’s vulnerability within the global food system, taking into consideration Africa’s reliance on ILC smallholder farmers for its agro-food needs.

4 JUSTIFYING THE UPOV ACT OF 1991 FOR AFRICA

4.1 Textual justifications from OAPI, ARIPO, SADC, etc.

First, as regards OAPI, the 1999 amendment to the Bangui Agreement only incorporates PBRs in its Annex X as part of the framework strategy to holistically ‘protect intellectual property rights … in as effective and uniform a manner as possible’65 in the territories of OAPI member states. Unlike regional and national instruments exclusively dedicated to PBRs, it does not provide robust hints on the motivation, objectives and justification for adopting a 1991 UPOV-style regime. Annex X has no foreword or preamble that outlines its objectives. However, in accordance with the Bangui Agreement text, OAPI states were ‘moved by the desire to promote effective contribution of intellectual property to the development of

their states and undertook to accede to a plethora of international agreements on intellectual property, including, for our purpose, the UPOV Act of 1991. The Bangui Agreement specifies as part of its objectives the desire of member states to leverage on ‘the role played by intellectual property in the achievement of aims of technological development’.

Second, both the Draft ARIPO Legal Framework for the Protection of New Varieties of Plants (ARIPO PBRS – now the Arusha Protocol for the Protection of New Varieties of Plants) and the SADC’s Draft Protocol for the Protection of New Varieties of Plants provide elaborate and identical justifications for introducing the 1991 UPOV-style PBRs regime in Africa. The two instruments premise the initiative on Article 27.3(b) of TRIPS’ provision for an effective sui generis regime on plant varieties. They also allude to the ability of PBRs to provide growers and farmers with access to a wide range of improved plant varieties that would enhance sustainable agricultural production and advance African regional economic development and food security. The documents tie effective plant variety protection pursuant to the 1991 Act of the UPOV with boosting plant breeding and development of new plant varieties for ultimate advancement of agriculture for the benefit of society.

The foregoing justification is consistent with the key findings of the 2005 UPOV-commissioned study on the impact of PVP in a select number (5) of representative countries at different developmental levels.

Third, the reasons gleaned from the aforementioned specific national jurisdictions that have been or are in the process of introducing PBRs are also engaged within the broader framework of adequate and effective levels of intellectual property rights, specifically the rights of breeders. While respectively the Tanzanian and Ghanaian Act and Bill on PBRs are bereft of preamble or objective or purpose sections, they are generally understood in the context of the regional initiatives to which both countries are members. Conversely, however, the 2014 Plant Variety Protection Act of Uganda provides amplified justifications under the section outlining the Act’s purpose. It is unequivocal that the Act is designed to promote breeders’ rights and institutional mechanisms in support thereof while serving as provision of a framework for equitable sharing of benefits integral to the use of plant varieties and relevant technologies and knowledge. It adds that stronger PBR law would promote ‘improvements in the productivity, profitability, stability, and sustainability of cropping systems through yield enhancements and maintenance of plant varieties’. Finally, the Act aims at promoting ‘the supply of good quality seed or planting material to farmers in order to strengthen the food security of the nation’.

66. Ibid, para. 2.
67. Ibid, para. 2(ix).
69. Emphasis added, word appears only in the ARIPO text.
70. Preamble to the ARIPO text (n 62) paras 3–8; preamble to the SADC text (n 64) paras 5, 7–8.
73. Ibid, art 2(a)–(c).
74. Ibid, art 2(d) (emphasis added).
75. Ibid, art 2(e).
4.2 Interrogating the promise of UPOV 91 for Africa

