The SADC PVP Protocol:

Blueprint for uptake of UPOV 1991 in Africa

DISCUSSION DOCUMENT

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Contents

On 7 April 2015 the African Centre for Biosafety officially changed its name to the African Centre for Biodiversity (ACB). This name change was agreed by consultation within the ACB to reflect the expanded scope of our work over the past few years. All ACB publications prior to this date will remain under our old name of African Centre for Biosafety and should continue to be referenced as such.

We remain committed to dismantling inequalities in the food and agriculture systems in Africa and our belief in people's right to healthy and culturally appropriate food, produced through ecologically sound and sustainable methods, and their right to define their own food and agricultural systems.

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Acronyms

ARIPO	African Regional Intellectual Property Organisation
ACB	African Centre for Biodiversity
CBD	Convention for Biological Diversity
CL	compulsory licenses
CSOs	civil society organisations
EU	European Union
ITPGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
NDUS	novelty, distinctness, uniformity and stability
LDC	least developed country
PBR	plant breeders' rights
PVP	plant variety protection
SADC	Southern African Development Community
TRIPS	Trade-Related Aspects of Intellectual Property Rights
TWN	Third World Network
UPOV	International Union for the Protection of New Varieties of Plants
WTO	World Trade Organisation

Use of terms

Plant Variety Protection (PVP)
Also known as Plant Breeders' Rights (PBR). This is the intellectual property protection given to the right holder over a new plant variety. PVP and PBR are often used interchangeably.

Arusha PVP Protocol
Arusha PVP Protocol is a protocol developed under the African Regional Intellectual Property Organisation (ARIPO). ARIPO is an intergovernmental organisation that facilitates cooperation among member states in intellectual property matters. There are currently 19 states that belong to ARIPO.[1] The name of the Protocol 'Arusha' denotes the place where the Protocol was adopted by the members states in Tanzania, 2015. The Arusha PVP Protocol and the ARIPO PVP Protocol are also often used interchangeably.

Farmer-managed seed systems/Farmer seed systems
Also known as the informal seed system. The historical and traditional practices of farmers regarding the management of seed and propagating material, including the in-situ conservation, maintenance and selecting of seed diversity, and the saving, re-using, exchanging and selling of seed amongst family, neighbours and communities.

Introduction and background

Article 27 (3)(b) of the Trade-Related Aspects of Intellectual Property Rights (TRIPs) Agreement of the World Trade Organisation (WTO) creates mandatory obligations on its members to provide for the protection of plant varieties either by patents or by an effective sui generis system or a combination of both.[2] Plant variety protection (PVP) defines and regulates private and exclusive monopoly rights vis-à-vis new, sexually reproduced or tuber-propagated plant varieties, including the right to license use to others for a fee and to claim royalties from farmers. There are different kinds of PVP laws in the world; some are of its own kind (*sui generis*); some are based on UPOV 1978 and still others on UPOV 1991 (see Annex 1). UPOV is the French acronym for the International Union for the Protection of New Varieties of Plants. UPOV was developed by industrialised countries to address their own plant-breeding and development needs. UPOV 1991 imposes a "one-size-fits-all", inflexible and restrictive legal framework, which limits the ability of countries to design national plant variety protection systems appropriate to their individual country needs and priorities, and to balance these with the protection and enforcement of farmers' rights. It does not reflect the concerns and conditions of African nations much less the great diversity and different levels of agriculture development across the continent.

In this paper, we deal with a regional PVP system developed under the auspices of the Southern African Development Community (SADC)[3] titled, the Protocol for the Protection of New Varieties of Plants (Plant Breeders' Rights) in the Southern African Development Community (referred to as the 'SADC PVP Protocol' or the 'Protocol'). This regime is based on a regional harmonisation model, whereby the same model of plant variety protection is adopted by members of a

1. Botswana, The Gambia, Kenya, Lesotho, Malawi, Mozambique, Namibia, Sierra Leone, Liberia, Rwanda, São Tomé and Príncipe, Eswatini, Tanzania, Uganda, Zambia and Zimbabwe.
2. This does not apply to WTO members that are least developed countries (LDCs). They enjoy a transitional period until 1 July 2021. This transitional period can also be extended. At the moment, there are nine LDC countries in the SADC, including Angola, Comoros, Democratic Republic of Congo (DRC), Lesotho, Madagascar, Malawi, Mozambique, Tanzania and Zambia.
3. The Southern African Development Community (SADC) is a Regional Economic Community comprising of 16 member states: Angola, Botswana, Comoros, Democratic Republic of Congo,Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania , Zambia and Zimbabwe.

regional economic community to expedite trade and the production of commercially bred seed varieties for the benefit of the seed industry/agribusiness. It is based on UPOV 1991 and is part of the legal and institutional architecture designed to facilitate the transformation of African agriculture from peasant-based to inherently inequitable, dated and unsustainable Green Revolution/ industrial agriculture. The SADC PVP Protocol was adopted by the 37th Ordinary Summit of Heads of States and Governments of SADC in Pretoria, South Africa on 19 and 20 August 2017. At the time of writing this critique, it had been signed by Angola, Democratic Republic of Congo, Eswatini,[4] Zambia, Lesotho and Namibia.

