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Inappropriate Processes and Unbalanced Outcomes: Plant Variety Protection in Africa Goes Beyond UPOV 1991 Requirements

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The African Regional Intellectual Property Organization (ARIPO) has traditionally been skeptical toward the African Intellectual Property Organization's (OAPI) approval in 1999 of a plant variety protection that was compatible with UPOV 1991, a convention adopted by the International Union for the Protection of New Varieties of Plants. Recently, however, ARIPO has been rushing through a plant variety protection (PVP) protocol, that in April 2014 was found by the UPOV Council to be in conformity with UPOV 1991. The article draws upon theories identifying under which conditions secretariats of international organizations (IOs) are able to operate without too stringent supervision and control by states. These theories goes beyond standars principal-agent theories, identifying IOs that regulate issues requiring high levels of expertise. Based on this general model, the article investigates both the process and the outcome of the ARIPO Arusha PVP Protocol. It finds that the interests of breeders prevail, while farmers' organizations and organizations promoting the public interest are to a large extent sidelined from the negotiations. The article then analyzes the content of the recently adopted Tanzanian Plant Breeders Rights Act, noting that several provisions go beyond the UPOV 1991 requirements. The article calls for the more flexible approach of the TRIPS Agreement.

Keywords International Covenant on Economic, Social and Cultural Rights (ICESCR); African Regional Intellectual Property Organization; International Convention for the Protection of New Varieties of Plants (UPOV); Africa; farmers' rights

The overall research question that this article seeks to answer is the following:[1] *How can the processes leading up to the African Regional Intellectual Property Organization's (ARIPO) Arusha Protocol for the Protection of New Varieties of Plants (ARIPO Arusha PVP Protocol) and the Tanzanian 2012 PVP Act, both of which are going beyond the scope of UPOV 1991, be explained, and how can these outcomes be assessed in light of the states' international obligations arising under other international treaties?*

In order to answer this question, the article explains more generally why the same developing countries which have been arguing for low protection standards in the global context of the TRIPS (Trade-Related Aspects of Intellectual Property Rights) Agreement, do accept high protection standards on the regional and domestic levels.

The recent developments in the Africa implies that the International Union for the Protection of New Varieties of Plants (UPOV) gained further influence in 2014 (UPOV 2014), while its much larger sibling, the World Intellectual Property Organization (WIPO), is undergoing a crisis (Intellectual Property Watch, 2014a).

First, in April 2014, the (anglophone) ARIPO's draft PVP Protocol was found by the UPOV Council to be in conformity with the 1991 Act of the UPOV Convention (UPOV 1991). The adoption of the Protocol is planned to take place at the ARIPO Diplomatic Conference that was originally scheduled for August 2014 (ARIPO, 2013a, p. 3) but adopted by a ARIPO diplomatic conference in Arusha on 6 July 2015. UPOV says that ARIPO, with 19 member states—13 of which are classified as Least Developed Countries (LDCs)—has initiated the procedure for acceding to the UPOV Convention.

Second, in June 2014, the (francophone) African Intellectual Property Organization (OAPI) became UPOV member, 14 years after its PVP Protocol was found to be in conformity with UPOV 1991 (Kongolo, 2000) and 8 years after this Protocol—being Annex X to the revised Bangui Agreement—had entered into force. Hence, the 17 OAPI members states—13 of which are classified as LDCs—are currently bound by the UPOV 1991 requirements, as OAPI has become a member of UPOV, based on Annex X of the revised Bangui Agreement.

In addition, individual ARIPO member states, particularly Tanzania (Intellectual Property Watch, 2014b), are in the processes of joining UPOV. Tanzania's domestic Plant Breeders Rights (PBR) Act was revised in 2012 explicitly with the purpose of being in conformity with UPOV 1991. These processes together represent a boosting of UPOV membership and influence.

This article provides a critical analysis of the process and content of the ARIPO Arusha PVP Protocol, as well as the content of the 2012 PBR Act of Tanzania. Tanzania is the first ARIPO member state—and the first LDC in the world—that is on the track of not only complying with UPOV 1991, but having provisions that give stronger protection to the breeders than what is required by UPOV 1991.

Assumption of the article are, first, that the private seed sector requires high profit rates, particularly in institutionally vulnerable environments and second, that increased dependencies on private seed providers is likely as a result of the introduction of stronger PBR. This might impede the exchange of seeds and networking within and between local communities (Berne Declaration, 2014, p. 31).

As studies on the outcome of the Green Revolution has demonstrated, the large-owning farmers are under most circumstances more able to reap the benefits from new technology as compared to small-holders. For the latter, wrong choices or unfortunate external conditions can mean that they become even more vulnerable if they make themselves highly dependent upon commercial providers.

The article proceeds as follows. First, theories on agency of secretariats of IOs are introduced in order to seek to explain the processes taking place at ARIPO and UPOV, and experiences from the previous OAPI process will provide additional justifications for the critical approach taken. Second, these theories are illuminated by a previous regional PVP process in Africa, within the OAPI. Third, a brief analysis of public interest provisions of UPOV 1978, in addition to human rights, as recognized in the International Covenant on Economic, Social and Cultural Rights (ICESCR), and farmers' rights, as recognized in the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) will be analyzed. Fourth, the ARIPO objectives, instruments and decision-making structure are outlined. Fifth, the finalization of the ARIPO Arusha PVP Protocol will be reviewed. Sixth, the content of this ARIPO Arusha PVP Protocol will be analyzed, followed, seventh, by an analysis of Tanzania's 2012 PBR Act in light of UPOV requirement. Eight, some differences between Tanzania's 2012 PBR Act and its 2002 PBR Act are highlighted, followed, ninth, by explanations for why Tanzania seems likely to be the first country that choses to be bound by UPOV 1991.

Beyond Two-Level Games—Strong Agency of Secretariats of Intergovernmental Organizations and Weak Domestic Stakeholder Involvement

A standard approach to international negotiations has been to emphasize the parallel processes on two different levels: between domestic stakeholders and between different states. One can then predict the outcome of a two-level game by identifying win-sets. Win-sets are defined as outcomes of international negotiations likely to be accepted by domestic interest groups (Level I), and international agreements will be the outcome of international negotiations when there is an overlap between win-sets of the negotiating states (Level II) (Putnam, 1988).

In this standard version of the two-level game, the secretariats of international organizations (IOs) are not included. This article is built on two premises: First, IO secretariats do themselves have agency

(Hawkins and Lake, 2006; Mathiason, 2007), termed by one author as "complex agency" (Elsig, 2010). The complexity is based on an expanded version of the principal-agent theory, where the principals (states) have both sovereign principals in their respective capitals and proximity principals in the headquarter of the IO, the latter whom are co-acting with the agents (IO secretariats). While proximity principals is common in for instance the World Trade Organization (WTO), there are no permanent delegations from ARIPO member states in Harare, which hosts ARIPO.