Even though the above-articulated justifications are not exhaustive, they beg the question how far they stand up to scrutiny in regard to the reality of African agriculture and food security needs. First, in the context of the relevant international legal regimes, it bears repeating that article 27.3(b) of TRIPS neither prescribes nor precludes UPOV-style PBRs. The idea of associating TRIPS’ article 27.3(b) with UPOV-style PBRs is a self-serving orchestration by developed countries as a way to drag the rest of the world onto a convenient and uniform PBRs system. The UPOV has served and continues to serve the interests of developed countries with advanced plant breeding industry and tradition. The application of the same system to countries, including African countries, where traditional farmers as opposed to virtually non-existent scientific breeders produce over 80 per cent of the food is suspect. Even the criminalization in the UPOV Act of 1991 of farmers’ use and exchange of farm-saved albeit proprietary seeds is indicative of its failure for fitness in Africa. Africa’s initial position pursuant to the Model Law is consistent with the approach of some Asian countries, including India, Thailand, Malaysia and the Philippines, that have since rejected a UPOV-style PBR in preference for a balanced and truly sui generis law that accommodates the interests of farmers as key stakeholders in agricultural production in those countries.76

Second, relevant international legal regimes such as the CBD (including the Nagoya Protocol), the Plant Treaty, and even the UN Declaration on the Rights of Indigenous Peoples, eschew the isolation of a single rights regime such as PBRs from the contingencies and contexts for knowledge production in ILCs and their use of genetic resources. These regimes demonstrate the relationships traversing biodiversity conservation, the role of indigenous knowledge, the importance of equitable access and benefits sharing over genetic resources and the contribution of local farmers as critical stakeholders in agriculture and food security. In essence, given its dedication to the interest of only one stakeholder constituency in agriculture, the UPOV scheme has the potential to steer African agriculture in a direction that is alienated from the continent’s factor endowments and potential for sustainable agriculture and economic development. This last point is part of the reason why the UPOV’s impact study’s77 linking of increase in the registration of new plant varieties by non-resident and resident breeders with the introduction of PVP in a specific country is not helpful in the African context, as the study provides no correlating impact information on traditional farmers and their landraces or non-PVP varieties.

The link which the PBR instruments make between adequate and efficient intellectual property on the one hand and economic development on the other stems from the classical but highly contested view of intellectual property. The triumph of this orthodox view is epitomized in the TRIPS agreement and, of course, the UPOV. This neoliberal economic model subscribes to the notion that more or stronger intellectual property translates to economic development. However, a counterargument calls attention to the sub-optimal innovative or creative outcome of overzealous intellectual property protection strategies and their potentially deleterious impact on economic development especially in technologically less endowed countries. These conflicting sentiments ‘persist because, in fact, little is really known about how IP environments

76. Singh, see n 46.
77. See n 71.
do or could influence innovation and creativity as a means to [economic] development.” Assuming that stronger intellectual property is unequivocally linked to economic development, such an outcome may be unfeasible without a few fundamental preconditions, including at least the presence of a structural and enabling capacity in a given sector.

In Africa there is, empirically, a paucity of capacity in scientific plant breeding, both in the public and private spheres. In the ARIPO region specifically, for example, ‘[a]bout 80%–90% of all seed used originates from the informal seed system (i.e. farm-saved seed, exchanges, barter and local markets) independent of whether farmers cultivate local and modern varieties’. Given the traditional farmers’ historic practice of seed exchange and their role as the mainstay of agricultural and food production on the African continent, African countries did not have laws safeguarding the rights of plant breeders until fairly recently when they capitulated to external pressures. Even the TRIPS agreement subtly accommodates this gap through its staggered transition scheme. Factually, Africa has the highest number of least developed countries (LDCs) of any continent. In ARIPO, 13 out of 19; in OAPI, 13 out of 17; and in SADC, 12 out of 15 member states are LDCs. As such, they are not required to comply with TRIPS, which means they are not required to have a national PBRs law until a later date, tentatively fixed at 2021 by the TRIPS Council. What this demonstrates is that African countries have neither the structure nor the capacity on the ground to exploit a regional or national PBRs system in a manner that could have positive ramifications for the continent’s economic development.

On the contrary, beneficiaries of the extension of PBRs to Africa are conceivably transnational agricultural corporations. This is simply evident in the proactive roles not only of developed countries but their institutions, lobbyists and corporations as undisguised vested interests in prodding the continent down the UPOV 91 path. Not surprisingly, while foreign stakeholders were extensively consulted and remained proactive in the development of PBRs in the ARIPO and the OAPI, ILC farmers in Africa were not similarly involved – a situation that further fuels the legitimacy gap in the evolution of the regime.