The ACB is already on record as having publicly voiced its concerns about current PVP models being developed on the continent. These models, based on UPOV 1991, undermine farmers' rights to freely save, use, exchange and sell all farm seeds, stifle innovation, raise input costs for farmers and, ultimately, allow commercial breeders to appropriate and privatise historical social knowledge and the natural ecological processes embedded in plant genetic resources (ACB 2018a).

African farmer and civil society organisations (CSOs) have made several critical commentaries on draft versions[5] of the SADC PVP Protocol, outlining serious concerns, particularly that the recognition and protection of farmers' rights was overlooked by the Protocol. Some of the concerns raised by CSOs were addressed as a result of robust advocacy work—including by the ACB—in a revised version of the SADC PVP Protocol. Two specific gains were made:[6] one regarding the exceptions to breeders' rights and the other, in relation to declaring the provenance or origins of germplasm used in the development of new varieties.

Unlike in the case of the ARIPO PVP Protocol,[7] no regulations have yet been made to implement the SADC PVP Protocol. The SADC Protocol can be said to be incomplete and unimplementable until such regulations have also been formally adopted. Once this happens, member states of SADC will be invited to sign and ratify the SADC PVP Protocol, together with its regulations.

Ratification is the process whereby a member state gives consent and agrees to be legally bound by the Protocol. This is usually preceded by a constitutional process that has to involve the public in decision-making and must also be passed by Parliament. However, this process may be determined by the specific national-level legislation of each country. According to Article 47 of the SADC PVP Protocol, the Protocol will come into force 30 days after two thirds of the member states ratify the Protocol and will remain in force, for as long as at least two thirds of the state parties, remain bound by the provisions of the Protocol. However, there is uncertainty as to whether the SADC protocol will have direct legal effect in the respective countries owing to the different current legal systems that the member states have adopted since independence (Munyi, et. al 2016).

Nevertheless, it is simply inconceivable that SADC members would willingly bind themselves to a regional PVP system that is centralised, top-down and, worse still, based principally on the inflexible regime of UPOV 1991.

This critique aims to:

- share information on some of the salient provisions of the SADC PVP Protocol within the context of our advocacy work to promote seed and food sovereignty and work with farmers towards protecting farmers' rights and farmers' seed systems;
- support advocacy work at the regional and national levels for more socially just and equitable seed laws and policies, including advocacy work as to why we are opposed to SADC member states ratifying the Protocol; and
- inform national seed policy and law making.

4. Previously known as the Kingdom of Swaziland.
5. See ACB (2013).
6. See AFSA (2014).
7. See ACB (2018b)

We refer the reader to our publication 'The Arusha Protocol and Regulations: Institutionalising UPOV 1991 in African seed systems and laws'[8] as several SADC countries are also members of ARIPO.[9] While the central mechanisms of both the SADC and the ARIPO PVP Protocols are similar, have the same intentions and are both based on UPOV 1991, there are some significant differences between the two (see Annex 2). The question then arises as to where these anomalies will leave countries that are members of both ARIPO and SADC.

Key concerns about the SADC PVP Protocol

Our major concerns about the SADC PVP Protocol include, but are not limited to, what follows.

- The Protocol creates a centralised PVP regime for SADC member states who ratify the Protocol. The SADC regional Plant Breeders' Rights Office will thus have extremely wide powers to grant and administer breeders' rights on behalf such member states. This includes granting PVP protection, issuing compulsory licenses, nullifying or cancelling PBRs and so forth. Disturbingly, there are no specific provisions and mechanisms to enable member states to object to a PBR applying in its territory and thus, exercise its national sovereignty. This is a very serious omission—one addressed by ARIPO in the Arusha PVP Protocol Article 4(1). CSOs and some ARIPO member states fought hard to get this right to object to the approval of any PBR application in their respective countries, included in the ARIPO PVP Protocol (ACB and TWN 2016). Individual SADC members will be denied the right to take sovereign decisions relating to the very core of national socio-economic development and poverty reduction strategies. This omission in the SADC PVP Protocol effectively undermines the sovereign right of each member state to take measures that are in its national interests.
- This centralised PVP—based on UPOV 1991—flouts the 'effective sui generis' system option of the TRIPS Agreement, since SADC members are required to apply the same restrictive PVP model, irrespective of their different levels of agricultural, economic and social development. This single approach assumes that what works for one country in the region (e.g. South Africa), should work for another country in the same region (e.g. Democratic Republic of Congo). Consequently, the Protocol also fails to provide any sort of flexibility that would allow its most vulnerable members to address their specific local agricultural systems and socio-economic challenges.
- More than half of SADC members are LDCs of the WTO and are currently not even obliged to implement the provisions of the TRIPs Agreement, including the provisions mandating plant variety protection. Many of these members have either limited or no experience with PVP systems. The question to be asked here is what the likely consequences of plant variety protection will be for public breeding, innovation on the part of public research institutions and farmers and food and nutrition security in these countries.
- There is a strong view that the PVP protection criteria, namely novelty, distinctness, uniformity and stability (NDUS), clearly disregard landraces and farmers' varieties, as is more fully discussed below. The view is that this exclusion and lack of recognition of landraces and farmer varieties effectively excludes farmers from the definition of 'breeder' in the Protocol and this precludes landraces from obtaining protection (Correa et al. 2015).
- The Protocol also goes beyond UPOV 1991 in some instances, especially with regard to allowing PVP protection of all genera and species, whereas even UPOV 1991 provides a transition period for protection. Flexibility is necessary in order to allow countries to determine which genera or

