Ghana Trips Over the TRIPS Agreement on Plant Breeders' Rights

Thaddeus Manu

Centre for Commercial Law Studies
Queen Mary University of London
t.manu@herts.ac.uk

Abstract

The premise under which the global Intellectual Property Right (IPR) system is validated has often focused on a traditional materialistic approach. While this seems to find legitimate support in economic reasoning, such a fundamental view also appears to contradict a related social norm claim, which dictates that society ought to be shaped by appropriate values rather than economic rubrics. Although Ghana is not a signatory member of the International Union for the Protection of New Varieties of Plants Convention (UPOV Convention), there is explicit evidence that the Plant Breeders' Rights (PBRs) Bill under consideration in the Ghanaian Parliament contains provisions modelled on the UPOV Act 1991 rather than the potentially flexible and effective *sui generis* system in TRIPS. This paper aims to contribute to a recently active area of discussion on the topic by examining the consequences of stringent legislation on PBRs in the absence of adequate safeguard measures to protect the public interest. Consequently, the hypothesis of this paper rests on the argument that every system needs checks and balances and the legislative system is no exception. The conclusion is that Ghana should not ignore the effective *sui generis* system under TRIPS for the PBRs modelled around the UPOV Convention because the latter does not entail adequate safeguard provisions and stands to devalue the public interest.

Keywords

food – genetically modified organisms – Ghana – Plant Breeders' Rights – TRIPS Agreement – UPOV Convention

1 Introduction

Food remains a critical commodity for life. By virtue of this, the expectation would be that all people should at least have adequate access to food, and such a principle would have the merit of saving lives. However, the United Nations (UN) Food and Agriculture Organisation (FAO) stipulates that about 795 million people in the world – just over one in nine – are undernourished.¹ This authoritative report presents gloomy empirical data, which show that little progress has been made towards the Millennium Development Goals (MDGs).² Consequently, in 2015, the UN Sustainable Development Goals enshrined the objective of “ending all forms of malnutrition,” challenging the world to think and act differently on malnutrition – to focus on all its faces and work to end it, for all people, by 2030.³

This move is relevant, as at least 12 of the 17 Sustainable Development Goals contain indicators that are highly relevant for nutrition, reflecting nutrition's central role in sustainable development.⁴ While the report notes that, since 1990, malnutrition has dramatically reduced in Ghana,⁵ generally in the context of Africa the number of hungry people grew from 175 million to 239 million between 2010 and 2012.⁶ This indicates that, on average, 20 million people are added every year.⁷ The 2016 report even goes beyond this and states that globally nutrition is deteriorating.⁸ This trend confounds logic given that the

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- 1 The State of Food Insecurity in the World 2016. Meeting the 2015 International Hunger Targets: Taking Stock of Uneven Progress (FAO, IFAD and WFP, 2015) p. 8.
 - 2 United Nations. Millennium Development Goals 2000. New York: UNGA Res. A/RES/55/2, eighth plenary meeting, Fifty-fifth session, Agenda item 60(b), 8 September 2000.
 - 3 Transforming Our World: The 2030 Agenda for Sustainable Development (United Nations General Assembly Resolution: A/RES/70/1, Seventieth session, Agenda items 15 and 116, 4th plenary meeting, 25 October 2015) para. 3. Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
 - 4 Global Nutrition Report 2016. From Promise to Impact: Ending Malnutrition by 2030 (International Food Policy Research Institute, 2016) p. xix.
 - 5 *Ibid.*, p. xx. See also The State of Food Insecurity in the World 2013: Climate Change, Agriculture and Food Security (FAO, 2016) p. 29.
 - 6 *Ibid.*, p. 10, observing that Africa remains the region with the highest prevalence of under-nourishment, with just under one in every four people, or 23.2 percent of the population, is estimated to be undernourished in 2014–16.
 - 7 *Ibid.*, Figure 4, p. 14.
 - 8 “Global Nutrition Report 2016”, *supra* note 4, p. xx.

number of underfed people in other regions is constantly decreasing.⁹ Africa is most exposed to an increased risk of hunger.¹⁰

The common view is that genetically modified organisms (GMOs)¹¹ in agriculture are an increasingly important driver for food security.¹² This is ordinarily the position, and notably, technology covering plant genetic resources in agriculture is rapidly advancing towards a global centre-stage.¹³ Unexpectedly, while Ghana, which uses virtually no GMOs in agriculture but only traditional farming, met its 2015 MDG hunger target by 2000/2002, and its MDG poverty target before 2015,¹⁴ whereas Burkina Faso, which uses GMOs in agriculture, failed to reduce hunger to an appreciable degree, as it could not meet its MDG targets by the 2015 deadline agreed by the UN.¹⁵ This defeats the very purpose of GMOs as an answer to global food security.¹⁶

- 9 *Ibid.* p. 15, suggesting that Africa as a whole, and sub-Saharan Africa in particular, will not achieve the MDG 1c target.
- 10 "State of Food Insecurity", *supra* note 5, p. 34.
- 11 A GMO can be defined as "an organism, with the exception of human beings, in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination". This definition is provided in Directive 2001/18/EC of 12 March 2001 on the deliberate release into the environment of genetically modified organisms and repealing Council Directive 90/220/EEC, OJ L 106, 17.04.2001, Article 2(2).
- 12 Lavlu Mozumdar, Mohammad Amirul Islam and Sumitra Saha, 'Genetically Modified Organisms and Sustainable Crop Production: A Critical Review' (2012) 10(2) *Journal of Bangladesh Agricultural University* 294. Matin Qaim and Shahzad Kouser, 'Genetically Modified Crops and Food Security' (2013) 8(6) *Plos One* 7.
- 13 Simon West, 'Institutionalised Exclusion: The Political Economy of Benefit Sharing and Intellectual Property' (2012) 8(1) *Journal of Law, Environment and Development* 22, stating that TRIPS has expanded the allocation of property rights over genetic resources and associated knowledge.
- 14 "The State of Food Insecurity", *supra* note 5, pp. 32 & 29, Box 1. Ghana: economic growth with improved food security and nutrition.
- 15 *Ibid.* p. 45, Annex 1, Table A1 for data on Burkina Faso's progress. See generally, Jeffrey Vitale, Gaspard Vognan, Marc Ouattarra, and Ouola Traore, 'The Commercial Application of GMO Crops in Africa: Burkina Faso's Decade of Experience with Bt Cotton' (2010) 13(4) *AgBioForum* 330, observing that the benefit distribution of using agro-biotechnology has increase national income of US\$ 30.94 million per year.
- 16 Poverty and Hunger: Issues and Options for Food Security in Developing Countries (World Bank, 1986) p. 13, stating that food is abundant worldwide, and it's a question of equitable distribution of resources. Global Food Losses and Food Waste – Extent, Causes and Prevention (FAO and WFP, 2011) p. v, finding that one-third of food produced for human consumption is lost or wasted globally, which amounts to about 1.3 billion tons per year. See also Save Food. Global Initiative on Food Loss and Waste Reduction. <<http://www.fao.org/save-food/en/>> [Accessed 12 March 2017], finding that each year 1.3bn tonnes of food,

Now, a major instrument used in pushing the global regime on GMOs is IP, which is an international trade matter aimed at incentivising technology developers to recoup the costs of investments.¹⁷ While the justification for IPRs is broader and includes a central strand presumed to encourage technology development and its dissemination, the social impact of IPRs remains contested given that the literature concerning the concept is still vast, twisting, inconclusive and controversial.¹⁸ While proponents of IP see it as a critical component for economic growth,¹⁹ its opponents ignore such a notion, and often typify it as a tool for protectionism.²⁰

Nevertheless, citing IP as the core element of economic growth, whose efficiency aspect lies in effective cross-border trade in technology,²¹ has provided a major economic justification that has informed the basis for placing its regulation into the hands of the World Trade Organisation (WTO).²² It must be noted that prior to the conclusion of the Agreement on Trade Related

about a third that is produced, is wasted, including about 45 percent of all fruit and vegetables, 35 percent of fish and seafood, 30 percent of cereals, 20 percent of dairy products and 20 percent of meat.