Industrialized countries have linked stronger intellectual property rights, including PBRs, as a pre-condition for FDI in Africa and market access for African export. As

79. See C Borowiak, ‘Farmers’ Rights: Intellectual Property Regimes and the Struggle over Seeds’ (2004) 32 PS 511, 525; La Via Campesina, ‘ARIPO’s Draft Protocol for the Protection of New Varieties of Plants Undermines Farmers’ Rights, Lacks Credibility and Legitimacy’ (Open Letter to UPOV Members, 14 April 2014) <http://goo.gl/9EbZ0h> accessed 5 March 2015; Alliance for Food Sovereignty in Africa (AFSA), ‘ARIPO’s Plant Variety Protection Law Criminalizes Farmers and Undermines Seed System in Africa’ (petition against ARIPO Draft Plant Variety Protocol, 8 October 2013) <http://goo.gl/UQLJ3q> accessed 19 March 2015. 80. For example, the UPOV Secretariat, the United States Patent and Trademark Office (USPTO), the European Community Plant Variety Office (CPVO), the African Seed Trade Association (AFSTA) and the International Community of Breeders of Asexually Reproduced Ornamental and Fruit Varieties (CIOPORA) are parties that have been extensively consulted during the development of the ARIPO and other regional instruments on PBRs in Africa. See La Via Campesina and AFSA, n 79.
81. See La Via Campesina, n 79.
82. Ibid; see also AFSA, n 79.
such, they are able to leverage their asymmetrical capacity in plant breeding to induct the continent into a harmonized global seed market for their unhindered and convenient operations. Save for the UPOV’s partisan study and a few others, there is presently a paucity of research on the impact of PBRs. However, not many disagree that PVPs embolden multinational plant breeders, as is evident in the often cited Kenyan cut flower industry. That experience is consistent with the observation that the export or related food production industries in the developing world are owned mainly by foreign entities from the developed countries. The UPOV’s study affirms a greater increase in the number of PVP titles held by non-residents above the number associated with local or resident breeders following the introduction of PVP, especially in the developing countries enlisted in the study. Even AGOA and the EPAs that support access of African goods to foreign markets do not guarantee the preservation of local or indigenous entities to leverage the opportunities. After all, ‘many plantations and food processing plants in poor countries are owned by corporations based in rich countries’, hence the much-touted export earnings associated with such economic partnerships may as well be a farce. There is no assurance against repetition of this asymmetrical dynamic of globalization in the context of plant breeding or seed industries where there is virtually no local institutional capacity in Africa.

Today, ten transnational corporations account for up to three-quarters of the global proprietary seed market. The corporations are headquartered in six countries, three of them in the US, two each in Germany and Japan, and one each in France, Switzerland and Denmark. They do not only dominate the seed market, they practise market segmentation that restricts the ability of other actors outside the monopolistic bloc to claim a market share. In 1994, Argentina’s desire to export strawberry plants to Europe was denied to avoid competition with European-produced strawberry plants under US licence. Recently, Canada’s National Farmers’ Union expressed its opposition to Canada’s implementation of the UPOV Act of 1991. It argued that not only would the implementation of UPOV 91 in Canada result in a higher licensing cost for farmers, it would only benefit American transnational seed corporations, such as Bayer, Monsanto, Dow and Syngenta, and other seed companies headquartered outside of Canada. With a virtually non-existent indigenous plant breeding or agro-biotech seed sector, Africa’s constraint from playing on this turf is self-evident.

The development of new and improved varieties and farmers’ access to them are additional promises of the proponents of Africa’s induction into a uniform PBRs system. Courtesy of industrial agriculture, out of an estimated 250 000 to 300 000 edible or higher plant varieties for food and agriculture, only about 12 per cent have been exploited. Out of that, just four crops (corn, wheat, maize and rice) are the source of about three-quarters of human plant-derived caloric consumption. The bulk of global research and development dollars is concentrated on those crops.