8. See ACB (2018b)
9. Botswana, Lesotho, Malawi, Mozambique, Namibia, Eswatini, Tanzania, Zambia and Zimbabwe.

species should be included and which should be excluded from the scope of national PVP law. For example, a member state might wish to exclude certain indigenous plant genera and species from PVP protection in order to guard against misappropriation, private ownership and generally, the erosion of genetic diversity and the marginalisation of local varieties and farmer-managed seed systems.

- Due to CSO pressure, the SADC PVP Protocol includes, as part of the application requirements for a plant breeder's rights, a declaration from the breeder that the genetic material or parental material acquired for breeding, evolving or developing the variety was lawfully acquired. These provisions are intended to contribute towards preventing the misappropriation of genetic resources—an improvement on the previous draft. However, it still does not provide for the right to benefit-sharing from the use of genetic resources that may have been acquired from farmers and local and indigenous communities. Consequently, the Protocol fails to support the objectives and the obligations of the Convention for Biological Diversity (CBD), the Nagoya Protocol on Access and Benefit Sharing and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA).
- Finally, and perhaps most importantly, are concerns about the provisions dealing with exemptions to breeders' rights and how far these exceptions fall short of realising farmers' rights as recognised in Article 9 of the ITPGRFA, to which Angola, Botswana, Democratic Republic of Congo, Eswatini, Lesotho, Madagascar, Mauritius, Malawi, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Zambia and Zimbabwe are contracting parties.[10] The exceptions to breeders' rights in the Protocol relate to "acts done by a farmer to save, sow, re-sow or exchange for non-commercial purposes his or her farm produce, including seed of a protected variety, within reasonable limits and subject to the legitimate interests of the holder of the breeder's right. The reasonable limits and the means of safeguarding the legitimate interests of the holder of the breeder's right shall be prescribed." While this is an improvement on the clause it has replaced,[11] a great deal will depend on how "non-commercial purposes" and "reasonable limits" and "safeguarding the legitimate interests of the holder of the breeder's right" will be further elaborated in the regulations.

Specific comments on the provisions of the Protocol

Preamble

An effective *sui generis* system

The preamble of the SADC PVP Protocol recognises the need for an effective *sui generis* system of intellectual property protection of new varieties that meet the requirements of Article 27(3)(b) of the WTO's TRIPS Agreement in the SADC region. Indeed, governments have flexibility to determine and design plant variety protection systems that are suitable to their specific needs, conditions and agricultural priorities (Shashikant 2018). However, the SADC PVP Protocol is a centralised, one-stop-shop PVP regime, modelled on UPOV 1991, which in turn imposes a 'one-size-fits-all' PVP regime. The Protocol thus contains provisions that are not in line with *sui generis* features—especially for developing countries—as seen elsewhere, such as in Asia and some countries in Africa (Correa et al. 2015). Such a centralised regime does not provide flexibility for individual member states to design systems that benefit their individual agricultural, food security, employment and other domestic priorities. Furthermore, an effective *sui generis* system

10. See list of membership of ITPGRFA: http://www.fao.org/planttreaty/countries/membership/en/?page=1&ipp=20&no_cache=1&tx_dynalist_pi1[par]=YToxOntzOjE6IkwiO3M6MToiMCI7fQ.
11. The plant breeder's right shall not extend to "acts done by subsistence farmers for the use for propagating purposes, on their own holdings, the product of the harvest which they have obtained by planting, on their own holdings the protected variety of varieties covered by Article 26(3) (a)(i) or (ii) to this Protocol. See Article 27(d) of draft SADC PVP Protocol 2012 http://www.ip-watch.org/weblog/wp-content/uploads/2013/04/SADC-Draft-PVP-Protocol-April-2013.pdf.

should be supportive of and not counter the objectives and obligations of other relevant international instruments such as the CBD, the Nagoya Protocol on Access and Benefit Sharing and the ITPGRFA (Correa et al. 2015).