- 17 Bronwyn Hall Dietmar Harhof, 'Post-Grant Reviews in the U.S. Patent System: Design Choices and Expected Impact' (2004) 19(3) *Berkeley Technology Law Journal* 1014. Suzanne Scotchmer, *Innovation and Incentives* (The MIT Press, 2004) p. 53.
- 18 Article 7 of TRIPS.
- 19 Roberto Mazzoleni and Richard Nelson, 'Economic Theories About the Benefits and Costs of Patents' (1998) 32(2) *Journal of Economic Issues* 1033, stating the overriding impact of IP on economic growth.
- 20 Peter Drahos and John Braithwaite, *Information Feudalism: Who Owns the Knowledge Economy* (Earthscan, 2002) p. 35, noting that patents are an important tool of protectionism. *Ibid.* p. 121, explaining that the existing IP regime is excessively tilted towards the interests of developed countries rather than developing countries.
- 21 Understanding the WTO (World Trade Organisation, 5th edn., 2015) p. 39. Thomas Cottier, Shaheezalalani and Michelangelo Temmerman, 'Use It or Lose It: Assessing the Compatibility of the Paris Convention and TRIPS Agreement with Respect to Local Working Requirements' (2014) 17(2) *Journal of International Economic Law* 459.
- 22 The WTO Agreement: Marrakesh Agreement Establishing the World Trade Organization, Apr. 15, 1994, the Legal Texts: The Results of the Uruguay Round of Multilateral Trade Negotiations 4 (1999), 1867 U.N.T.S. 154, 33 I.L.M. 1144 (1994). Gail Evans, 'Intellectual Property as a Trade Issue: The Making of the Agreement on Trade Related Aspects of Intellectual Property Rights' (1994) 8(2) *World Competition* 148, observing that the previous IP regimes under the Paris and Berne Conventions lacked the necessary remedial provisions to enforce IP in a way deemed reasonable by key developed countries.

Aspects of Intellectual Property Rights (TRIPS),²³ several countries did not view GMOs in agriculture as a patentable subject matter.²⁴ In fact, plant genetic resources were freely exchanged on the understanding that they constitute a global public good – a shared norm earmarked to safeguard the dignity of humanity.²⁵ This was expressed in Article 1 of the International Undertaking on Plant Genetic Resources:

The objective of this Undertaking is to ensure that plant genetic resources of economic and/or social interest, particularly for agriculture, will be explored, preserved, evaluated and made available for plant breeding and scientific purposes. This Undertaking is based on the universally accepted principle that plant genetic resources are a heritage of mankind and consequently should be available without restriction.²⁶

However, this is no longer the case as plant genetic resources in agriculture are now subject to the same patentability as other technologies. This idea is within the purview of Section 5 of the TRIPS Agreement, which embodies an overriding enforcement provision that patents should be available for any inventions, whether products or processes, in all fields of technology.²⁷ The TRIPS Agreement is quite exhaustive in most regards; however, only a single sentence refers to patents on plant genetic resources. Article 27.3(b) of TRIPS

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- 23 The Agreement on Trade-Related Aspects of Intellectual Property Rights, 15 April 1994, Marrakesh Agreement Establishing the World Trade Organisation, Annex 1C, The Legal Texts: The Results of the Uruguay Round of Multilateral Trade Negotiations 320 (1999), 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994). Christopher May and Susan Sell, *Intellectual Property Rights: A Critical History* (Lynne Rienner, 2006) pp. 5–8, examining the global governance and history of TRIPS.
 - 24 Graham Dutfield, Food, Biological Diversity and Intellectual Property: The Role of the International Union for the Protection of New Varieties of Plants (UPOV) (Global Economic Issue Publications, Intellectual Property Issue Paper Number 9: Quaker UN Office, 2011) p. 7, noting that before the 1960s, IP protection of plant varieties was uncommon.
 - 25 Article 1 of the Convention on Biological Diversity of the United Nations Conference on the Environment and Development, June 5, 1992, U.N. Doc DPI/1307, reprinted in 31 I.L.M. 818 (29 December 1993).
 - 26 International Undertaking on Plant Genetic Resources, FAO Res. 8/83, 22nd Sess., U.N. Doc. C/83/REP (23 November 1983). For additional analysis see, Chidi Oguamanam, 'Intellectual Property Rights in Plant Genetic Resources: Farmers' Rights and Food Security of Indigenous and local Communities' (2006) 11(3) *Drake Journal of Agricultural Law* 283.
 - 27 Article 27(1) of TRIPS.

states, in part, that WTO members must provide protection for plant varieties either through patents or “an effective *sui generis* system” or by any combination thereof.²⁸

Significantly, the principle behind patentable subject matter within the previous TRIPS text indicates that agro-biotechnology also qualifies for patent protection and, therefore, Ghana is under a WTO treaty-obligation to create “effective *sui generis*” legislation to protect PBRs. Thus, at first glance, the scope of legal protection within the PBRs appears to be stringent while, in contrast, the patent standard setting under TRIPS seems flexible.²⁹ Surprisingly, Ghana’s move in this direction is consistent with the UPOV Convention.³⁰ Article 36.1(i) of the UPOV Convention states that each member state shall adopt regulations consistent with the requirements of the UPOV Convention and submit that legislation to the UPOV Secretariat for review and approval by the UPOV Council. Ghana’s notification to the UPOV Council flies in the face of common sense, since the country is not a member signatory to the UPOV Convention.³¹

The controversy surrounding the PBRs Bill that is being pursued by Ghana has assumed extreme proportions as it appears that the Parliament intends to allow the granting of legal protection that will arguably protect the rights of scientists and private corporations seeking to develop and commercialise GMOs in native species of seeds and crops – a system that historically has not been the subject of legal protection.³² This paper aims to contribute to a recently active area of discussion on the topic by examining the consequences of stringent legislation on PBRs in the absence of adequate safeguard measures to protect the public interest. Consequently, the hypothesis of this paper rests on the argument that every system needs checks and balances and the legislative system is no exception. The conclusion is that Ghana should not ignore the effective *sui generis* system under TRIPS for the PBRs modelled around the UPOV

28 Dutfield, *supra* note 24 p. 11.

29 *Ibid.* p. 6, observing that the PBRs system is unsuited to the agricultural characteristics of poor countries.

30 The Convention was adopted in Paris in December 2, 1961. 33 U.S.T. 2703, 815 U.N.T.S. 89 and revised on November 10, 1972, on October 23, 1978, and on 19 March 1991.

31 See a notification by Ghana’s Attorney General contained in Document C/46/19 seeking UPOV Council confirmation on the conformity of Ghana’s PBRs draft bill to the UPOV Convention during the Forty-Seventh Ordinary Session of the UPOV Council Geneva, October 24, 2013: C/47/18). http://www.upov.int/edocs/mdocs/upov/en/c_47/c_47_18.pdf [Accessed 20 March 2017] Annex 1.

32 Ghana’s PBRs draft copy. <http://media.peacefmonline.com/docs/201312/919280493_445860.pdf> [Accessed 4 April 2017].

Convention because the latter does not entail adequate safeguard provisions and stands to devalue the public interest.

2 The Controversy of GMOs in the Ghanaian PBRs: Clause 23

One major justification for the introduction of the PBR system in Ghana, like many developing countries, is to provide a legal framework that will serve as bait for private sector investment in agricultural research and plant breeding activities.³³ Nevertheless, this move has created a heated debate, with some people questioning the fundamental wisdom and safety of GMOs in agriculture.³⁴ Since 2014, farmers, labour unions, religious groups, and political and civil society organisations have taken to the streets to demonstrate against the adoption of the PBRs Bill that is before the Ghanaian Parliament.³⁵ Consequently, a coalition of civil society organisations is resisting the passage of the Bill into law.³⁶

Clause 23 on “measures regulating commerce” has been the key bone of contention. This provision has been carefully worded to reflect Article 18 of the UPOV Convention,³⁷ although Ghana is not a member of the UPOV Convention.³⁸ It states that: ‘A plant breeder right shall be independent of any measure taken by the Republic to regulate within Ghana the production,

33 Hillary Bortey and Flora Mpanju, ‘Adoption of Plant Breeders’ Rights System: Perceived Implication for Food, Seed Security and Sovereignty in Ghana’ (2016) 21(2) *Journal of Intellectual Property Rights* 100.