83. Dutfield (n 16) 43, referencing a few other PVP impact studies.
84. Singh, see n 46; Dutfield, see n 16.
86. Ibid, 26.
87. Cloke, see n 11; ETC Group, Nation of Change, see n 32.
88. GRAIN, see n 31.
89. Most of these American corporations have subsidiary operations in Canada.
91. Manning, see n 18; Kloppenburg, see n 23.
because of their economic and market value. Even then, the research focuses narrowly on genes of so-called elite germplasm, which is the basis for developing variety. There is little interest or incentive to develop genetically broad or diverse varieties. It is a research and development tradition that is steeped in monoculture, genetic uniformity and a recipe for genetic erosion. African traditional farmers do not necessarily lack improved varieties. Within their traditional landraces are rich reservoirs of genetic diversity. What they need far more than artificially improved and externally controlled or tolled proprietary ‘varieties’ are agro-ecological incentives that optimize the niches inherent in their traditional ecological knowledge and its application in diverse landraces.

It is fashionable to argue that, as farmers still have access to their landraces, PBRs do not inhibit their ability to thrive using such landraces. This convenient argument easily misses the point because it does not reckon with the rate of disappearance of non-PVP varieties. In a one-size-fits-all global PBRs order, there is hardly any incentive for farmers to develop their landraces. As is evident in the above reference to the Ugandan PBRs Act, in most developing countries seed laws encourage ‘good quality seeds’ or ‘improved varieties’ within the prism of conventional breeding, and do not recognize – let alone reward – traditional farmers’ development and adaptation of local varieties. While breeders have rights, farmers are grudgingly assigned narrow privilege under the whim and caprice of breeders.

Breeders have unfettered access to genetic materials to develop new varieties, save where such varieties are ‘essentially derived’ from a protected variety. Only a breeder’s variety may be recognized as a proprietary variety under the UPOV. Plausibly, breeders can appropriate a preexisting farmer variety to create a protected variety, even if the latter is essentially derived from a non-recognized ‘farmer variety’. The UPOV Act does not recognize as a protected variety traditional landraces or such varieties that fall within communal or immemorial use. Also, because of its narrow focus on the breeder and its disconnection from relevant regimes, it does not hold breeders to the emergent standard of prior informed consent of original custodians or disclosure of origin of genetic materials that are used to develop breeders’ improved variety. For these reasons, the present UPOV 91 framework of PBRs in Africa is conceivably disposed to facilitate biopiracy. It is hard to figure how it could give rise to the continent’s economic development. The next section revisits the interrelated claims on food security and sustainable agriculture made to justify the continent’s PBRs law and provides a concluding reflection on the way forward.

5 THE IMPORTANCE OF LEGAL INSIGHTS IN GLOBAL FOOD SYSTEM ANALYSIS

5.1 PBRs, food security and agricultural sustainability

Improvements in food security and sustainability of agriculture on the African continent are part of the justifications for Africa’s rapprochement with the 1991 Act of the UPOV. As already noted above, the 1996 FAO definition of food security is only a

92. Manning, see n 18.
93. Dutfield, see n 16.
94. Dutfield, see n 16.
starting point for grasping the concept that continues to evolve. According to analysts, the FAO’s long-held emphasis on the productionist approach as the foundation of food security is no longer fashionable. The world produces much more food than it needs. An estimated 25–40 per cent of global food produced is wasted. But there has yet to be any radical reduction in the number of the world’s hungry, most of whom are in Africa and Asia.

The association of adequate and effective intellectual property with food security and the fixation on industrial stakeholders (e.g. breeders) and new technologies of production are part of the increasingly obsolete but strategic deployment of food security. This approach, Cloke argues, is part of the neoliberal economic narrative that emphasizes key elements or dimensions of food security such as availability, access, utilization and stability. He further notes that projecting these components ‘in a vacuum of political economy and socio-cultural context’ masks the pattern of corporate domination of production, distribution and the overall market for food globally. Within this distorted framework, it is easy to associate food security in Africa with stronger plant breeders’ rights while ignoring Africa’s political economy and the socio-cultural context of its agriculture, in which traditional farmers produce the bulk of food and rely upon informal barter, seed sharing and exchange for the supply of 90 per cent of their seed, and in which formal scientific seed breeders are virtually non-existent. It is also possible within this framework to ignore the fact that stronger and more formal PBRs result in the opening of markets for transnational agro-industrial entities that have the potential for radical displacement and disruption of farmers and traditional farming systems. Furthermore, it is possible to disregard the fact that, conceivably, stronger PBRs could facilitate research and development in monoculture with no commensurate interest in traditional landraces, a situation that could erode Africa’s genetic diversity with detrimental effects on sustainable traditional knowledge and innovative adaptations of farmer varieties.