Farmers' rights
In its preamble, the Protocol does not acknowledge the contribution made by smallholder farmers to the development and conservation of plant varieties, in particular by women; nor does it commit to ensuring participation of such farmers in decision making and in the fair and equitable sharing of benefits arising from the use of plant genetic resources.

Access to improved plant varieties
The Protocol also claims in its preamble that plant breeders' rights will allow farmers to "access a wide range of improved varieties of crops, which will contribute to the attainment of the regional goal of economic development and food security" and that the Protocol will "encourage plant breeding and facilitation of agricultural advancements for the benefit of the region". On the contrary, evidence shows that improvements in plant genetic resources for food and agriculture have successfully taken place over the centuries without PVP protection. A World Bank study showed that a diverse and dynamic seed system supply can develop in the absence of intellectual property rights, as in the case of India (World Bank 2006).

UPOV tends to favour commercial breeders to the detriment of farmers and may serve foreign rather than local breeders, thus killing local innovation. In Kenya, for example, PVP played a very small part in stimulating local research and benefitted a handful of foreign breeders where PBR rights were predominantly applied by foreign-owned commercial exporters of flowers and vegetables to underpin commercialisation and exportation (Meienberg 2014).

Any PVP regime based on UPOV is bound to have negative consequences if it restricts farmers' seed systems from operating freely and if it stifles the natural evolution and expansion of such systems through limitations on the saving, exchanging and selling of farmer-produced seed of protected varieties (Correa et al. 2015).

In fact, as it is (with its scope including all species, expansive breeders' rights, a narrow range of breeders' exemptions and even more restrictive farmers' exceptions), the Protocol is more likely to hinder farmers' access to improved varieties and breeding efforts in the SADC region.

Article 3: Scope and application

Application of PVP to 'all genera and species'
Article 3(1) of the Protocol states that it "shall be applied to all plant genera and species". This provision goes beyond UPOV 1991 which gives new members a transitional period for such coverage: it requires new members to provide PVP protection, at the date on which it becomes bound by the Convention, to at least 15 plant genera or species and extends to all plant and genera or species after ten years.

It should be noted that the TRIPS Agreement of the WTO does not specifically address the coverage of protection for plant varieties. This can be interpreted as allowing members to reasonably determine a number of genera and species that would be eligible for PVP (Correa et al. 2015) and thereby also to exclude some plants and genera from the ambit of the law for food security, national sovereignty and biodiversity conservation reasons.

Under UPOV 1978 (Articles 4(4) and 4(5)), once a country ratifies the Convention, the country only needs to extend PBRs to at least five genera or species. This progressively applies to at least ten genera or species within three years, 18 genera or species within six years and to 24 genera or species within eight years. Further, due to special economic, ecological or other difficulties, a country may request UPOV to reduce the minimum numbers or extend the above-mentioned duration. The Indian PVP law does not automatically cover all genera and species. It allows the central government to determine which genera and species will be covered by the Act. Further, it makes it clear that no variety that is injurious to the life or health of human beings, animals or plants may be registered. In addition, in the interests of the public, any genera or species may be removed from the scope of the Indian law (Correa et al. 2015).

The approach taken by the SADC Protocol is extremely concerning. Article 3(1) of the draft Protocol grants countries no flexibility regarding the scope of protection. The justification for automatically extending protection to all plant species remains unclear.

Given that PBRs is a relatively new concept for many African countries in the region, with unknown effect, it is irrational to extend protection to all genera and species. We believe that, rather than a blanket application of PVP across all species, SADC member states who are bound by the WTO rules to put in place a PVP system should retain their policy space and apply PVP to species and genera selectively and gradually. Moreover, PBRs tend to be relevant only to crops with commercial value, thus it is also important that the need for PVP standards is differentiated between different categories of crops, such as commercial non-food crops and food crops to ensure equity in domestic food and seed systems. It is prudent to restrict PVP to a limited number of genera and species, rather than developing administrative guidelines related to crops that are of no commercial interest in a particular country or region, thus concentrating efforts around those crops relevant for their economies (Correa et al. 2015).

The flexibility to limit PVP protection to certain species/genera and to exclude specific genera/species is critical as it allows member states to take the measures necessary to protect public interests, food security, specific indigenous crops or the interests of specific communities, as well as to address any specific national food and seed security challenges.