Second, international negotiations in the realm of intellectual property rights are not characterized by the broad involvement of all relevant stakeholders, but primarily including the business sector. Business actors and associations are known to have played very important roles in intellectual property treaty making (Sell, 2003, 2009; Sell and May, 2006). IOs in the realm of intellectual property are not, however, known to be particularly attentive to provide for the broad participation by non-governmental organizations (NGOs), with the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore being an exception, with facilitation for participation by representatives for indigenous peoples. The reason for the limited participation by NGOs in the work of UPOV is found in paragraph 2 of UPOV's rules on granting observer status, saying that this status is "reserved to those organizations with competence in areas of direct relevance in respect of matters governed by the UPOV Convention." Moreover, only *international* NGOs can obtain observer status. UPOV has interpreted the "competence" requirement narrowly (Monagle, 2011, p.14), but the Association for Plant Breeding for the Benefit of Society (APREBES) and the European Coordination Via Campesina (ECVC) were given observer status in 2010. Subsequently, UPOV revised its rules governing the granting of observer status in 2012 (UPOV, 2012a, p. 4; UPOV, 2012b, p. 3), with stricter requirements, resulting in formulations "not found in the rules of any other international organization..." (APBEBES, 2012).

Each of these two premises will now be explored in greater detail.

A model analyzing state control over IOs has been developed, based on a comprehensive dataset, developed in order to challenge explanations of IOs that "overlook international bureaucrats" (Johnson, 2014, p. 6; see also Johnson, 2013a,b; Johnson and Urpelainen, 2014). The model seeks to explain how active roles of existing IO secretariats during the establishment of an IO influence the stringency of state control mechanisms over IOs. Less stringent state control means more power to the IO secretariats.

Four different dependent variables are introduced, addressing various forms of state control: (1) share of IO financing coming from states; (2) frequency of oversight meetings involving all members; (3) possibilities for single members to block a decision; and (4) whether states send active government officials to the meetings. The presumptions (hypotheses) is that IO will be more insulated from state influence if the IO is characterized by limited state financing, few review meetings, simple majority in decision-making, and state participation primarily by technical experts (Johnson, 2013a, p. 189; Johnson, 2013b, p. 503). With a possible exception for the second, on oversight or review meetings, the three variables on financing, decision-making, and representation do apply more directly to IOs in the realm of intellectual property than to IOs with a mandate relating to international development, or health and education.

To analyze these dependent variables, several explanatory (independent) variables are introduced, which will not be analyzed in this article. What is worth noting, however, is that the dependent variable that is significantly related to most explanatory variables is the fourth, on government representatives (Johnson, 2013a, p. 193). Significant scores are found for ten explanatory variables, six of which are negative, indicating that IO secretariats are particularly influential in policy areas with high need for expertise.[2] The other three dependent variables (financing, meetings, and decision-making) have significant scores for one, two, and three explanatory variables, respectively. Hence, it seems that IOs that primarily address matters that require technical competence held by experts, but not by governmental representatives, are more easily insulated from state influence. Intellectual property issues are relatively

technical matters, where information and technical insight primarily flows from other intellectual property IOs, and not from the respective capitals.

IOs might, however, have relatively strong internal division within their secretariats. In WIPO, there are divisions between those who only seek to promote the interests of the producers of creative work or new innovations, on the one hand, and those who seek to balance the interests of the users and producers of such work and innovations, on the other hand (May, 2007, p. 35). The first can be termed "pro-IP" and the second can be termed "pro-development" (Deere, 2011). Can we say anything general about how tensions between a "pro-development" wing and a "pro-development" wing in the same IO secretariat—or a state's ministries are solved?

Turning to the second premise, this relates primarily to the domestic level, or Level I in Putnam's model. Level I refers to the domestic negotiation games, based on a presumption that the respective states involved must have identified the views and brought further the concerns of the different stakeholders at the domestic level. While the national parliaments are expected to represent diverse views, Level I in Putnam's model implies that it is not considered adequate to only have backing from the parliament, but from a wide range of stakeholders, as specified by international law experts.

The International Law Association (ILA) adopted in 2004 its report titled "Accountability of International Organisations," ("IO Accountability") emphasizing transparency and relationship to NGOs (non-governmental organizations), including "at regular intervals convene a briefing where representatives of particular NGOs may be given an opportunity to present their views..." (International Law Association, 2004, p. 16).[3]

The IO Accountability specified accountability on "three levels which are interrelated and mutually supportive" (International Law Association, 2004, p. 5). The first level is the existence of systems for internal and external monitoring, in other words some form of supervision that the IO has done what has been asked by it by the member states. The second and third levels are on the IO's acts or omissions in relation to rules of international and/or institutional law.[4]

Hence, while IO Accountability do not represent binding law on IOs, it is reasonable to state that secretariats of an IO should facilitate meetings with NGOs at a regular interval. On a more general level, the IO is expected to have monitoring systems in place, and should be subject to procedures to assess if its conduct complies with international and/or institutional law.

In summary, we see that IO secretariats in the realm of intellectual property rights have diverse ways of influencing the processes and outcomes of intergovernmental negotiations, based on a prevailing "pro-IP" position. We also see that within the wider realm of intellectual property rights, negotiations relating to traditional knowledge are expected to be relatively inclusive and participatory, in line with ILA's IO Accountability. Negotiations relating to plant breeders' rights, on the other hand, are expected to be less participatory and less transparent.

Applying These Theories to Previous African Regional PVP Processes and Instruments

In order to illuminate these theories further, it is relevant to assess the process of adopting Annex X to OAPI's revised Bangui Agreement, on plant variety protection, taking place in 1999. An in-depth study of explains the negotiation process by identifying explanatory variables that might also be relevant for the more recent ARIPO process: (1) dependencies on global intellectual property organizations; (2) closed processes; (3) limited state capacities; (4) strong external influences by developed states; and (5) lofty promises on overall benefits in the realms of aid, trade and investments (Deere, 2011, pp. 241–242).

Deere provides more specific explanations for OAPI's strong pro-IP position, by arguing that employees at OAPI and national offices promote their own career opportunities in global IOs by promoting

a pro-IP position (Deere, 2011, p. 279). Hence, the tensions within the IO secretariat that May identifies for WIPO is not found within OAPI. Deere also argues that as the national offices in the OAPI member states are dependent upon funds from OAPI for their own budgets, the OAPI more easily persuades its member states (Deere, 2011, p. 283).

As for the second premise, on the involvement of relevant stakeholders, the second explanatory variable identified above, on "closed processes," covers more than merely NGO participation. The revised Bangui Agreement was presented to OAPI member states by the OAPI Secretariat without there being any formal state negotiations or parliamentary debate (Deere, 2011, p. 261).

This inadequate processes can be explained by the fact that developing countries lack effective internal coordination and communication, implying that states' positions in the WTO or the African Union (AU) might differ considerably from their positions in OAPI or WIPO (Deere, 2011, p. 285). As the overall structure and membership characteristics of OAPI and ARIPO are similar, it is reasonable to assume that characteristics of the OAPI process are also identified within ARIPO.

Hence, weak state capacities gives limited abilities to influence IOs, which gives IO secretariats strong agency, particularly if the issues that the IOs are mandated to regulate are of a complex and technical nature. This implies that Level II in Putnam's two-level game theory—with rational and autonomous states—has limitations in its explanatory powers in a context where the regional IO is dependent upon global IOs, and where states are dependent upon both.

NGOs in most African states are not regularly consulted when domestic laws or international treaties are to be adopted or policies are to be revised. The particular challenges arising in international negotiations characterized by a high need for technical expertise might further contribute to sideline NGOs working in the realm of farmers' rights and human rights. It is to these norms—that provide balance to the strengthening of exclusive rights for technology producers—that we now turn.