34 Jennifer Ferrara and Michael Dorsey, *Genetically Engineered Foods: A Minefield of Safety Hazards*. In Brian Tokar (ed.), *Redesigning Life? The Worldwide Challenge to Genetic Engineering* (Zed Books, 2001) p. 51.

35 See Petition to Parliament on the Plant Breeders’ Bill, 2013. <<http://foodsovereigntyghana.org/petition-to-parliament-on-the-plant-breeders-bill-2013/>> [Accessed 1 April 2017].

36 See Seed Freedom. <<http://seedfreedom.info/author/food-sovereignty-ghana/>> [Accessed 13 March 2017].

37 Article 18 of the UPOV Act 1991 reads:

“The breeder’s right shall be independent of any measure taken by a Contracting Party to regulate within its territory the production, certification and marketing of material of varieties or the importing or exporting of such material. In any case, such measures shall not affect the application of the provisions of this Convention.”

For example, see “A notification by Ghana’s Attorney General”, *supra* note 31.

38 Members of the UPOV Convention: Status on 15 April 2016. <<http://www.upov.int/export/sites/upov/members/en/pdf/pub423.pdf>> [Accessed 19 March 2017]. See Thaddeus Manu, ‘Self-Defeating Reasons for Signing the African Growth and Opportunity Act: Analysing the Pressure on African Countries to Enact UPOV Convention – Plant Breeders’ Rights as

certification and marketing of material of a variety or the importation or exportation of the material'.³⁹ The central premise of this resistance is that the Bill is designed to impose GMOs into Ghana's food chain, a move that could change the entire agricultural supply system. Critics are concerned that the Bill, as it stands, contains clauses that could have serious implications for the sovereignty of the Ghanaian people, including unacceptable limitations on the policy space it leaves for the state to regulate the activities of plant breeders vis-à-vis measures to protect the public interest and the natural environment.⁴⁰

The ultimate result of the Bill will be to put Ghana's food supply into the hands of foreign corporations, as the Bill sets up a legal framework for commercial breeders – most of whom are likely to be foreign entities – to use local germplasm to develop varieties that are then exclusively appropriated by such breeders. Far from simply dealing with the rights of the plant breeder, the Bill is designed to pre-empt the laws of Ghana and prevent farmers from freely saving, using, and sharing seed from season to season as they have always done. The majority of critics are deeply troubled by the thought that, without amendment, the Bill will facilitate bio-piracy in that it does not require a breeder to disclose the origin of the genetic material used to develop the variety it wishes to protect, nor does it provide mechanisms for prior informed consent, access and benefit sharing.⁴¹

Within this purview the unintended consequence is that the Bill could lead to erosion of crop diversity, and thus reduce resilience to threats such as pests, disease or climate change. Simply put, activists contend that genetically manipulated food is not only a health hazard but, significantly, it also remains a threat to the economic and food sovereignty of the country.⁴² Critics take the view that Ghana will eventually have to depend on certified seeds invented by multinational corporations (MNCs) and other private seed producers, thus surrendering its food sovereignty to often-greedy private organisations.⁴³ Opponents specifically question the absence of any legislation that will realise, protect, and promote farmers' rights, including the right to save, use, exchange

Opposed to Effective *Sui Generis* Regimes under TRIPS' (2015) 44(1) *Common Law World Review* 5, stating that many countries in Africa are not members of the UPOV Convention.

39 See text at *supra* note 35.

40 Food Sovereignty Ghana. <<http://foodsovereigntyghana.org/>> [Accessed 23 March 2017].

41 Food Sovereignty Ghana. <<http://foodsovereigntyghana.org/reject-clause-23-a-monsanto-law-to-subjugate-ghana/>> [Accessed 29 March 2017].

42 Ferrara and Dorsey, *supra* note 34 p. 51. See also Dutfield, *supra* note 24 p. 5, stating that PVRs can affect agricultural policy, food security, rural development, economic development, biodiversity, genetic resource conservation, and human rights.

43 "Food Sovereignty Ghana", *supra* note 40.

and sell farm-saved seed and other propagating material, and to participate in decision-making regarding, and in the fair and equitable sharing of, the benefits arising from the use of plant genetic resources for food and agriculture.⁴⁴

Further concerns are that the Bill will hinder Ghana's ability to fulfil its commitments under the International Treaty on Plant Genetic Resources for Food and Agriculture (IT PGRFA), commonly known as the International Seed Treaty.⁴⁵ This treaty aims at guaranteeing food security through the conservation, exchange and sustainable use of the world's plant genetic resources for food and agriculture, as well as the fair and equitable benefit sharing arising from its use, in particular the recognition of farmers' right to freely access genetic resources unrestricted by IPRS.⁴⁶ In a related development, on 17 February 2015, an Accra Fast Track High Court halted the production and sale of GMOs in Ghana.⁴⁷ This followed a writ of summons against the Ghanaian National Biosafety Committee and the Ghanaian Ministry of Food and Agriculture by the Ghanaian civil society organisation, Food Sovereignty Ghana (FSG), with an application for an interim injunction to stop any release or commercialisation of GMOs until the provisions of Ghana's Biosafety Act had been expressly and fully obeyed.⁴⁸

FSG's case is very simple. According to Section 13 of the Biosafety Act, 2011, Act 831, on "The application to import or place on the market", only the National Biosafety Authority has the power to authorise the commercial release of GM foods in Ghana. Article 13 of the law states that:

(1) A person shall not, without the prior written approval of the Authority, import or place on the market a genetically modified organism. (2) An application under subsection (1) shall include (a) The information set out in the Third Schedule (b) a risk assessment as set out in the Third Schedule, and (c) any other information that the applicant may consider

44 Manu, *supra* note 38 p. 6, stating that agro-biotechnology should be held as a public good for common good of humanity.

45 Resolution 3/2001. Adoption of the International Treaty on Plant Genetic Resources for Food and Agriculture and Interim Arrangements for its Implementation (FAO, 3 November 2001).

46 *Ibid.* Article 1.

47 Food Sovereignty Ghana. <<http://foodsovereigntyghana.org/court-orders-temporary-halt-on-gm-commercialization/>> [Accessed 1 March 2017].

48 Ghanaian Government Sued over "Illegal" GM Crops Policy (Sustainable Pulse, 10 February 2015). <<http://sustainablepulse.com/2015/02/10/ghanaian-government-sued-illegal-gm-crops-policy/#.Vo6D2pMrJE5>> [Accessed 15 March 2017].

necessary for an assessment of the potential risks and benefits of the requested activity.⁴⁹

Surprisingly, Parliament has brought this bill to the Consideration Stage without any public participation or awareness.⁵⁰ Importantly, Ghana is a signatory state to the Cartagena Protocol on Biosafety to the Convention on Biological Diversity adopted on 29 January 2000, which entered into force on 11 September 2003.⁵¹ This Treaty has an interesting objective.⁵² It requires parties, on their own and in cooperation with other states and international bodies, to promote and facilitate public awareness and education, including access to information, regarding the safe transfer, handling and use of living modified organisms.⁵³ Additionally, it also obliges parties to consult the public in the decision-making process, to make public the final decision taken and to inform the public about the means of access to the Biosafety Clearing-House.⁵⁴

Meanwhile, Section 11(1) of the Biosafety Act states that: 'A person shall not conduct a contained or confined use activity involving genetically modified organisms or their development without the written approval of the Authority'. The law further stipulates in Section 42(2) that, 'The Authority shall publish notices of final decisions concerning applications made under this Act in the Gazette and electronic and print media, in order to ensure public awareness and participation'. This law has not been followed by the Ghanaian authorities,

49 Court Dismisses GMO Case (Ghanaweb Business News, 30 October 2015). <<http://www.ghanaweb.com/GhanaHomePage/economy/artikel.php?ID=390841>> [Accessed 19 March 2017].