Centralised PVP system

Although the Protocol does not prevent SADC members from granting PBRs through their national PVP legislation, where such legislation exists, the main thrust of the Protocol is about creating a centralised PVP system in the SADC region. Article 3(2) states that "[p]lant breeders' rights granted under this Protocol shall, on the basis of one application, be valid in all State Parties". Other articles of the Protocol allow the SADC PBR office to receive PBR applications and grant or reject the application on behalf of SADC members (Articles 4, 4(a), Article 13, Article 25 and Article 33). Management of PBRs will also be done regionally. Although it may seem obvious that breeders will be interested in seeking protection in the SADC region, this will largely depend on national PVP legislation in place to allow for this to happen. At the moment, there are only five[12] countries within SADC with PVP systems in place and thus enactment of regional PBRs may not take place sooner in countries with no PVP systems due to capacity constraints, and implementation costs (Munyi, et. al 2016). Thus important decisions that have far-reaching national impacts and consequences will now be taken at the SADC regional level by a handful of officials who may not have the necessary experience with intellectual property rights such as PBRs. This includes deciding on significant, far-reaching issues such as whether or not to grant compulsory licenses in the public interests of a SADC member and whether or not to nullify or cancel PBRs that are granted.

The SADC protocol prevents cumulative protection of plant breeders rights thus favoring uniform application. This means that if a variety is protected by the SADC regional PVP system, the same variety cannot also be protected or be given other rights under national law, ostensibly to avoid double protection and different laws applying in respect of the same variety. Further, if a right holder has already been granted rights under the national law and then receives another PBR grant under the SADC regional system, the regional PVP law will prevail over the national law. This has vast implications for national sovereignty as lawmakers at the country level will be unable to make any decisions concerning what is approved in the region. On the other hand, the Arusha PVP protocol allows cumulative protection of rights at the national and regional levels.[13] It has been argued that cumulative protection would make sense when granting PBR rights to breeders in the

12. Mozambique, South Africa, Tanzania, Zambia and Zimbabwe
13. See Article 38 of the Arusha protocol

two regional PVP instruments – Arusha and SADC PVP protocols – particularly since the Arusha PVP protocol is not only open for signature and ratification by ARIPO member states but also to any other members of the African Union[14] (Munyi, et. al 2016). Furthermore, any exceptions and flexiblities in national laws for smallholder farmers will be superceded by the SADC PVP Protocol. Compounding this sovereignty minefield, is the lack of provisions and mechanisms to enable a contracting party to object to, or prevent PBRs from operating in its territory.

The Protocol does not make any provision for contracting parties to object to an application lodged under the Protocol for PBR implementation in its territories, as does the ARIPO's Arusha PVP Protocol. Article 4(1) of the Arusha PVP Protocol and Rule 12 of its Regulations allows contracting parties to object to a PBR being extended to its territory within six months of the date when the application for the PBR was filed. This was a major point of controversy and heated debate during the final rounds of negotiations just before the Arusha PVP draft Protocol was adopted. The version that was eventually adopted was intended to safeguard member states' sovereign right to object prior to a PBR being granted regionally (ACB and TWN 2016). It has been noted above that a regional "one size fits all", top-down approach that entrusts critical national decisions of a sovereignty nature regarding PBRs to a regional authority, is fundamentally flawed. SADC members should not give away their national autonomy and their sovereignty to decide for themselves whether or not to approve the PVP applications.

Article 5: SADC Plant Breeders' Rights Advisory Committee

The SADC PVP Protocol provides for a SADC Plant Breeders' Rights Advisory Committee and proposes that one of the committee members should come from the farmers' associations or unions. It is likely that this space will be occupied by farmers' unions that represent the interests of commercial farmers and not those of smallholder farmers.

Article 6: Plant breeders' rights register and non-disclosure of information

Articles 6(6) and (7) give the Registrar of the SADC PBR Office the discretion to "determine the particulars in the register that should be for public inspection". This discretion shall be "diligently exercised with due regards to the confidentiality of any particular information".

These provisions go beyond UPOV 1991 and allow applicants for PBR who do not wish to disclose important information with regard to the breeding and development of the variety to hide behind 'confidentiality'. Lack of transparency and limited access to information are key issues that farmer and civil society organisations have been struggling against in their efforts to access key documents when engaging with regional and national seed and PVP law-making processes. Limiting access to information provides loopholes for biopiracy and also makes it difficult for a member of the public or any person opposing an application to do so without having read the relevant information.

Article 7, 8, 9, 10 and 11: Criteria for protection and NDUS

According to Article 7 of the Protocol, breeders' rights shall be granted where the variety is novel (N), distinct (D), uniform (U) and stable (S). The conditions of NDUS are defined in Articles 7–11 of the Protocol and are based on UPOV 1991. Article 7 goes on to state that "the grant of plant breeders' rights shall not be made subject to any further or different condition".