The contemporary approach to food security has morphed into a food system analysis. As already indicated, a food system framework engages myriad issues outside the neoliberal or productionist and market approach. It has moved beyond the politics of hunger eradication or the artificial certainty of people having enough to eat, but focuses on ‘where the food comes from or how it is produced’, among other things. In addition, it is concerned with the sustainability of food production as an ecological, epistemological, economic and social factor and indeed a ‘matter of marrying complex standards, values and modes of delivery from production to consumption’. A food system approach in Africa is not averse to the traditional elements of food security articulated by the FAO. That approach, however, explores socio-cultural and political economic contexts that tap into national and regional self-sufficiency, resilience, constructive regulatory systems and measures that identify Africa’s factor endowments in agriculture and food production. Uppermost in the list of such factors are Africa’s rich biological and genetic diversity, its traditional agro-ecological outlook on agriculture,

96. See Lang and Barling, n 9; Tiraldo et al., n 1; Cloke, n 11.
98. FAO, see n 5.
100. La Via Campesina, see n 79.
101. Lang and Barling (n 9) 321.
102. Ibid, 322.
and the role of smallholder artisanal farmers, especially women as recognized by the Model Law. Women contribute on average 43 per cent of agricultural labour in developing countries, and in Africa and Asia the figure is more than 50 per cent.  

It is hard to fathom how externally driven, self-serving pressures from developed countries and their fascination with market extension for monoculture through the instrumentality of boosting PBRs could support Africa’s food security. Moreover, within the tripartite framework of the environmental, social and economic ramifications of sustainability discourse, it may be overstretching it to associate strong PBRs under the 1991 Act of the UPOV with sustainable agriculture in Africa. First, as an adjunct of industrial agriculture, the PBRs regime is entrenched and serviced by an epistemological approach to agriculture that is driven by capital, wealth creation and market efficiency. It prioritizes monoculture over the genetic diversity and agro-ecological considerations that are at the heart of African agriculture.

Second, PBRs promote plant breeding and empower plant breeders virtually at the expense of the socio-cultural cohesion that is part of the essence of farmer-driven agriculture. That socio-cultural cohesion is at the core of ‘the culture in agriculture’, which constitutes the lived reality of communal and smallholder farming experience in Africa. Third, at their face value, PBRs’ promotion of monocultural plant breeding under a homogenized legal framework potentially has a disruptive effect on traditional farmer practices. Farmers’ ability to participate and economically benefit from this pattern of agriculture production is constrained by capital, capacity and privilege. Only a few farmers who can afford to pay breeders’ licensing fees or royalties and are willing to be integrated into a transactional agri-business as contract farmers can thrive. A majority of Africa’s smallholder farmers, especially women, are economically excluded from this pattern of agricultural production. Perhaps more importantly, subtly coercing African farmers away from dealing with traditional varieties and into breeders’ protected varieties is not in the sustainable economic interest of the region’s food security and agricultural sustainability. In sum, the association of stronger PBRs with sustainable agriculture in Africa requires more convincing arguments.

5.2 Concluding reflections

Food security analysis has been transformed into a food system discourse. Despite the multidisciplinary nature of the food system discourse, legal aspects of the food system are not well integrated into those discourses. Africa’s ongoing calibration of its regional and national PBRs to stronger global PBRs pursuant to the 1991 UPOV underscores how legal developments are very much integral to understanding the broader disciplinary interests on food security and the food system. In fact, understating and tackling the gaps in the global food system from its inherent multidisciplinary perspective can hardly be of any consequence if their links to the global legal order in general and intellectual property (as well as trade) in particular are not well understood.