50 Ghana: Publish Report On 'Consultations' Over Plant Breeder's Bill' (All Africa, 31 March 2016). <<http://allafrica.com/stories/201604180666.html>> [Accessed 29 March 2017].

51 2226 U.N.T.S. 208; 39 ILM 1027 (2000); UN Doc. UNEP/CBD/ExCOP/1/3, at 42 (2000). Ghana ratified the Treaty on 30 May 2003, Accession 11 September 2003. <<https://bch.cbd.int/about/countryprofile.shtml?country=gh>> [Accessed 16 March 2017].

52 Article 1 provides that:

"In accordance with the precautionary approach contained in Principle 15 of the Rio Declaration on Environment and Development, the objective of this Protocol is to contribute to ensuring an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health, and specifically focusing on transboundary movements."

53 Article 23: Public Awareness and Participation.

54 Article 23(3).

which have created a veil of secrecy surrounding the experiments currently going on in Ghana.

3 The Legislative Overlap between PBRs under UPOV and Patents under TRIPS Regime

The most fundamental aspect of patent law is the limited exclusive right granted to patentees to exercise control over who uses inventions and when, and under what terms and conditions licences are granted or sold.⁵⁵ Thus, both TRIPS and the UPOV Convention impose an overriding obligation on their members to ensure adequate IP protection for plant varieties. In the context of TRIPS, Article 27(1) is the starting point for outlining the legal provisions that frame the obligation that binds its members to provide patents for inventions in all fields of technology on a non-discriminatory basis.⁵⁶ The common conceptual view under the UPOV Convention is that GMO crops, and the IPRs granted to them are no different from the IPRs granted for any usual technologies. In comparison, a condition for the granting of a breeder's right is found in Article 5(1)(a) of the UPOV Act 1991.⁵⁷

The scope of the legal protection is provided within Article 14(1)(a).⁵⁸ The duration of the breeder's right is found in Article 19(2) of the UPOV Act 1991.⁵⁹ Notably, in terms of policy, UPOV claims that the rights provided by the UPOV

55 Article 28.1 of TRIPS.

56 Article 27(1) of TRIPS reads:

Patents shall be available for any inventions, whether products or processes, in all fields of technology ... and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced.

57 *For example*, Section 42(a) of Plant Variety Protection Act: Public Law 91-577, 84 Stat. 1542-1559; Dec. 24, 1970 (as amended: the current amendment is: Public Law 104-127, 110 Stat. 1186, Sec. 913; April 4, 1996). *See also* Section 97(1) of Regulations and Rules of Practice for Plant Variety Protection [7 CFR, Part 97, as of 1 September 1996] (as amended and the current amendment is: Federal Register - 16 September 2005, Volume 70, No. 179, 54609-54612).

58 *See* Section 83(a)(1) of the US PVPA. *See also* Section 111(a) of the US PVPA provides:

"Except as otherwise provided in this title, it shall be an infringement of the rights of the owner of a protected variety to perform without authority."

59 Subsection (b) of Section 7(2) of Pub. L. 103-349, 108 Stat. 3140, 6 October 1994, substituted "twenty" for "eighteen" and added protection for a tree or vine for a 25-year term. Section 913(b) of Pub. L. 104-127, 110 Stat. 1186, 4 April 1996; amended the term of protection to expire 20 years after the date of protection granted to the variety outside the United States.

system and the patent system under TRIPS are similar.⁶⁰ Thus, if a country decides, within the framework of its overall policy, to opt for either PBRs or patents the legal effect is the same.⁶¹ Gervais, with this line of thinking, asserts a logical proposition, which concludes that a state adopting national legislation consistent with the UPOV Act has satisfied its obligations under Article 27.3(b) of TRIPS.⁶² This same conclusion was reached by UPOV in April 2003, following the request by the Convention of Biological Diversity to UPOV for comments in the context of the specific IP implications of the “Genetic Use Restriction Technologies” (also known derogatively as ‘terminator genes’, ‘terminator technology’ or ‘suicide seeds’).⁶³ In the summary of its response, UPOV notes that:

The UPOV Convention provides an effective and well balanced system for the protection of new plant varieties which assures the breeders interest. Where effective systems of protection are in place, breeders may not have to rely on other systems of protection.

It further notes that: ‘Breeders need to recover their investment and to receive incentives in order to be able to continue their breeding activities’.⁶⁴ In regard to this, Dutfield initially observed that, ‘there is no legal basis for implying that a non UPOV-compliant plant variety protection law is contrary to TRIPS simply for being inconsistent with UPOV’.⁶⁵ He also claimed that UPOV officials know very little about actual farming and that they are a “club of scientists” that produces little public information.⁶⁶ More substantively, the UPOV Office has given the impression of being closed through its apparent reluctance to engage with outsiders on matters within UPOV’s range of operation, and there

60 Specific Issues Concerning the Interface Between Patents and Breeders’ Rights (Forty-Seventh Session 10 April 2003, CAJ/47/2) p. 2 Annex, comparing patents within TRIPS and PBRs under UPOV Convention. See the proceedings of the WIPO-UPOV Symposium on Intellectual Property Rights in Biotechnology (24 October 2003). <http://www.upov.int/en/documents/Symposium2003/intro_index.html> [Accessed 1 April 2017]. See also WTO Doc. Job no. 2627, UPOV-WIPO-WTO Joint Symposium on the Protection of Plant Varieties under Article 27.3(b) of the TRIPS Agreement, 7 May 1999.

61 *Id.*

62 Daniel Gervais, *The TRIPS Agreement: Drafting Analysis and Negotiating History* (Sweet and Maxwell, 1998) p. 151.

63 Sixth Ordinary Meeting of the Conference of the Parties to the Convention on Biological Diversity (7–19 April 2002 (Decision VI/5) para. 24.

64 Bortey and Mpanju, *supra* note 33 p. 100.

65 Dutfield, *supra* note 24 p. 15.

66 *Ibid.* p. 13.

is also the question of why UPOV information is so sensitive that it must be kept from the public.⁶⁷

He also reiterates that while they may know about breeding and favour commercial breeders, UPOV officials sit in Geneva, and lack detailed knowledge on issues pertaining to TRIPS compliance, access to genetic resources and benefit sharing, the disclosure of origin in IP, and the right to food.⁶⁸ Hence, they know little about how small-scale farmers actually develop new varieties and produce them.⁶⁹ Not surprisingly, UPOV has accepted the fact that they lack a practical understanding of the IP system and how IPRs affect their policy framework:

UPOV has not to-date, in the context of its work or otherwise, examined substantively the IP implications on its policies ... and are not in a position, in the context of its work or otherwise, to express an opinion on the intellectual property implications of its policies.⁷⁰

Based on this voluntary admission, Dutfield is right to claim that UPOV officials are only playing the role of advocates and may not be aware of the IP ramifications in regard to poverty.⁷¹ Notably, the TRIPS Agreement does not specify that the UPOV Convention provides a “*sui generis*” alternative to patents. In fact, the WTO seems to be in doubt about the consistency of the UPOV legal claim regarding the concept of “effective *sui generis*” in TRIPS and UPOV obligations.⁷² A position statement based on an intervention by UPOV before the WTO’s Council for TRIPS in 2002 stated that: ‘The UPOV Convention provides an *effective sui generis system* of plant variety protection at national

67 *Id.*

68 *Ibid.* p. 12, observing that the Office of UPOV is very small with a staff of 11 people. This small group consists of people with backgrounds in such fields as agricultural economics, agronomy, plant breeding and law.