Public Interest Concerns, Human Rights, and Farmers' Rights

To illustrate how public interest are recognized within PVP, some provisions in UPOV 1978 will be briefly reviewed. States seeking to join UPOV do not have the option of choosing UPOV 1978, only UPOV 1991, with higher protection standards. Should such provisions from UPOV 1978 nevertheless be promoted in order to provide for a better balancing between public and private interests?

First, both UPOV 1991 Article 17, paragraph 1 and UPOV 1978 Article 9, paragraph 1, state that "public interest" may allow states to "restrict the free exercise of a breeder's right..." This term is not defined, however. The second preambular paragraph of UPOV 1978 acknowledges "the special problems arising from the recognition and protection of the rights of breeders..." and "limitations that the requirements of the public interest may impose..." These must be considered as encompassing public interest concerns. Most domestic PVP legislation do not contain explicit provisions on exceptions in the public interest, but the 2001 India Plant Varieties and Farmers' Rights Act allows for revocation in the public interest.[5]

Second, UPOV 1978 also allows for the exclusion of certain varieties, based on their "particular manner of reproduction or multiplication, or a certain end-use" as specified in Article 2.2. A similar wording is not found in any other treaties nor domestic legislation on PBR. The wording "particular manner of reproduction or multiplication" can refer to varieties that are only able to propagate once, such as the genetic use restriction technology (GURT), which is patented in the US, but which is currently not in commercial use.

States being in the process of adopting a PBR legislation should take note of these provisions of UPOV 1978. Hence, states that seek to comply with the requirement of TRIPS Article 27.3(b) of having in place an "effective sui generis system" (Association for Food Sovereignty in Africa (AFSA), 2014a, p. 14–17) can build upon UPOV 1978.

Moreover, states must take into account their obligations under other international treaties when they are negotiating intellectual property rights treaties or entering such treaties.[6] Two set of norms seek to promote the public interest: human rights, ensuring the rights of the most vulnerable persons by specifying that goods are to be both physically and economically accessible; and farmers' rights, acknowledging the breeding efforts of farmers for improving food plants, and indicating rights deriving from these efforts.

While acknowledging the complex relationships between human rights and intellectual property rights (Wager and Watal, 2015; Geiger, 2015; Grosheide, 2010; Haugen, 2007a; Helfer and Austin, 2011; Torremans, 2008; UN Committee on Economic, Social and Cultural Rights, 2006), some obvious differences are evident. The general wording and the weaker enforcement of human rights treaties stand in contrast to the explicit wording and strong enforcement of intellectual property treaties. Farmers' rights have the weakest wording and enforcement provisions. There are positive links between farmers' rights and human rights (FAO, 2004, 2014).

Human rights are not explicitly recognized within the mandate of intellectual property organizations, but by being a specialized agency of the UN, WIPO is bound by Article 55 of the UN Charter—on economic and social progress and development; solutions of international problems; and respect for, and observance of, human rights and fundamental freedoms—as specified by Article 59.[7]

While a detailed review of the right to food provision of the International Covenant on Economic, Social, and Cultural Rights (ICESCR) is beyond the scope of this article, there are three international law obligations that must be acknowledged if a state decides to rely on breeding efforts by private actors.

First, the state must identity whether the most vulnerable and disadvantaged persons are adequately served by the private actors. Two provisions of ICESCR gives guidance in this regard, namely Article 15, paragraph 1(b), recognizing everyone's rights to "enjoy the benefits of scientific progress and its applications" and Article 15, paragraph 2 on measures necessary for "diffusion of science..." It cannot be argued that new products should be given for free to the most disadvantageous persons. The state does, however, have an obligation, as outlined in the Venice Statement on the Right to Enjoy the Benefits of Scientific Progress and its Applications (UNESCO, 2009, paragraph 16(b)) and the Guidelines for state reporting on their implementation of the ICESCR (UN Committee on Economic, Social and Cultural Rights, 2009, paragraph 70(a)) to promote such access by particular measures to meet needs of the most disadvantaged and marginalized.

Second, taking into account the high rate of return and substantive yields improvements through public plant breeding efforts, particularly by international agricultural research centers (Renkow and Byerlee, 2010), states should more actively observe the obligation to cooperate internationally in the context of the right to food, as specified in Article 11, paragraphs 1 and 2 and Article 2, paragraph 1 of the ICESCR. In this context it must be acknowledged that the global costs of distribution of food will outweigh the costs of better distribution of food-producing resources, such as improved seeds (Haugen, 2007b, p. 145).

Third, by relying more upon the private breeding sector and facilitating this sector by ratifying UPOV 1991, it will be impossible to adequately observe obligations derived from other international treaties. Most known is the fact that no intellectual property rights treaty requires the applicant to comply with the access and benefit-sharing obligations as found in Article 15 of the Convention on Biological Diversity (CBD). Disclosure of origin of genetic material is one manner by which these obligations can be better complied with. As stated by UPOV: "UPOV encourages information on the origin of the plant material... but could not accept this as an additional condition of protection..." (UPOV, 2003, paragraph 8; see also UPOV, 2009a, paragraphs 77–79). The requirement to obtain a prior and informed consent (PIC) or "approval and involvement" from the indigenous and local communities before accessing their traditional knowledge or genetic resources is outlined in more specific terms in Article 7 of the 2010 Nagoya Protocol

on Access and Benefit-sharing—which entered into force in October 2014—as compared to Article 15 of the CBD.

Turning to farmers' rights, the 1992 Conference that adopted the CBD gave in Resolution III, paragraph 4(b) a mandate to negotiate an international treaty encompassing farmers' rights, a work that was completed in 2001, with the adoption of the ITPGRFA. Article 9 on farmers' rights says in paragraph 2 that it encompasses the protection of traditional knowledge, the right to equitably participate in sharing benefits, and the right to participate in making decisions, at the national level. Article 9, paragraph 3 confirms that farmers maintain the right to save, use, exchange, and sell farm-saved seed/propagating material.

There are, however, three terms that are applied that limit the strengths of these provisions. First, the term "should", not "shall" appears in Article 9, paragraph 2. It is uncommon that international treaties apply the term "should". Second, the term "as appropriate" is applied in both paragraph 2 and paragraph 3 of Article 9. Third, the term "subject to its national legislation" is also applied in both paragraphs.

There are examples of states which specify farmers' rights in detail, most notably India, which says in Article 39(1)(i): "a farmer who has bred or developed a new variety shall be entitled for registration and other protection in like manner as a breeder of a variety under this Act." The number of the farmers varieties that have been applied for to the Indian authorities exceeds the number of other new varieties applied for, with 2012 as an outstanding year, with almost 74% of all applications being for farmers' varieties.[8]

Moreover, Malaysia's New Plant Varieties Act 2004 (Act 634) reads in Section 14.2 (extract):

> where a plant variety is bred, or discovered and developed by a farmer, local community or indigenous people, the plant variety may be registered as a new plant variety and granted a breeder's right if the plant variety is new, distinct and identifiable.