As with UPOV 1991, the Protocol (Article 8) defines 'novelty' in terms of whether a variety has been sold or disposed of with the consent of the breeder. This definition means that novelty is defined in relation to commercialisation and not by the fact that the variety did not previously exist.[15]

14. See Article 42 of the Arusha PVP Protocol
15. See http://www.apbrebes.org/content/upov-convention.

The variety is considered to be novel if it has not been sold or otherwise disposed of in the SADC region earlier than one year before the date of application, and outside of the SADC region earlier than six years for trees and vines, and four years for other varieties. The article thus distinguishes between sale or disposal within the SADC region and outside the region. The positive value of this distinction is not obvious. But the novelty standard set out in the Protocol is low in that it allows varieties that have been commercialised for between four and six years outside of the SADC region to be considered novel. If the aim of the Protocol is to introduce new varieties in the SADC region, then this article contradicts that aim as it facilitates delay in the introduction of new varieties.

Correa et al, 2015. argue that the application of the novelty requirement generally would tend towards excluding farmers' varieties from protection, as UPOV 1991 sets out very narrowly prescribed circumstances that will constitute 'disposed of'[16] and that do not include, for instance, farmers' exchange of seeds. In other words, acts between farmers to exchange seed do not fall within UPOV's definition of 'disposal' to disqualify a variety from protection. On the other hand, farmers have used but may not have sold a variety. Thus the definition of 'novelty' does not prevent the misappropriation of a farmer's variety by the breeder (BMZ 2015).

The definition of 'distinctness' in Article 9 requires that in order for a new variety to be a candidate for protection, it must be clearly distinguishable from any variety that is a matter of common knowledge *anywhere in the world*. Further, Article 9(2) outlines factors for a variety to be of common knowledge such as:

(a) Exploitation of the propagating material or harvested material of the variety has already been marketed for commercial purposes;
(b) Entry of the variety in an official list or register of varieties in any SADC Member State or outside SADC Region or precisely described in any professional publication; or
(c) Inclusion of the variety in a publicly accessible plant varieties collection.

It must be noted that UPOV 1991 does not mention the factors which Article 9(2) of the SADC PVP Protocol contains, and leaves room for UPOV members to determine the scope of the common knowledge. It is therefore proposed that, when the regulations are drafted, consideration be given to the fact that publication is not limited to professional publication but includes informal recordings that are available within SADC member states and farming communities in order to avoid biopiracy.

Theoretically, plant variety protection may be beneficial for farmers in the protection of their diverse varieties from biopiracy (ACB 2018a). Unfortunately, with the NDUS requirements this may not work for farmers. Furthermore, applying for PVP protection will be costly and difficult for farmers or even small seed enterprises to manage (ACB 2018a). PVP systems involve significant costs which are related to NDUS testing and assessment, but maintaining the PVP is also costly as fees tend to rise steadily over the full or initial period of protection (World Bank 2006). This must be taken into account by the LDCs within SADC. This then raises a much broader question about comprehensive protection and recognition of farmers' varieties—an issue that really should be addressed in a comprehensive policy for farmer-managed seed systems.

There is a view that the uniformity and stability requirements of the Protocol make it impossible for farmer breeders to seek PVP protection for their varieties and landraces and for any new varieties they may develop, as these varieties are heterogeneous, variable and thus, inherently unstable in an evolutionary sense and in permanent evolution (Correa et al. 2015). It can be further argued that the requirement of uniformity is also a threat to food security, especially in risk-prone areas, as an increasingly narrow

16. See UPOV 'Explanatory notes on novelty under the UPOV Convention', UPOV/EXN/NOV, 2009, para 6. www.upov.int/edocs/expndocs/en/upov_exn_nov.pdf.

genetic base equals genetic vulnerability, making crops vulnerable to pests and climate stress (Correa et al. 2015).

It is concerning and rather tragic that SADC has chosen to follow the flawed approach of UPOV 1991, which only encourages standardisation and homogeneity instead of developing a legal framework that also rewards agro-biodiversity and encourages farmers to rely on a diversity of crops, which is important to protect livelihoods in the face of the emerging threat of climate change and the challenges of food security facing the region.

It is important that any *sui generis* regime fully recognises the importance of heterogeneity and the adaptability of plant varieties to changing conditions and does not rely (totally, or partially) on the UPOV standards and therefore includes landraces and farmers' varieties. For example, the Indian PVP Act and Farmers' Rights Act of 2001 applies to: (i) new plant varieties, (ii) extant (domestic and existing) varieties, and (iii) farmers' varieties. Farmers' varieties are a subset under 'extant varieties'. In addition, the Malaysian Protection of New Plant Varieties Act of 2004, provides that plant varieties bred or discovered and developed by a farmer, local community or indigenous people are protectable if they are "new, distinct and identifiable" (Correa et al. 2015).