103. FAO, see n 2.
105. Manning, see n 18.
106. GRAIN, The Great Food Robbery: How Corporations Control Food, Grab Land and Destroy the Climate (GRAIN, Barcelona 2011).
Contrasted to the earlier African initiative via the Model Law, Africa’s recent volte-face and embrace of a more aggressive regime of PBRs is at odds with the socio-cultural and political economics of agriculture on that continent. And despite their abundance, interdisciplinary insights on the eradication of hunger and poverty can only assuage or perpetuate the mimetic neoliberal narrative that serves the interest of global capital. But they risk failing to unmask the complicity of capital’s complementary legal framework and problematizing it.

In Africa, legal support for smallholder ILCs is imperative to shield them against perceived pressures from transnational agribusiness. Such legal support can be premised on an important but rarely recognized insight that locates the starting point for food security in the seed.107 According to an analyst, ‘[t]he seed for the farmer is not merely the source of future plants and food; it is the storage place of culture and history. Seed is the first link in the food chain. Seed is the ultimate symbol of food security’.108 Convergence of laws and policies on seed, agriculture, biodiversity conservation and local knowledge aimed at recognizing, protecting and empowering farmers and the value of traditional landraces, in a manner that unletters their ability to save, exchange and share seed would stimulate the African continent’s strength in its agro-biodiversity and agro-ecological knowledge base. Formal seed breeding or transgenic applications do not have an exclusive epistemological monopoly on seed improvement. Farmers are also in the business of seed improvement and agricultural innovation outside the monocultural framework and its fascination with elite germplasm. Farmers’ dealings with a wide genetic base under an agro-ecological and socio-cultural order represent a vision of agriculture in need of strategic support rather than regulatory suppression. Such a niche is very much in demand in a global food and agricultural order that is increasingly apprehensive of the dangers of monoculture and the sustainability of industrial agriculture, not to mention food safety and multifarious environmental concerns. There is a need to deliberately look inwards at Africa’s diverse genetic base as the target for public research and infrastructural support to strengthen ILC farmers.

Within the global legal framework, even under TRIPS, it is conceivable for Africa to legally chart an agricultural policy pathway that can empower ILCs to optimally participate in the local, national and global food value chain in order to exploit their niches on a fair market basis. Beyond TRIPS, cognate regimes such as the Plant Treaty provide impetus for farmers’ rights which the Plant Treaty associates with traditional knowledge over plant genetic resources for food and agriculture. Also, the participation of ILCs, especially women, in policies around agriculture and food is integral to the realization of farmers’ rights and to Africa’s food security in the global food system. Given that women are the dominant custodians of agriculture skills and sources of agricultural labour, studies indicate that adequately empowering women would increase yield production upward of 30 per cent.109 Such an outlook is in sync with the Model Law but in sharp contrast to Africa’s ongoing romance with the UPOV. Africa’s reversal of resolve against the vision of the Model Law denies the continent the opportunity to leverage on its unique factor endowment in agricultural production that potentially provides a viable alternative to the dominant industrial order. India and other jurisdictions have been able to balance the competing interest of plant breeding

107. V Shiva, *Stolen Harvest: The Hijacking of the Global Food Supply* (South End Press, Cambridge MA 2000) 7; ETC Group, see n 83; Kloppenburg, see n 23; GRAIN, see n 102.
108. Ibid.
109. FAO, see n 2.
and various industrial agricultural stakeholders through the rejection of a UPOV-style PBRs system. Africa was well within its rights in 2000 when it initiated the Model Law. Even though subsequent international developments warranted revisions of the Model Law, its fundamental logic is more relevant than ever before. Africa’s strength in warding off external pressure would lie in a uniform and coordinated approach, a privilege that India has as a singular political unit. But the competing colonial legacies evident in Africa’s regional and linguistic faultlines has resulted in a race to the bottom in PBRs despite the continent’s foresight with the Model Law. Stronger civic activism, public education and awareness-raising among African smallholder farming peasantry may yet be a viable source of internally generated counterpressure against the ongoing external siege on the continent that has the potential to aggravate its food insecurity in a fractured global food system. The present and unfolding legal climate on PBRs underscores the power of law to undermine progress in other realms and disciplines towards tackling the global burden of hunger that poses a serious and existential threat to Africa’s progress and development.