We see that that the standard eligibility requirements for plant variety protection of stability and uniformity are replaced by the requirement of identifiability, allowing for a less rigorous examination procedure. This amendments from the UPOV requirements are fully possible for states that only seek to comply with the TRIPS requirements and not the UPOV requirements. Hence, while farmers' rights on the international level is not recognized as an enforceable intellectual property rights (ITPGRFA Governing Body (2013) for criticism on its implementation, see Third World Network et al. (2014)), there exists national legislation, particularly in Asia, that recognizes farmers' rights in a similar way as plant breeders' rights.

Similar strong legal recognition of farmers as breeders is not found in African legislation, but is contained in the AU Model Law for the Protection of the Rights of Local Communities, Farmers, and Breeders, and for the Regulation of Access to Biological Resource In Relation to International Law and Institutions ("Model Law"), where farmers' rights are recognized in Articles 24–27, with Article 25, paragraph 2 reading (extracts):

> A variety with specific attributes identified by a community shall be granted intellectual protection through a variety certificate which does not have to meet the criteria of distinction, uniformity and stability.

We see that unlike the Malaysian Act specified that varieties needed to be distinct and identifiable in order to be registered as a new plant variety, these requirements are not included in the AU Model Law, by requiring that the variety has "specific attributes." The author is not aware of any African state that has included a provision in their plant variety legislation based on this part of the Model Law. This does not,

however, imply that African states are not seeking to promote an understanding of farmers as breeders, but this could be more promoted, through specific programs. Studies of efforts to promote farmers' breeding and selection find that farmers are better able than scientific breeders to develop the most appropriate varieties adapted to the local conditions, particularly in arid areas (Ceccarelli, 2012; Ceccarelli et al., 2013).

Finally, there are two procedural obligations that must be observed by ARIPO member states, as parties to international treaties. First, they must facilitate access to information—as recognized in the International Covenant on Civil and Political Rights (ICCPR) Article 19, paragraph 2. Second, they must ensure participation—as recognized in ICCPR Article 25, paragraph (a), Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) Article 14, paragraph 2(a), and ITPGRFA Article 9.2(c). How these obligations have been observed in the process with the ARIPO Arusha PVP Protocol will now be analyzed.

ARIPO Objectives, Instruments, and Decision-Making Structure

Before elaborating more on the process of the ARIPO Arusha PVP Protocol, it is relevant, in light of the "pro-IP" tendency and the various "public interest" provisions analyzed above, to gain an understanding of ARIPO objectives. These are defined in Article III of the Agreement on the Creation of the African Regional Intellectual Property Organization (Lusaka Agreement), encompassing in paragraph (c) "the coordination, harmonization and development of the intellectual property activities..." Moreover, it is only in the context of *copyrights* of Article III, paragraph (i) that ARIPO is required to "ensure that [such] rights contribute to the economic, social and cultural development of members and of the region as a whole." Hence, while it could be expected that the socio-economic development—promoting the realization of all human rights, not only economic and social rights—is an *overall* objective of ARIPO, this is not explicitly provided for by its founding agreement.

Despite the particular emphasis on copyrights in the Lusaka Agreement, ARIPO has no copyright treaty. ARIPO has adopted agreements in the realm of patents (1982 Harare Protocol), marks (1993 Banjul Protocol), and traditional knowledge (2010 Swakopmund Protocol; not yet in force). In addition to the Administrative Council, that meets every year and oversees several sub-committees, a Council of Ministers meeting is held biannually. While ARIPO published a bimonthly newsletter 2011–2013, termed "ARIPO Magazine," its publishing is discontinued, but ARIPO's home page includes a news archive. A call was made by the Kenyan delegation at the 2013 Council of Ministers meeting, to enhance the visibility of ARIPO, and peoples' awareness of ARIPO (ARIPO, 2013b, p. 6, paragraph 28). Meeting documents are not generally available from the ARIPO home page, only by password, but decisions from the Board of Appeals are available without password. Finally, there are no explicit provisions on observer status for NGOs in the Lusaka Agreement. On this background, it is reasonable to state that ARIPO is not characterized by a high level of information accessibility. Is this inadequate transparency also seen in the process of the ARIPO Arusha PVP Protocol?

The Lusaka Agreement Article V says that ARIPO "shall establish and maintain close and continuous working relationships with the United Nations Economic Commission for Africa [UNECA], the World Intellectual Property Organization and the African Union." Hence, by the term "shall," an explicit procedural requirement as placed on ARIPO. Has this requirement been complied with and how has the overall process with the ARIPO Arusha PVP Protocol been conducted?

Moreover, Article VI of the Lusaka Agreement says that ARIPO "may co-operate with...organizations, institutions and bodies other than those referred to in Article V." Unlike Article V, this is a "may" provision. As there is no specification in Article VI itself, this provision must be read so as to include *any* "organizations, institutions and bodies."

The Process Leading up to UPOV Council's Decision on the ARIPO Arusha PVP Protocol

The detail of the analysis below is justified in order to trace the process of the ARIPO Arusha PVP Protocol, particularly to identify what has been the relationships with UNECA and the African Union, as well as cooperation with other organizations, as specified by Articles V and VI of the Lusaka Agreement. By revealing how the ARIPO Secretariat has acted throughout the process, this illustrates the agency and role of IO secretariats in the realm of intellectual property protection.

Concerning UNECA or AU (Lusaka Agreement Article V), there are no indications that the they have been asked to contribute to the process, even if this is required in Article V of the Lusaka Agreement. As for UNECA, a 1995 assessment of the TRIPS said that it "will be a constraint on their decisions 'over seeds and patents'..." (UNECA, 1995, B.3(f)). Subsequent UNECA/AU resolutions have, however, called on "African countries to strengthen their intellectual property regimes..." (UNECA and AU, 2011, paragraph 4). While this resolution does not specify plant variety protection, a general call for strengthening intellectual property regimes must be considered to encompass legal protection of breeders' rights.

Specific UN resolutions is specified to be a part of the "legislative mandates" of the UNECA (UNECA, 2014). One of the resolutions listed is the 2010 General Assembly resolution on the right to food, which "stresses" that WTO member states "should consider implementing [TRIPS] in a manner supportive of food security, while mindful of the obligation of Member States to promote and protect the right to food" (UN General Assembly (2010), paragraph 26 (extract); see also UN General Assembly (2009), paragraph 25; UN General Assembly (2014), paragraph 31). More explicit is the UN Special rapporteur on the right to food's report, which reads ((2010), paragraph 57(b); extracts):

> international institutions ... should assist States in implementing ... intellectual property rights which suits their development needs and is based on human rights ... by refraining from imposing on these countries the condition that they go beyond the minimum requirements of the TRIPS Agreement...

Neither this concern nor the concern expressed in the UN General Assembly resolutions have been adequately observed by the ARIPO member states. As part of UNECA's "legislative mandates," the UN General Assembly resolution and other right to food resources should have been brought before the ARIPO delegates.

Turning to the cooperation with other organizations (Lusaka Agreement Article VI), on only two occasions were non-governmental organizations critical of the draft ARIPO PVP Protocol invited to ARIPO workshops: one in July 2013 and one in October 2014.[9] In 2014, one organization representing farmers was present. The two experts meetings in July 2011 and June 2012 discussing the draft ARIPO PVP Protocol were attended by UPOV, the US Patent and Trademark Office (USPTO), the EU Community Plant Variety Office (CPVO), the OAPI, the French National Seed and Seedling Association and the seed industry (ARIPO, 2013a, p. 2). The October 2014 workshop was convened in cooperation with USPTO.