69 *Id.*

70 Position of UPOV Concerning Decision Vi/5 of the Conference of the Parties to the Convention on Biological Diversity (Twentieth Extraordinary Session, 11 April 2003 (C(Extr.)/20/4)). http://www.upov.int/edocs/mdocs/upov/en/c_extr_20/c_extr_20_4.pdf [Accessed 19 March 2017] p. 2 Annex under Option 2&3.

71 Dutfield, *supra* note 24 p. 15.

72 For a summary of positions at the WTO TRIPS Council on the relationship between TRIPS and UPOV see Review of the Provisions of Article 27.3(b) – Summary of Issues Raised and Points made. Note by the Secretariat (WTO Doc. IP/C/W/369/Rev.1, 9 March 2006) pp. 14–16.

level and, through international harmonisation, at the international level'. The statement continues:

Enhancing international harmonisation is an indispensable tool for the protection of new plant varieties, for international trade and for the transfer of technology. Should a country introduce a system not compatible with the internationally harmonised system based on the UPOV Convention, this might result in barriers to trade and the transfer of technology.⁷³

By this, UPOV seems to be promoting itself as “an effective *sui generis* system” for the protection of plant varieties as required by Article 27.3(b) of TRIPS.⁷⁴ This is an attempt to rewrite the rules on patents with a view to extending WTO members’ commitment under TRIPS to include stringent patent protection for plant varieties.⁷⁵ Settled into an uneasy standoff, a tremendous amount of scholarship has sought to clarify the distinction between patents under TRIPS and the UPOV style PBRs. Thus, there are significant differences in approach between PBRs and the regimes covered under TRIPS. While there seems to be an unclear relationship between patent rights under TRIPS and PBRs based on the UPOV Convention, Rimmer provides empirical facts to reinforce the principle that patents and PBRs overlap and are not mutually exclusive.⁷⁶

73 International Harmonization is Essential for Effective Plant Variety Protection, Trade and Transfer of Technology (UPOV Position based on an intervention in the Council for TRIPS, 19 September 2002). <http://www.upov.int/export/sites/upov/about/en/pdf/international_harmonization.pdf> [Accessed 3 April 2017] para. 3. See also Dutfield, *supra* note 24 p. 11.

74 Review of the Provisions of Article 27.3(b), Relationship between the TRIPS Agreement and the Convention on Biological Diversity and Protection of Traditional Knowledge and Folklore (WTO Doc. IP/C/W/347/Add.3, 1, 10 June 2002). A view also expressed by the US, European Commission, Japan, Switzerland and Uruguay in submissions to the WTO TRIPS Council. For a detailed account of the positions held in the TRIPS Council on whether UPOV provides for an appropriate “*sui generis* system” see “WTO Doc. IP/C/W/369/Rev. 1, *supra* note 72, Section II.C, pp. 14–17.

75 See Biswajit Dhar, *Sui Generis Systems for Plant Variety Protection: Options Under TRIPS* (A Discussion Paper Commissioned by the Quaker United Nations Office, 2002) p. 25, observing that the expansion of the IPR regime in agriculture tends to create a market for seeds and other planting material that is dominated by a few large companies.

76 Matthew Rimmer, ‘Franklin Barley: Patent Law and Plant Breeders’ Rights’ (2003) 10(4) *Murdoch University Electronic Journal of Law* para. 5, citing *Diamond v Chakrabarty* (1980) 447 US 303; *JEM Ag Supply Inc v Pioneer Hi-Bred International Inc.* (2001) 534 US 124; High Court case of *Grain Pool of Western Australia v Commonwealth* (2000) 46 IPR 515 and

It must be noted that the purpose of the UPOV Convention was to ensure that the member states acknowledged the successes of breeders of new plant varieties by making available to them exclusive IPRs, on the basis of a set of uniform, new, stable and distinct principles.⁷⁷ Remarkably, member states to the UPOV Convention must provide statutory possibilities for breeders to enjoy twenty years of exclusive rights.⁷⁸ Significantly, PBRs are IPRs granted to the breeder of a new variety of plant that gives the breeder exclusive control over the production and reproduction of materials, and allows for their propagation, sale, export, import and storage.⁷⁹

On the other hand, the TRIPS Agreement's influence on PBRs stems from the requirement in Article 27.3(b) of TRIPS that its members must provide protection for plant varieties 'either by patents or by an *effective sui generis system* or by any combination thereof'.⁸⁰ In the case of plant breeders' rights, the eligibility requirements for protection are not onerous, but the scope of protection granted is quite narrow, both in terms of exclusive rights and the various exceptions and limitations to those rights.⁸¹ The eligibility requirements are high and difficult to meet, but once granted a patent conveys broad rights to exclude third parties from exploiting patented inventions.⁸² Depending on the needs and level of development of plant breeder industries within its territory, a government may decide that either or both forms of protection will provide the appropriate incentives to encourage plant-related research and innovation.⁸³

4 Ghana Trips over the TRIPS Agreement: Bilateral Pressure

Given that international trade has been a defining driver for technology development and the benefits it brings, private corporations everywhere are working harder than ever to persuade their elected leaders to make decisions

Monsanto v Percy Schmeiser (2001) FCT 256 to substantiate the claim that PBRs are not different from IP patent rights.

77 Article 5.1 of the UPOV Act 1991.

78 Article 19.2 of the UPOV Act 1991. Note that for trees and vines, the said period shall not be shorter than 25 years. *See also* Dutfield, *supra* note 24 p. 9.

79 Article 14.1(a) of the UPOV Act 1991.

80 Laurence Helfer, Intellectual Property Rights in Plant Varieties International Legal Regimes and Policy Options for National Governments (FAO Legislative Study 85, 2004) p. 33.

81 *Ibid.* p. 43.

82 *Id.*

83 *Id.*

that favour their fundamental profit interests.⁸⁴ AGOA is one such initiative promoted by the US private corporate interests. AGOA is part of the Trade and Development Act, 2000,⁸⁵ and was passed by the US Congress and signed into law on 18 May 2000.⁸⁶ Specifically, AGOA strengthens some of the Generalised System of Preferences (GSP) programmes,⁸⁷ which empower the US President through an executive instrument to determine the eligibility of a country to benefit from additional preferential tariffs treatment.⁸⁸

AGOA's main objective is to promote the economic emergence of Africa, and to enable the continent to join the international trading system efficiently. AGOA is meant to serve the mutually assured beneficial trade interests of both the US and African countries. On first glance, Section 103(4) appears to offer

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- 84 Helena Paul, Ricarda Steinbrecher, Devlin Kuyek and Lucy Michaels, *Hungry Corporations: Transnational Biotech Companies Colonise the Food Chain* (Zed Books, 2003) chapter 5, p. 9, claiming that private companies hold tremendous influence over agricultural policy. Citing World Bank as saying 'politicians can be loath to change seed regulations without support from at least some national experts, including crop scientists and other agricultural experts.'
- 85 AGOA is contained in the US implementation legislation: Title 1 of The Trade and Development Act of 2000 P.L. 106–200. 114 Stat. 251 (19 USC 3701). Note that AGOA was renewed in 2015 under the H.R. 1295 – Trade Preferences Extension Act of 2015. Public Law No: 114–27.
- 86 Section 506A(a)(1) of the Trade Act of 1974, as amended (19 USC 2466a (a)(1)), as added by section 111(a) of the African Growth and Opportunity Act (title I of Pub. L. 106–200).
- 87 See Title v of the Trade Act of 1974, as amended, 19 USC 2461. Note that the US GSP was enacted in the 1974 Trade Act, which authorizes the president to eliminate tariffs on imports from eligible developing countries. The Trade Act of 1974, Pub. L. No. 93–618, §§ 501–505, 88 Stat. 1978, 2066–71 (1974) (codified as amended at 19 USC §§ 2461–2467 (2000)). See *Importantly* Title v of the Trade and Tariff Act of 1984 (Pub. L. 98–573) subject to periodic renewal by Congress (the so-called GSP Renewal Act) conditioning GSP; inter alia, on protection of IPRs in order to maintain US preferential trading status. This Act clarified the conditions under which unfair trade cases under Section 301 of the Trade Act of 1974 can be pursued. See also the reauthorization of the Act in 1996 (19 USC 2101. Pub. L. 104–188, Title 1, subtitle J. 110 Stat 1917), which now requires the President to “take into account the extent to which such country is providing adequate and effective protection of intellectual property rights.” (Last renewed on 31 July 2013, through Pub. L. 112–40). For further review of the US GSP see Amy Mason, ‘The Degeneralization of the Generalized System of Preferences (GSP): Questioning the Legitimacy of the US GSP’ (2004) 54(2–5) *Duke Law Journal* 524, criticising the US-GSP as primarily employing negative conditionality which falls generally under its overarching economic interests.
- 88 Country eligibility criteria under the AGOA: Section 104 of the Trade and Development Act of 2000 under subtitle A and Section 111 of that Act under Subtitle B in effect amending the GSP Act consolidating AGOA to GSP via Section 506A.