Article 13: Filing an application and disclosure of origin

One of the gains made following the concerns raised by CSOs was for the inclusion of "disclosure of origin" provisions in the Protocol as provided for by Article 13(5)(e) of the Protocol. This Article requires that applications for PBR contain "a declaration that the genetic material or parental material acquired for breeding the variety has been lawfully acquired and the source of such material". This element is important to safeguard against misappropriation of genetic resources and associated traditional knowledge and to ensure fair and equitable benefit sharing. Requiring full disclosure of information with regard to how the variety is developed in exchange for receiving plant variety protection is also critical for transfer of technology and knowledge to local communities. Moreover, full disclosure of information will enable SADC member states to ensure that varieties that are injurious to health and the environment do not receive protection.

An example of a country in Asia with disclosure or origin provisions is India's PVP Act of 2001, Article 18(1)(e)[17] and within Africa and particularly the SADC region, an example is Zimbabwe's PBR Act of 2001, under Article 7(3)(a).[18]

Article 21: Publication of information

Article 21(2) of the Protocol deals with publication of information. It lists information that should be published by the SADC PBR office at regular intervals. It also states: "No confidential information as indicated in the application form shall be published without the written consent of the breeder of the variety." Again, this lack of transparency and access to information under the guise of 'confidentiality' is totally unjustifiable and unacceptable.

In the patent system, patent holders are given 20 years' protection from the filing date and in return, patent applications must be published and the applications must also disclose the invention in a manner sufficiently clear and complete for the invention to be carried out by a skilled person including the best way of working the invention. This is to ensure that once the protection period expires, others have the technological information necessary to develop the invention. The same should apply to PBRs. In return for PBRs, the applicant

17. Article 18(1) (e) of the Indian PVP Act of 2001 states that "Every application for registration under Section 14 shall ... (e) contain a complete passport data of the parental lines from which the variety has been derived along with the geographical location in India from where the material has been taken and all such information relating to the contribution, if any, of any farmer, village community, institution or organisation in breeding, evolution or developing the variety". See www.fao.org/faolex/results/dtails/en/c/LEX-FAOC028128.
18. Article 7(3)(a) of the Zimbabwean PBR Act of 2001 states that "An application ... (a) shall indicate the origin of the plant concerned and give the full name of the breeder". See http://extwprlegs1.fao.org/docs/pdf/zim36503.pdf.

must be required to reveal all information with regard to breeding and development of the variety that is to be protected (e.g. the parental lines of the protected variety). Otherwise breeders that apply for PVP can keep their breeding/development methods (e.g. the parental lines of the protected variety) a trade secret even after expiry of their rights.

Effectively, the confidentiality clause in Article 21 enables the right holder to maintain exclusive monopoly rights over the variety (e.g. hybrid varieties) even after expiry of the period of protection, preventing transfer of technology and knowledge to local entities. Since breeders receive certain exclusive rights, their applications should be publicly available, with breeders required to make full disclosure, including complete passport data and disclosure of the origin of the genetic material used to develop the new varieties. We see no value in Article 21.

Further, Article 25(3)(c) of the Protocol suggests that only selected information about the grant will be published. There is no justification for this. It is important to publish all details with regard to the grant of the PBR.

If a breeder is allowed to hide behind confidentiality, important information may be withheld, making it more difficult, if not impossible, to challenge the application through, for example, pre-grant opposition procedures or to operationalise benefit-sharing arrangements, even if a variety is developed using local germplasm. The breeder would also be able to more easily manipulate the system.

Article 22: Publication of application and objections

Article 22 of the Protocol allows for pre-grant objections to be filed with regard to published applications. This article allows "any person" to submit, within 60 days, a written and reasoned objection to the SADC PBR Office. The definition of 'any person' in the Protocol is "any natural or legal person". In this regard a range of institutions may be interpreted here to include, for example, a SADC member state who is a Party to the Protocol, farmer and local communities and CSOs.

The notice of objection has to *inter alia* specify the grounds on which the objection is based and be accompanied with proof of payment of fees.

Specific observations are made with regard to Article 22:

- Sufficient time should be provided for submission of a written and reasoned objection, particularly as farmer and local communities have many constraints and few resources and therefore need time to mount an objection. A period of 60 days is insufficient. A period of at least three months after publication of the application, and any further time before the application is disposed of, should be considered for a written objection to be made. It is also important to expressly require the pre-grant objection to be given due consideration before a decision is made to grant protection.
- Provision should also be made for payment of fees to be waived when the objection is made by communities such as local community groupings, farmers and civil society groups since the fees may deter or even prevent them from making an objection.
- Grounds for submitting an objection in Article 21(4) should include instances where granting PBR is simply not in the public interests of a SADC member state, where the variety may have an adverse effect on the environment, or where the application fails to provide full disclosure of information.
- Article 22 is tilted in favour of the right holder. It provides for the PBR applicant to receive the notice of objection and to reply to the objection (make a counter-statement). However, no provision is made for the opposing party to receive the counter-statement and the accompanying evidence.