According to the Alliance for Food Sovereignty in Africa (AFSA), the October 2014 workshop showed that "most of the delegations from member states, government officials in particular, did not have full knowledge and understanding of the ARIPO PVP Protocol," and this was "acknowledged" by the ARIPO Secretariat itself (AFSA, 2014b, p. 1). The regional workshop on the ARIPO PVP resulted in that:

> member states ... unanimously endorsed the need for further consultations to be held at national levels and independent expert review of the draft ARIPO PVP Protocol and that ... a Diplomatic Conference ... is hopelessly premature. (AFSA, 2014b, p. 1)

Hence, the proposed recommendation mandating the ARIPO secretariat to call for a Diplomatic Conference in 2015 was not adopted. The criticism of the whole process has been expressed on several occasions (AFSA, 2014a,b,c,d; AFSA et al., 2014); criticism which has been responded to by the ARIPO Secretariat (IP Watch, 2014).

The processes at the workshops have not been adequate, illustrated by the fact that UNECA and the AU have been sidelined. Also the processes at the ARIPO meetings themselves have been inadequate. A detailed review of what happened at the November 2013 ARIPO Council of Ministers meeting is already done (AFSA, 2014a), but some illustrations will be provided.

One delegation commented that "it appears that ARIPO will further present to the UPOV Council for approval" (ARIPO, 2013b, paragraph 69 (extract)). The phrase "appears" indicates that the procedures were not clear to all ARIPO member states, even if the document prepared before the ARIPO Council of Ministers was clear that specific approval of the UPOV Council was needed. The more interesting part is a subsequent paragraph, with the ARIPO Director General responding that (ARIPO, 2013b, paragraph 71 [extract, emphasis added]):

> ... UPOV becomes relevant only at the operational level *when ARIPO would request it* to link its system to that of UPOV, and *that would require a separate decision to be taken by the Member States at a future date.*

While the phrase "link its system" is not fully clear, from the context it seems evident that this refers to the UPOV Council's examination of the ARIPO draft PVP Protocol's conformity with UPOV 1991, that took place in April 2014.

In the document to the 2013 ARIPO Council of Ministers meeting, two paragraphs address UPOV, both having UPOV in the title. The first states in the text: "The Council of Ministers *will be required to make a determination on the way forward...*" (ARIPO, 2013a, paragraph 42 (emphasis added). The second states in the text: "it is proposed that the Council of Ministers *approve for the draft Protocol to be submitted to the UPOV Council* session that will take place in March, 2014..." (ARIPO, 2013a, paragraph 45 (emphasis added). The author does not find that the report from the 2013 ARIPO Council of Ministers neither makes a specific determination nor *explicitly* approves of the UPOV process, but rather that the ARIPO Director General answers in a way that makes it reasonable to understand that the UPOV process will require a *specific* request and a *subsequent* decision by the ARIPO Council of Ministers.

Turning to UPOV, when the UPOV Council examined the conformity of the draft ARIPO PVP Protocol with UPOV 1991, it specified that the basis for this was paragraph 73 of the Report of the 2013 ARIPO Council of Ministers meeting, in relation to UPOV 1991 Article 1 paragraph (viii) ("territory in which the constituting treaty ... applies") and UPOV 1991 Article 34, paragraph 1(b)(iii) ("has been duly authorized ... to accede") (UPOV, 2014, paragraph 7). There is, however, no specification of any UPOV process in this paragraph of the report from the 2013 ARIPO Council of Ministers meeting, as it only refers to the adoption of the draft ARIPO PVP Protocol "as the basis for the conclusion of a Protocol ... in 2014" (ARIPO, 2013b, paragraph 73). We have already seen that this has been postponed.

Finally, it must be noted that the ARIPO Council of Ministers in November 2013 were orally informed that "the preparation of the text involved all stakeholders to ensure that the views of farmers ... were taken on board" (ARIPO, 2013b, paragraph 63 (extract)). Those attending the October 2014 workshop were informed that the "consultation process gives a platform to various stakeholders including civil society to contribute..." (AFSA, 2014c, p. 2). As the October 2014 workshop was the first occasion where an NGO representing farmers was present, with own funding (AFSA, 2014b), this information saying that farmers were "involved" and "contribute" cannot be considered to be correct.

While official ARIPO reports reveal that not all delegations have an adequate understanding of all relevant information relating to the process, the reports from the NGOs present at the workshops do reveal the real tensions that exists within ARIPO and between ARIPO Secretariat and its member states. (AFSA 2014b). In addition, ARIPO has ignored UNECA and the AU in the process leading up to the ARIPO Arusha PVP Protocol, and not adequately informed and involved relevant stakeholders, particularly farmers associations. The process has not been adequate.

Content of the ARIPO Arusha PVP Protocol

Rather than assessing the various provisions of the ARIPO Arusha PVP Protocol that mirror UPOV 1991, this section will identify and analyze those provisions that actually go beyond the requirements of UPOV 1991. These are the explicit requirement that all genera and species shall be protected from day one (Article 3); that the right-holder can withhold confidential information (Article 15.2); that remuneration are to be paid by small scale commercial famers (Article 22.3); and that the enforcement provisions encompass also any other breach of this legal framework (Article 35). Each of these will be specified below.

Number of Genera and Species

While the ARIPO Arusha PVP Protocol says that it shall be applied to all genera and species, UPOV 1991 says that this can be delayed until ten years after a State becomes a party to the UPOV Convention. UPOV 1991 Article 3.2(i) specifies that by the day a State is bound by UPOV 1991, its provisions must apply to at least 15 plant genera or species.

Withholding Confidential Information

One of the primary rationales behind both patent and plant variety protection is to enable publicly available information about new inventions or varieties, while allowing the time-limited exclusive rights on these inventions or varieties. The term patent comes from the verb pateo, which means "disclose" or "expose." Based on this understanding, it is surprising that the ARIPO Arusha PVP Protocol includes Article 15.2. This provision can be said to disturb the delicate balance between private and public interests that the patent and plant variety system seeks to provide.

Remuneration Paid by Small Scale Commercial Famers

There seems to be an understanding that all farmers are under a strict requirement to pay remuneration to the right-holder. This is not correct. With the notable exception of the "technology use fee," that Monsanto charges in certain countries on top of the price of the seeds, the actor that has time-limited exclusive rights is not making one's profit by collecting remunerations from farmers, but rather by charging a given price on the product one sells, and protected seeds can be resold by the purchaser, provided that it is not for reproduction. As an example of the legislation in a country which practices the "technology use fee," the US Plant Variety Protection Act includes a right to save protected seed that also extends to *bona fide* selling of protected seeds "for other than reproductive purposes" (7 U.S.C. § 2543)[10]; for the prohibited infringements, see 7 U.S.C. § 2541(a)).[11] This does not imply that the US law is necessary the most suitable for an African context, but it demonstrates that the ARIPO Arusha PVP Protocol gives stronger rights to the breeders than what is found in the most advanced industrialized countries. When UPOV 1991 addresses remuneration (Articles 13 and 17) this is in the context of compensating the PBR holder if another producer is granted a compulsory license to produce the protected variety. Hence, including provisions requiring farmers to remunerate breeders—as is done in ARIPO Arusha PVP Protocol Article 22.3–is neither required by any legal instrument nor wise.