precisely the prospect of market access to African countries. This provision stresses the need to encourage investment in African countries, which broadly falls in line with the ground-breaking approach that several African countries have been waiting for in order to consolidate their economic growth agendas. Moreover, Section 122(a) of AGOA recognises that the US seeks to use the partnership to establish a comprehensive trade and development policy for African countries. To do this, the US intends to use the AGOA platform to extend liberal access to duty-free and quota-free exports from Africa to the US market.⁸⁹

While the foregoing sounds promising, the reality is that Section 125(c) of AGOA provides that the US is pursuing the exportation of US goods and services to African countries. The case against BTAs is empirical in nature, and the academic literature often captures this evidence. To reveal the drive behind these waves of BTAs, Okediji claims that multilateralism is a dead loss for member states like the US and the EU that seek the highest returns on IPRS. Okediji further notes that in order to ameliorate that loss, bilateralism offers a precise and controlled opportunity to recover any perceived losses from multilateral engagement and to avoid giving up additional concessions to countries. This is because bilateralism splinters any developing country coalitions and may make it difficult for them to negotiate on a broader development platform.⁹⁰

In addition, Drahos contends that leading developed countries that conclude BTAs often use these agreements for strategic economic gain.⁹¹ He claims that they offer a suitable forum that is capable of affording their key industries an effective platform to have their commercial interests broadened.⁹² Notwithstanding the criticism of key developed countries in regard to their use of BTA standards to rebalance their trade interests to the

89 Section 112(c) of the AGOA, as added in Section 6002 of the Africa Investment Incentive Act of 2006 (Division D, title VI of Public Law 109-432) (19 USC 3721(c)) provides special rules for certain apparel articles imported from lesser developed beneficiary sub-Saharan African countries.

90 Ruth Okediji, 'Back to Bilateralism? Pendulum Swings in International Intellectual Property Protection' (2004) 1(1-2) *University of Ottawa Law & Technology Journal* 144.

91 Peter Drahos, 'BITs and BIPs: Bilateralism in Intellectual Property' (2001) 4(6) *The Journal of World Intellectual Property* 803, noting that developing countries and developing countries are being led into a highly complex multilateral/bilateral web of IP standards that are progressively eroding not just their ability to set domestic standards, but also their ability to interpret their application through domestic administrative and judicial mechanisms.

92 Peter Drahos, *Expanding Intellectual Property's Empire: The Role of FTAs* (Regulatory Institutions Network, Research School of Social Sciences, Australian National University, 2003) p. 10, noting that by adopting BTAs developing and developing countries are going even further to protect patent more than the US does.

detriment of other signatories, and leaving aside the pressure brought to bear on poor countries to sign BTAs, they sometimes do not hesitate to trade off their vital socio-economic protection in exchange for market access for their exports.⁹³ This is clearly evident from the willingness on the part of African countries to negotiate in spite of concerns raised by observers on the impact of BTAs.⁹⁴ Notably, the resulting opportunity for market access means that African policymakers are not able to pay detailed attention to the future consequence of the key provisions in BTAs.

5 Noting the Conflicting Provision in AGOA

At the centre of a disturbing claim lies the idea that the key IP provision in AGOA fuels the political pressure on African countries because it serves as the eligibility criteria.⁹⁵ This has succeeded in creating an unhelpful situation that has resulted in self-imposed difficulties. It propagates the negative thinking among policymakers concerning the US ability to withdraw trade benefits if PBRs are rejected. What makes AGOA so distinctive is that once ratified there is no room for derogation; its legal effects are irreversible. Consequently, while African countries were free to endorse AGOA, they seem to have lost any right to repeal or even amend key legislation to protect their social interests.

In hindsight, Drahos contends that although the preferential trading arrangements that are found in the US AGOA initiative are not in themselves a stringent demand for IP protection, he concedes that they can be used to exert

93 Drahos, *supra* note 91 p. 792, noting that poor countries simply decide to adopt BTAs and TRIPS-plus measures in order to avoid further unilateral action by the US such as action under the 301 processes.

94 The Potential Effects of Economic Partnership Agreements: What Quantitative Models Say (Overseas Development Institute Briefing Paper No. 5, June 2006) p. 3, explaining that fiscal effect (loss of tariffs revenue) for West African states is negative. See Table 1: Economic effects of EPAs on ACP Regions. See also Stephen Karingi, Nassim Oulmane, Mustapha Sadni-Jallab, Remi Lang, and Romain Perez, Assessment of the impact of the Economic Partnership Agreement between the ECOWAS countries and the European Union (African Trade Policy Centre Paper No. 29, Economic Commission for Africa, 2005) p. 45, recounting that the EU member states could gain more than US\$ 1.87 billion worth of increased exports to the West Africa region alone while West African states are likely to suffer a welfare loss of US\$ 564 million each.

95 Section 104 of the Trade and Development Act of 2000 under subtitle A and Section 111 of that Act under Subtitle B in effect amending the GSP Act consolidating AGOA to GSP via Section 506A.

pressure on a country to comply with US standards of IP protection that may well go beyond the provisions of the TRIPS Agreement.⁹⁶ The moderate claim here is that AGOA has contributed considerably to the pressure on Ghana to implement stricter PBRs as opposed to effective *sui generis* regimes under TRIPS. What carries all of these pressures into effect is the IP clause in Section 104, which remains a significant eligibility standard, and Section 111(a)(3) of AGOA, which calls for continued compliance in order to benefit from trade concessions. Otherwise, the US President has the discretion to terminate a country as a beneficiary.

This comes on the back of evidence that Ghana and several African countries have been in contact with the UPOV office regarding assistance in the development of their national legislation on PBRs even though these countries are not signatory members of the UPOV Convention.⁹⁷ The US authorities have recently put pressure on policymakers in Ghana to that effect, and this proves that the US government is behind the pressure on the country to enact legislation on PBRs.⁹⁸ For fear of losing trade benefits, Ghana must respect the US demands. The implication is that if countries resist persistent demands by the US to promulgate legislation based on PBRs, they will be in breach of key obligations in accordance with Section 111(a) of the AGOA provision, which together with Section 506(A) of the GSP and Section 502(c)(5) of the Trade Act 1974 remains the fundamental requirement for designating countries as beneficiaries of AGOA with access to the US market and other budgetary supports.⁹⁹ African countries are under constant pressure to reflect on the enormous economic prospects in AGOA; even though these appear non-existent, policymakers are still responding to the US pressure to enact legislation on PBRs.

In fact, any resistance by an African country would mean such a country is erecting barriers to US trade and investment interests pursuant to Section 104(c) of AGOA. They would also be in breach of Section 104(c)(i) of AGOA, which stresses national treatment and measures to create an environment conducive to foreign investment by US corporations. More significantly,

96 Drahos, *supra* note 91 p. 801.

97 Algeria, Burundi, Democratic Republic of Congo, Djibouti, Ghana, Malawi, Seychelles, Sudan, Uganda, United Republic of Tanzania, Yemen, and Zambia. <http://www.apbrebes.org/content/national-and-regional-plant-variety-protection-legislation-developing-countries> [Accessed 2 April 2017]. "A notification by Ghana's Attorney General", *supra* note 31.