Enforcement Against Other Breach of This Legal Framework

Article 35 specifies that enforcement shall not only apply to alleged infringements of breeders' rights, but also to "any other breach..." It is not fully clear what might potentially fall under this, but general and broadly worded provisions allowing for dispute settlement or any other legal enforcement is to be discouraged. Allowing procedures over issues that are not related to alleged infringements of breeders' rights mirrors the so-called non-violation provision of TRIPS,[12] which is so controversial that it has still not been implemented. What is more concretely defined as enforcement is not clarified in the ARIPO Arusha PVP Protocol, but UPOV has made a list (UPOV, 2009b) that encompasses civil, customs, administrative, criminal, dispute settlement, and specialized courts.

In summary, the existence of these four provision in the ARIPO Arusha PVP Protocol and the lack of provisions that specifies a certain conduct by the breeders and more specific benefits accruing to the farmers and other providers imply that the ARIPO Arusha PVP Protocol is formulated so that it does not adequately ensure the adequate balance between private and public interests. As noted above, international law obligations that the state has to bear in mind when implementing plant variety legislation includes adequate procedures for accessing genetic resources and providing for benefit-sharing with the providers of the genetic resources or the traditional knowledge applying to these resources.

Content of the Tanzania 2012 Plant Breeders' Rights (PBR) Act, in Light of UPOV 1991 and UPOV 1978

Turning to the content of Tanzania's 2012 PBR Act, a full review of all the provisions is not possible. Some provisions of the 2012 PBR Act that go beyond the UPOV 1991 and that mirror those of the ARIPO Arusha PVP Protocol, on the number of species to be protected and on possibilities to withhold information,[13] will not be assessed further. Moreover, the 2012 PBR Act contains no provision on farmers remunerating breeders. There are however, several provisions that go even further than the ARIPO Arusha PVP Protocol.

This section will review five provisions of the 2012 PBR Act go beyond the requirements of UPOV 1991 and of the ARIPO Arusha PVP Protocol, one provision of the 2012 PBR Act that is not regulated by neither UPOV 1991 or the less restrictive UPOV 1978, and two provisions of the 2012 PBR Act where there is a certain gap between what is required by UPOV 1991 and UPOV 1978.

Exceptions to plant breeders' rights as specified in Section 31 of the 2012 PBR Act goes beyond the requirements of the UPOV 1991, Article 15, as these exceptions do not apply to fruits, ornamentals, vegetables or trees under the 2012 PBR Act.

Duration of protection as specified in the 2012 PBR Act goes beyond UPOV 1991, Article 19, as Section 33(2) says that the protection term "may be extended for an additional five years, by a written notice to the Registrar [of Plant Breeders' Rights]..." The author is not aware of any other state having the possibility for 5 years extension simply by a submitting a written notice.

Section 34 of the 2012 PBR Act goes beyond UPOV 1991 by introducing criminal law in specifying protection against infringements. While the TRIPS Agreement includes criminal procedures in Article 61, these apply primarily to trademark counterfeiting and copyright piracy, but as specified in the last sentence of Article 61, "Members *may* provide for criminal procedures ... *in other cases* of infringement of intellectual property rights..." (emphasis added) if "committed wilfully and on a commercial scale." Hence, criminal proceedings for alleged infringements of patent and plant variety rights is a "may" requirement under TRIPS, and is conditioned upon the alleged infringer's intention and the scope of the alleged infringement. While the threat of criminal proceedings might work as a deterrent, it seems unwise to introduce provisions that tip the balance between breeders and farmers even more toward the breeders.

Confidentiality is addressed in Section 51 of the 2012 PBR Act, going beyond UPOV 1991 and the ARIPO Arusha PVP Protocol. Section 51, paragraph 3 specifies that any person who discloses information

made available under this Act shall be liable to a fine of not more than 5 million tz shillings or not more than one year imprisonment or both. In this context, it must be reminded that there is absolutely no justification within the patent or PBR system for keeping information away from the public, even if it is obvious that applicants do not provide more information than what is required to undertake the examination by the patent or plant variety offices.

The fifth section that *goes beyond* UPOV 1991 and the ARIPO Arusha PVP Protocol is Section 53, allowing the 2012 PBR Act to be applied retrospectively to existing varieties. This provision is not necessary, due to the fact that Tanzania has had a PBR legislation in place.

Pre-grant opposition is *not found* in UPOV 1991 or UPOV 1978—or any intellectual property treaties. In principle this is an important measure in order to prevent the grant of exclusive rights if the applicant is not eligible to file the application or if one or more of the requirements for being granted protection are allegedly not met. It can, however, be argued against the short time-limit as specified by Section 25 of the 2012 PBR Act, saying that pre-grant opposition is only allowed for only 2 months after the publication of the notice of the PBR application. Extending this period to for instance 6 months will allow for those that have objections to be able to coordinate themselves.

Section 29 of the 2012 PBR Act on receiving equitable remuneration from anyone who carried out acts on the variety over which PBR is sought—after the publication of the application but before the granting of the right —reflects the gap between UPOV 1991 (and the 2012 PBR Act) and UPOV 1978, as this is only regulated in the former.

Section 30 of the 2012 PBR Act on the exclusive rights given to the right holder is in line with UPOV 1991. The 2012 PBR Act applies also to varieties that are deemed to be derived varieties.[14] By this wording, breeding on protected varieties is not permitted without the consent by the right-holder—unless this is for private, non-commercial or experimental purposes, as specified in Section 31(a) and 31(b) of the 2012 PBR Act. Hence, the scope of plant breeders' rights is probably the provision where there is the largest gap between UPOV 1991 (and the 2012 PBR Act) and UPOV 1978. Depending on how the provision on essentially derived varieties is applied, there is a risk that varieties that farmers are using might fall under the scope of plant breeders' rights protection.

Hence, in addition to being the first LDC that seeks to comply with UPOV 1991, Tanzania takes upon itself substantively stricter requirements than what is found in UPOV 1991. As for the ARIPO Arusha PVP Protocol, the "pro-IP" forces prevailed also in the process of the 2012 PBR Act.

Content of the Tanzania 2012 Plant Breeders' Rights (PBR) Act, in Light of its 2002 PBR Act

In order to comply with UPOV 1991, some provisions of Tanzania's 2002 PBR Act that sought to provide for a balance between private and public interests were not included in the 2012 PBR Act. Three provisions will now be briefly identified.

First, the 2002 PBR Act contained in Section 22, paragraph (c) a requirement to include the origin of the variety. This could provide for some form of benefit-sharing. As already seen under the human rights section above (UPOV, (2003), paragraph 8; UPOV, (2009a), paragraph 77–79), UPOV says that requiring an applicant to disclose the origin of the genetic resource is understood as an additional eligibility criteria, and hence not in compliance with the established criteria of PBR.

Second, the 2002 PBR Act reads in Section 57, paragraph 1 (extract):

> The Minister shall ensure that the implementation of this Act shall not affect the fulfillment of the Government obligations pertaining to the protection of farmers' rights to equitably share and access to traditional cultivars...