98 See <http://wikileaks.org/cable/2010/01/10ACCRA59.html> [Accessed 2 March 2017].

99 "AGOA, GSP Act and Trade Act, 1974", *supra* notes 85, 86 & 87.

such a move would be contrary to the commitment by African countries to strengthen the protection of IP belonging to various US corporations in accordance with Section 104(c)(ii) of AGOA. Section 104(b) and Sub-Title B of Section 111(a)(3) of the AGOA obligation on continuing compliance once a country receives benefits from AGOA further compound this issue. Surprisingly, while the eligibility requirements are set out in the legislation, it is the US that determines, annually, whether countries have met the published eligibility requirements. Beneficiary countries have no recourse to dispute settlement unlike the mainstream multilateral platform under the WTO.¹⁰⁰

Beneficiary status may therefore be granted, or withdrawn, at the discretion of the US President, if the President determines that a beneficiary African country is not making progress in meeting the requirements set forth in Section 104 of AGOA, which include IP protection as per Section 104(c)(ii). It is worth noting that under the Proclamation 7350 the US President has delegated to the USTRs the authority to determine whether these countries continue to meet the on-going compliance of AGOA.¹⁰¹ This would by implication mean that countries have failed to honour a key obligation in accordance with Section 111(a) of AGOA, which together with Section 506(A) of the GSP and Section 502(c)(5) of the Trade Act 1974 remains the fundamental requirement for designating countries as beneficiaries of AGOA.

6 The Legal Effect of AGOA and Ghana's Ability to Implement Safeguard Measures in the PBRs

Article 17(1) of the UPOV Convention details the partial recognition of public interests as a foundation for restricting the exercise of the breeder's right, and this is comparable to Articles 30 and 31 of TRIPS, where member states can exercise "limited exceptions" and "other use of the subject matter of a patent without the authorisation of the right holder", including use by the government or

¹⁰⁰ Dispute Settlement Rules: Understanding on Rules and Procedures Governing the Settlement of Disputes, Marrakesh Agreement Establishing the World Trade Organisation, Annex 2, the Legal Texts: The Results of the Uruguay Round of Multilateral Trade Negotiations 354 (1999), 1869 U.N.T.S. 401, 33 I.L.M. 1226 (1994). For additional analysis of the WTO Dispute Resolution Rules see Ernst-Ulrich Petersmann, *The GATT/WTO Dispute Settlement System: International Law, International Organizations and Dispute Settlement* (Kluwer International Law, Volume 23, 1997) p. 117, discussing the new Dispute Settlement System of the 1994 WTO Agreement.

¹⁰¹ Section 8 of the Proclamation 7350 of 2 October 2000 [114 Stat 3378] Federal Register / Volume 65, No. 193, at 59321.

third parties authorised by the government. Nevertheless, these options have not been openly available under the UPOV Convention style PBRs. Therefore, if Ghana were to implement effective *sui generis* regimes it would maintain its right to use public safeguard measures, such as a compulsory licence, to meet the reasonable requirements of the public as provided in Article 31 of TRIPS.¹⁰² This is only possible within patent law and not under PBRs. Section 209 of the US Patent law states that:

If the Federal Agency finds that the public will be served by the granting of the licence, or licence is a reasonable and necessary incentive to bring the invention to practical application; or to promote the invention's utilisation by the public; the Federal Agency may grant an exclusive or partially exclusive licence on a federally owned invention thereof.¹⁰³

Nevertheless, compulsory licences are not generally permitted under the US PVP Act 1970.¹⁰⁴ The only statutory exception for the public interest use rule pertains to the exploitation of patents by or for the benefit of the federal government itself, and no other third party can exercise this safeguard provision.¹⁰⁵ Notwithstanding this, there is nothing that states can do in regard to dealing with public non-commercial use, anti-competitiveness, national emergency or other circumstances of extreme urgency as postulated under the provisions of Article 31 of TRIPS. The same is true of Section 97(700)(a) of the US Regulations and Rules of Practice, which permits a government Secretary to declare a protected variety open to use for public interest purposes, but only within the US, and even provides protection for two years.¹⁰⁶

102 The term 'non-voluntary' or 'compulsory licensing' refers to the practice by a government to authorize itself or third parties to use the subject matter of a patent without the authorization of the right holder for reasons of public policy. See Jerome Reichman and Catherine Hasenzahl, Non-Voluntary Licensing of Patented Inventions: Historical Perspective, Legal Framework under TRIPS, and an Overview of the Practice in Canada and the United States of America (UNCTAD-ICTSD Project on IPRs and Sustainable Development Series, Issue Paper 5, 2003) p. 10.

103 Title 35 of the U.S.C. entitled 'Patents' as *codified* July 19, 1952, c. 950, 66 Stat. 792: (amended by) Pub. L. No. 94-131, Nov. 14, 1975, 89 Stat. 685. [emphasis added].

104 "The US PVPA", *supra* note 57.

105 Section 1498 of Title 28 U.S.C. 1961 [currently through Pub. Law 113-142.] Part IV, chapter 91.

106 "The US Regulations and Rules of Practice", *supra* note 71. See also Section 44 of the PVPA 7 USC. 2404 as amended by Section 13(f) of Pub. L. 103-349, 108 Stat. 3143, 6 October 1994.

Notably, this does not extend to foreign countries,¹⁰⁷ and is also subject to the requirement for a reasonable or entire remuneration.¹⁰⁸ The same Section 97(700)(a) permits US patents titleholders to oppose applications for such a public interest use.¹⁰⁹ In addition, the US PVPA has a provision that forbids foreign governments from interfering with patents granted to US firms. Section 130(a) states that:

Any State, any instrumentality of a State, and any officer or employee of a State or instrumentality of a State acting in the official capacity of the officer or employee, shall not be immune, under the eleventh amendment of the Constitution of the United States or under any other doctrine of sovereign immunity, from suit in Federal court by any person, including any governmental or nongovernmental entity, for infringement of plant variety protection under Section 111, or for any other violation under this title.¹¹⁰

Moreover, Section 3802(4) of the US Trade Act, 2002 details what the US offers:

(ii) providing strong protection for new and emerging technologies and new methods of transmitting and distributing products embodying intellectual property; (iii) preventing or eliminating discrimination with respect to matters affecting the availability, acquisition, scope, maintenance, use, and enforcement of intellectual property rights; (iv) ensuring that standards of protection and enforcement keep pace with technological developments, and in particular ensuring that right holders have the legal and technological means to control the use of their works ... and to prevent the unauthorized use of their works; and (v) providing strong enforcement of intellectual property rights, including through

107 *Ibid.* Public interest in wide usage 'In order to insure an adequate supply of fiber, food, or feed in this country' arguably referring to or within the US.

108 *Ibid.* 'In the event litigation is required to collect such remuneration, a higher rate may be allowed by the court.'

109 The relevant part of Section 97(700)(a) reads:

"In accordance with [Section 44 of the PVPA] the Secretary shall give the owner of the variety appropriate notice and an opportunity to present views orally or in writing ..."

110 Section 3(b) of Pub. L. 102-560, 106 Stat. 4231, Oct. 28, 1992, added Sec. 130, and Sec. 4 of Pub. L. 102-560, provided that the amendments made by this Act [amending Section 111 and adding Section 130] shall take effect with respect to violations that occur on or after the date of enactment of this Act. (7 U.S.C. 2541 note). Section 13(w) of Pub. L. 103-349, 108 Stat. 3144, 6 October 1994.

accessible, expeditious, and effective civil, administrative, and criminal enforcement mechanisms.

By virtue of Section 97(5)(a) of the US Regulations and Rules of Practice, legal protection on PVP will be afforded to nationals and residents of the US, and nationals and residents of member states of the inter-governmental UPOV Convention. More importantly, sub-paragraph (i) of the same stipulates that nationals of a foreign state that is not a member of the UPOV Convention will be entitled to the same type of protection if such a country is under any treaty to which the US is a party. With this background, Drahos argues that the US in essence wants to bring IP standards in line with its own domestic position.¹¹¹ Presumably, the foregoing legal protection is based on the national treatment and the most-favoured nations principles within Articles 3 and 4 of TRIPS.¹¹²

Given this legal effect, signatory African countries, and more specifically Ghana, are able to implement public safeguard measures only if they are permissible under US jurisprudence. Notably, the US strictly protects PBRs under its PVPA and forbids the use of compulsory licensing thereof.¹¹³ This literally means that Ghana, which signed the AGOA initiative with the US, will not have the right to exercise any recourse to compulsory licensing. Moreover, the US claims that it is seeking to impose standards of IP on signatory states of its BTAs that reflect its own domestic standards. This is in accordance with Section 3802(4)(A)(i)(II) of the US Trade Act, 2002.¹¹⁴ This provision stipulates that 'any multilateral or bilateral trade agreement governing intellectual property rights that is entered into by the United States [must] reflect a standard of protection similar to that found in United States law'.

111 Drahos, *supra* note 92 p. 9, citing *Hughes Aircraft Co. v. United States*, 148 F.3d 1384, 1385 (Fed. Cir. 1998).

112 Gail Evans, 'TRIPS and the Sufficiency of the Free Trade Principles' (1999) 2(5) *The Journal of World Intellectual Property* 714, mentioning that both national treatment and most favoured nation principles are instrumental in removing private law, such as IP, from its traditional territorial foundation and aligning it with the free trade principles of international trade law to ensure that domestic laws do not discriminate against either member states or their nationals. See also Rafael Leal-Arcas, 'The Resumption of the Doha Round and the Future of Services Trade' (2007) 29(3) *Loyola of Los Angeles International and Comparative Law Review* 346, noting that the binding commitment of the most favoured nation principle is valuable because it creates a more predictable legal system.

113 'US PVPA', *supra* note 57.

114 The specific objectives for IP in the Trade Act of 2002 (19 USC. Pub. L. 107–210. H.R. 3009. 166 STAT 933. (The US Trade Promotion Authority Act) were spelled out in 19 USC Section 3802(b)(4) as important negotiating objective for the US.

Pursuant to Section 3802(b)(3)(E) of the US Trade Act, 2002, the US as part of its BTAS is 'seeking to establish standards.... consistent with United States legal principles and practice, including the principle of due process'. This reinforces the argument that the enforcement regime in Ghana's PBRs validated through AGOA must be consistent with US legal principles and practice under UPOV style PVP. Consequently, the logical implication is that Ghana has in fact carried into effect IP legal standards and enforcement regimes that are prevalent in the US. This emphasis thus presents a gloomy situation that does not appear promising for the country, since the US PVPA, which is crafted in exactly the same frame as the UPOV Convention, limits flexibilities to protect public interests.¹¹⁵ This situation is worsened still further, as the US does not recognise a farmer's privilege under its utility patent laws,¹¹⁶ while along a similar vein, Section 3802(4)(A)(II) of the US Trade Act, 2002 provides that the US seeks for a stronger protection for new and emerging technologies and new methods of transmitting and distributing products embodying intellectual property.

More importantly, UN-FAO Resolution 5/89 endorses the concept of farmers' rights.¹¹⁷ Note that such rights are also recognised in Article 9 of the ITPGR, which asserts that the responsibility for realising farmers' rights rests with national governments. The provision maintains that 'in accordance with their needs and priorities, each Contracting Party should, as appropriate, and subject to its national legislation, take measures to protect and promote farmers' rights'.¹¹⁸ The UN further recognises the enormous contribution that farmers of all regions have made to the conservation and development of plant genetic resources, which constitute the basis of plant production throughout the world, and form the basis for the concept of farmers' rights.¹¹⁹ The organisation agreed that the best way to implement the concept of farmers' rights is to ensure the conservation, management and use of plant genetic resources, for the benefit of present and future generations of farmers.¹²⁰

115 Dutfield, *supra* note 24 p. 18, claiming that PVRs systems carry the potential to undermine other public interest objectives, such as by limiting countries' policy space to protect the interest of small-scale farmers, traditional knowledge.

116 Note that Article 11 of the European Union's Directive 98/44/EC of the European Parliament and of the Council of 6 July 1998 on the Legal Protection of Biotechnological Inventions. Official Journal L 213, 30/07/1998 P. 0013 – 0021. See Helfer, *supra* note 80 p. 50.

117 Farmers Right Conference (FAO Res. 5/89, twenty-fifth Session, 11–20 November 1989) Endorsement.

118 Article 9.2 of the IT-PGRFA.

119 Agreed Interpretation of the International Undertaking (FAO Res. 4/89, 25th Session, 11–20 November 1989) para. 3.

120 Stephen Biggs and Edward Clay, 'Sources of Innovation in Agricultural Technology' (1981) 9(4) *World Development* 323. Plant Biotechnology and Global Food Production: Trade

It resolved to assist farmers and farming communities, in all regions of the world, but especially in the areas of origin/diversity of plant genetic resources, in the protection and conservation of their plant genetic resources, and of the natural biosphere.¹²¹ In a report by Olivier De Schutter, the UN Special Rapporteur on the Right to Food, entitled “The Transformative Potential of the Right to Food”, the UN called for a redesigning of the world food system to cater for changes to the way IPRs are applied to food and agriculture.¹²² The report notes in paragraph A(2)(a) that developing countries must make swift progress towards the implementation of farmers’ rights, as defined in Article 9 of the IT-PGRFA. Likewise, paragraph A(2)(b) calls on member states not to allow patents on plants and to establish research exemptions in legislation protecting PBRs.¹²³

The report also appealed to donors and international institutions to assist with developing countries’ efforts to establish an effective *sui generis* regime for the protection of IPRs that suits their development needs and is based on human rights. Finally, the UN asked member states to establish the right to food security in their national laws and constitutions.¹²⁴ Given the rigidity of the UPOV Convention style PBRs as opposed to much more flexible *sui generis* regimes under TRIPS, the US would prefer Ghana to adopt the former with a view to restraining the potentially overriding flexibilities under TRIPS while cementing the commercial interests of its private corporations.

7 Conclusion

The question of how patents and PBRs affect the processes of food security appears complex and based on multiple variables. Even though Article 27.3(b) of TRIPS allows member states to provide patents for plant varieties through either patents or an “effective *sui generis*” system, or by any combination thereof, the same provision obligates members to exclude from patentability plants and animals and essentially biological processes for the production of

Implications (International Policy Council on Agriculture, Food and Trade Position Paper No. 7, 1998) p. 9.

121 FAO Resolution 5/89, *supra* note 117, para. (b) under Endorsement.

122 Report of the Special Rapporteur on the right to food, Olivier De Schutter. Final report: The transformative potential of the right to food (UN Human Rights Council Res. A/HRC/25/57, twenty-fifth session, agenda item 3, 24 January 2014).

123 *Ibid.* p. 22, Annex.

124 *Ibid.* p. 24, Annex C(1)(a).

plants. The literature that advocates often cite suggests that PBRs could be the solution to hunger while in fact the eradication of extreme hunger remains a question of global wealth distribution.¹²⁵ Thus, the idea that PBRs are key to removing extreme hunger is not a good argument since it does not significantly address the ever-divisive question of whether or not hunger is created and maintained by human decisions.

Consequently, such an understanding cannot be presented on a strictly constricted basis as it casts doubt to a considerable extent on whether debates regarding food security can be premised on a simple analysis as opposed to exhaustive propositions. This paper has examined in detail the public interest consequences of Ghana's implementation of UPOV Convention style PBRs in Ghana by delving into its conceptual legal basis. It concludes that Ghana should not ignore the effective *sui generis* system under TRIPS for the PBRs modelled around the UPOV Convention because the latter does not entail adequate safeguard provisions and stands to devalue the public interest.

125 "Poverty and Hunger", *supra* note 16 and the text accompanying.