The term "share" must be understood to refer to the same as "exchange." We see that the Tanzanian authorities saw its obligations as encompassing measures to ensure that farmers equitably share and access traditional cultivars. Hence, this was a weaker understanding of farmers as breeders than what can be found in the Indian and Malaysian legislations, but it must be acknowledged that the 2002 Act recognized obligations in relation to farmers rights.

Third, in Section 57, paragraph 2 the requirement that "fees paid to the Registrar under this Act, be set aside for the benefit of traditional farmers and the preservation of traditional cultivars . . ." Tanzania's Plant Varieties Registrar refers to this as a "Community Fund", informing that "part of the revenue . . . is set aside for development activities of the arrears *[sic!]* that contributed to the development of the protected varieties" (Ngwediagi, 2009, p. 12)[15] There are no references to traditional farmers and cultivars in the 2012 PBR Act. There is, however, a continuation of the Plant Breeder' Right Development Fund, established by Section 48 of the 2002 PBR Act and continued by Section 46 of the 2012 PBR Act. When specifying the financing purposes of this Fund in Article 48(3) of the 2012 PBR Act, this is limited to dissemination of PBR information, plant variety banks, further research on plant varieties, and other activities relating to the promotion of PBR. Hence, there is no specification of development activities to directly benefit traditional farmers, even if farmers might benefit indirectly from these general measures to promote plant breeding.

In sum, the interests of the farmers are much more present in the 2002 PBR Act as compared to the 2012 PBR Act. The fact that farmers are not included—being mentioned only in Article 9, paragraph 2(d) of the 2012 Act, in the context of having one member in the Plant Breeders' Rights Advisory Committee—should be a reason for concern. By not seeking to uphold the interests of farmers, the balance between plant breeders' rights and farmers' rights—irrespective of how farmers' rights are defined—are likely to tip toward the interests of breeders.

The 2002 Act was not in compliance with UPOV 1991. There are, however, no indication that other WTO members have considered the 2002 PBR Act as not being compliant with the TRIPS Article 27.3(b) requirement of having in place an "effective sui generis system." Tanzania is as a LDC in any regard not required to comply with the TRIPS Agreement—with the exception of its Articles 3, 4, and 5—until 1 July 2021. Why then was it necessary to adopt the 2012 PBR Act?

What Explains the Tanzania Push for Stronger PBRs—and is This Wise?

The main explanation for the process of writing a PBR Act that was in conformity with UPOV 1991 seems to be two. First, the acknowledgement that relatively few applications for PBR had been received. Second, the fact that Tanzania is part of all the recent global initiatives to boost Africa's agriculture, most notably the G8's New Alliance for Food Security and Nutrition, launched in 2012 and endorsed by IFAD, FAO, WFP, World Bank and the ADB.[16] Each of these will now be analyzed.

The Tanzanian Plant Varieties Registrar observed with regard to China that its farmers "have greatly benefited from the introduction of a PVP system and in particular with UPOV membership" (Ngwediagi, 2009, pp. 9–10). The limited number of PBR applications in Tanzania, particularly from foreigners, is specified as the main challenge (Ngwediagi, 2009, p. 14), and this is explained by lack of trust because Tanzania is not a UPOV member. A process was therefore initiated whereby the current Act should be amended to comply with UPOV 1991. It is on this background that we must understand the process of adoption of a new PBR Act, less than three years after the 2002 PBR Act became operational.

Second, according to the G8 Cooperation Framework to Support the New Alliance for Food Security and Nutrition in Tanzania (New Alliance Cooperation Framework; G8, 2012), the timeline for aligning Tanzania's PBR with UPOV was November 2012. This time limit was kept.[17] The New Alliance Cooperation Framework emphasize the role of the private sector, and Monsanto are among those

companies that have made "investment intentions" in Tanzania (G8, 2012, p. 9 and 14). Stronger PBR will most likely facilitate efforts by the private sector, resulting in an increase of the overall availability of improved seeds (Majamba and Longopa, 2014, p. 51, which might result in yields increases.

This story should be challenged, however. There are good reasons to doubt the simple causality model that goes like this:

stricter PBR laws—more PBR applications sent—more new varieties released—higher yields among all farmers—higher incomes for all farmers—better and more food for everyone

Inadequate affordability for farmers or farmers' dependency on the seed companies are just two of the factors that might disturb this causality. By expressing doubt of a simple causality as the one modeled, this does not imply a warning against plant breeding as such. Public breeding programs, with farmers' participation must be scaled up (UN Secretary-General, 2013, paragraphs 69–79). Public breeding could have a mutually positive relationship with commercial breeding, but there is no guarantee that mutually positive relationships will necessarily be the outcome.

Finally, it should be noted that the drafting of the Act happened without the adequate consultation, even if Section 21(2) of the Constitution of Tanzania says that "Every citizen has the right and the freedom to participate fully in the process leading to the decision on matters affecting him, his well-being or the nation." As already seen, human rights provisions specifying similar requirements.

Conclusions

There is no doubt that agricultural investments seeking to boost the yields of the small-holder is the most effective strategy for enhanced food security in Africa. Moreover, necessary structural changes in the African agriculture should be undertaken, in line with the wording of ICESCR Article 11.2(a), requiring States to take measures to "improve methods of production, conservation and distribution of food by making full use of technical and scientific knowledge..."

This article has shown that there are more tensions within ARIPO concerning the ARIPO Arusha PVP Protocol than what is read out from the ARIPO documents. In order to seek to calm down the concerns, the ARIPO Secretariats specifies that there will be additional regulations based on the ARIPO Arusha PVP Protocol, with the aim "that the situation of small holder farmers will be taken into consideration in relation to farm-saved seeds..." (ARIPO, 2013c, p. 3). While such regulations can be relevant for the implementation and interpretation of the ARIPO Arusha PVP Protocol, it is the wording of the Protocol itself that will prevail.

Stricter PBR legislation is adopted in order to facilitate for the private sector to take a more central role in the development of new plant varieties. In the absence of adequate institutions for regulation of anti-competitive practices, the agricultural sector might be dominated by one or a few commercial providers, that is an explicit concern by the UN Secretary-General (2013), paragraph 82. If the strategy by Tanzania and other ARIPO member states for a strengthened PBR results in a situation where seed companies becomes the primary provider of new seeds, public breeding programs are scaled down or discontinued, and farmers are sidelined from decision-making this is unwise and might be in contradiction of Tanzania's human rights obligations, particularly ICESCR Article 11.2(a).

Locally adapted varieties do depend less on expensive inputs (Berne Declaration, 2014, p. 35) and is therefore a superior strategy to achieve a "climate-smart" agriculture. This is also reflected in the views by APBREBES (2014), calling for "rewarding agrobiodiversity rather than uniformity."

Moreover, the experiences from those states that have undergone what can be termed "miracles," as seen in the Brazilian semi-arid cerrado, shows that a strong public breeding and extension programs have formidable result. Hence, the emphasis on the corporate breeders must not imply that less emphasis is placed on public breeding programs.

The two premises introduced in the theory section, saying that IO secretariats do themselves have agency; and that international negotiations in the realm of intellectual property rights are not characterized by the broad involvement of all relevant stakeholders, but primarily including the business sector, are both found to have relevance in the context of the ARIPO Arusha PVP Protocol. Both premises do represent serious challenges to the state-centered two-level game theory. This article has shown the relevance of analyzing the role of IO secretariats, including from whom they take advice, whom they are accountable to, and how the pursuit of individual careers might affect one's loyalty. IO secretariats in the realm of intellectual property seem to be highly interesting cases of how other actors than member states influence the priorities of the IO.

Within the ARIPO Secretariat, the process has not been adequate regarding the following issues: (1 which decisions are given priorities; (2) which provided information is acted upon; (3) the "shall" requirement of Article V of the Lusaka Agreement has not been adequately observed. It is reasonable to conclude that it has been an inadequate process. As concerns the outcome, the wording of the ARIPO Arusha PVP Protocol—notwithstanding the call by ARIPO member states for "further consultations to be held at national levels and independent expert review of the draft ARIPO PVP Protocol" (AFSA, 2014b)—provides for stronger exclusive rights than what is to be expected based on the development level and characteristics of farming among the ARIPO member states.

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Notes

1. The article is based on two legal opinions that were written for the African Centre on Biosafety in 2014: "Legal opinion on the draft ARIPO Plant Variety Protocol (PVP) and subsequent regulations" (for an edited version, see AFSA, 2014a), and "Legal Opinion on the Tanzania Plant Variety Protection Act, Act. No 1 of 1 March 2013." Thanks to Mariam Mayet for responses to the drafts of these two Legal Opinions.
2. Note that the term "patent" is a keyword for "need for expertise" (Johnson and Urpelainen, 2014, p. 201), and the kind of expertise that is assigned the highest value is scientific or technical expertise (Johnson, 2013b, p. 514), which is relevant in the context of patent and plant variety protection.
3. This article does not analyze the ILC "articles on the responsibilities of international organisations" (2011 Articles) (International Law Commission (ILC) 2011, pp. 52–172; see AFSA (2014a), p. 12 for an analysis of the legal status of these 2011 Articles, comparing them to the 2001 Articles on state responsibility). The application of the 2011 Articles are monitored by a specific implementation program, with regular reports by the UN Secretary-General on courts' decisions and IOs and states' practice with regard to these articles (UN General Assembly, 2012,2015).
4. In brief, the second level is on liability for injurious consequences which are not a breach of such rules and the third level is responsibility for acts or omissions which do constitute a breach of such rules.
5. The India Protection of Plant Varieties and Farmers' Rights Act allow in Article 34(h) for revocation of the PBR if "the grant of the certificate of registration is not in the public interest." The term public interest is not defined, but

is, however, defined in the India Patent Act, Article 66, covering situations where "a patent or the mode in which it is exercised is mischievous to the State or generally prejudicial to the public..."

6. Note in this context that all 19 ARIPO members are also parties to the International Covenant on Civil and Political Rights (ICCPR); 17 of 19 ARIPO member states are parties to the ICESCR (Mozambique and Botswana are not members); 17 of 19 ARIPO member states are parties to the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) (Somalia and Sudan are not members); and 15 out of ARIPOs 19 members states are parties to the ITPGRFA (Botswana, Gambia, Mozambique, and Somalia are not members).
7. WIPO's purpose can be defined differently according to different sources. On the one hand, Article 3(ii) of the 1967 Convention establishing the WIPO reads "to promote the protection of intellectual property throughout the world..." On the other hand, Article 1 of the 1974 Agreement between UN and WIPO reads: "promoting creative intellectual activity and for facilitating the transfer of technology ... in order to accelerate economic, social and cultural development..." The fact that the latter is the more recent one, and the fact that WIPO as a UN specialized agency is bound by the UN Charter should imply that the latter has greater weight than the former (Haugen, 2010, p. 698).
8. India Protection of Plant Varieties and Farmers' Rights Authority (2012), iii, reporting the following number of applications for registration and protection: new varieties 149, extant varieties 177, and farmers' varieties 921; the numbers for 2012 are, according to the India (PPVFR) Authority (2013), ix: new varieties 176, extant varieties 243, and farmers' varieties 359.
9. Based on information by the ARIPO Secretariat, "consultations with a wide range of stakeholders" characterized the process with the adoption of the 2010 Swakopmund Protocol (see WIPO, 2010).
10. The relevant part recognizes the right "for a person to save seed produced by the person from seed obtained, or descended from seed obtained, by authority of the owner of the variety for seeding purposes and use such saved seed in the production of a crop for use on the farm of the person, or for sale as provided in this section. A bona fide sale for other than reproductive purposes, made in channels usual for such other purposes, of seed produced on a farm either from seed obtained by authority of the owner for seeding purposes or from seed produced by descent on such farm from seed obtained by authority of the owner for seeding purposes shall not constitute an infringement."
11. What is specified as constituting infringements are: sell or market; import; sexually multiply; producing a hybrid; use seed which had been marked "Unauthorized Propagation Prohibited;" dispense the variety to another without notice as to being a protected variety; condition for the purpose of propagation; stock; perform any of the foregoing; instigate or actively induce performance of any of the foregoing.
12. The basis is GATT Article XXII.1(b) and (c), which allow any party alleging that "any benefit accruing to it ... is being impeded as the result of ... the application by another contracting party of any measure, whether or not it conflicts with the provisions of this Agreement, or ... the existence of any other situation" (emphasis added) to "make written representations or proposals to the other contracting party or parties" The outcome can, in accordance with GATT Article XXIII.2 be "a ruling on the matter..." TRIPS Article 64.2 reads: "Subparagraphs 1 (b) and 1(c) of Article XXIII of GATT 1994 shall not apply to the settlement of disputes under this Agreement for a period of five years from the date of entry into force of the WTO Agreement."
13. Section 12 of the 2012 PBR Act on all genera and species to be protected are going beyond UPOV 1991, that only requires protection of 15 plant genera or species from the day the state is bound by UPOV 1991.
14. The essentially derived varieties provision is essentially about extending the protection to those varieties that can be categorized as being derived from the original variety, meaning that they are not adequately distinct. As the plant breeders' rights extends to these varieties, the breeders are able to prevent certain acts also on such derived varieties. Without going into the requirements in detail, Section 33 of Tanzanian 2002 PBR Act is essentially giving the same requirements as Article 14.5 of UPOV 1991. UPOV 1978, on the other hand, does not include provisions on essentially derived varieties.

15. Note that three questions sent to the Registrar for Plant Breeders' Rights, P. Nwaediagi, have not been responded to; the three questions reading: "1) What were the amounts that were collected under Article 57.2 [of the 2002 PBR Act] summed up to? 2) For what purposes and in which regions they were used? 3) Since you in the same report [the 2009 report] apply the term Community Fund, is this to be understood as a separate Fund that was established, or just a separate bank account within the office of the Registrar, that is now terminated (as the new PBR Act does not include a similar provision) ?"
16. The other initiatives are WEF's New Vision for Agriculture (2009 highlighting collaboration, investment and innovation); WEF/NEPAD/AU's Grow Africa (2011 seeking to accelerate investments); and Rockefeller and Bill & Melinda Gates' Alliance for a Green Revolution in Africa (2006, supported by IDRC, DFID, and NEPAD).
17. The examination by the UPOV Council of the then Bill took place 8 October 2012, the adoption of the Act took place by the Tanzanian Parliament on 5 November 2012, and it entered into force 1 June 2013.

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