Article 26: Period of protection

The Protocol in Article 26 follows UPOV 1991 and prescribes the duration of PBR protection to begin from the date of grant of the breeders' right for a period of 25 years for trees and vines and 20 years for all other genera and species. It further states that the Advisory Council may extend these periods

by up to five years (i.e. an optional five-year extension may be granted).

The period proposed by the Protocol is excessively long, particularly in view of the blanket application of the Protocol covering all plant genera and species, the fact that most SADC members have never had PVP legislation and thus are unaware of its potential adverse impacts, and in view of the vulnerability of many of the SADC members.

There is no logical explanation for SADC to simply adopt the UPOV 1991 standard as it provides no flexibility to SADC members. In addition, the combined strategy of extended scope and longer protection makes little sense, since the agricultural landscape in SADC member states is dominated by farmer-managed seed systems. Allowing for extended protection does not in any way benefit these systems. It only benefits commercial seed breeders, which are multinational seed and agrochemical companies and allows such breeders to dominate seed breeding and production and to extract royalties from local farmers for the duration of protection. It also does little in terms of developing agricultural innovation.

The Protocol has failed to consider other options that allow sufficient protection as well as flexibility to SADC member states. For example, the Indian law grants an initial period of protection of nine years for trees and vines and six years for other crops.[19] This period may be reviewed and renewed for the remaining period on payment of fees and subject to the condition that the total period of validity shall not exceed the duration of 18 years for trees and vines and 15 years from the date of registration of the variety for other genera and species .

In comparison to the UPOV model, this option would provide adequate protection, would ensure that only interested breeders continue to receive protection, and would allow SADC members flexibility to not renew protection, if it is not in the interests of SADC members. There is also no sound justification for an optional five-year extension to be added to an already excessively long period of protection. Moreover, there is no information about on which grounds an extension would be allowed. A mere request from the breeder should certainly not be sufficient to extend protection.

Article 27: Scope of plant breeder's rights and Article 28: Exception to plant breeders' rights

Articles 27, 28 and 29 of the Protocol define the scope of rights that a right holder is entitled to and the rights of farmers and other actors vis-à-vis the protected variety.

Article 27 sets out provisions for the scope of breeders' rights in respect of the propagating material of a protected variety. According to Article 27(1), the following acts require the authorisation of the holder of the plant breeder's right:

(a) Production or reproduction (multiplication);
(b) Conditioning for the purpose of propagation;
(c) Offering for sale;
(d) Selling or other marketing;
(e) Exporting;
(f) Importing; and
(g) Stocking for any of the purposes referred to in paragraphs (a) to (f).

Article 27(2) states that the holder may make an authorisation referred to in sub-article (1), subject to conditions and limitations, and Article 27(3) states that harvested material, including entire plants and parts of plants, obtained through the unauthorised use of the propagating material of the protected variety, shall require the authorisation of the holder, unless the holder has had a reasonable opportunity to exercise his/her right in relation to the said propagating material.

Article 27(4) states that the provisions of sub-articles 1, 2 and 3 shall also apply to essentially derived varieties, varieties not clearly distinguishable, in accordance with Article 9, from the protected variety and whose production requires the repeated use of the protected variety.

19. See Article 24(6) of the Indian PVP Act of 2001.

The list of prohibited activities in the Protocol goes beyond UPOV 1978 which required prior authorisation of the breeder only with regard to "production for purposes of commercial marketing", "offering for sale" and "marketing" of "reproductive or vegetative propagating material" of the protected variety. By focusing on the commercial marketing of propagating material, UPOV 1978 implicitly allows the production of propagating material of a protected variety for non-commercial purposes, thus allowing, for example, farmers to exchange seeds.

Article 28 of the Protocol deals with exceptions to breeders' rights and states that plant breeders' rights shall not extend to:

(a) acts done privately and for non-commercial purposes;
(b) acts done for experimental purposes;
(c) acts done for the purpose of breeding other varieties, and, except where the provisions of Article 27(3) apply, actions referred to in Article 27(1) and (2) in respect of such other varieties; and
(d) acts done by a farmer to save, use, sow, re-sow or exchange for non-commercial purposes his or her farm produce, including seed of a protected variety, within reasonable limits subject to the safeguarding of the legitimate interests of the holder of the breeder's right. The reasonable limits and the means of safeguarding the legitimate interest of the holder of the breeder's right shall be prescribed.

Both Articles 27 and 28 raise concerns.

Scope of breeders' rights

First, as previously mentioned, Article 27 has expanded the scope of rights to breeders in comparison with the exclusive rights granted under UPOV 1978, as the Protocol is based on UPOV 1991 to the point where these rights are comparable to those granted under patents. Under UPOV 1978, the saving, re-use and exchange by farmers of seed for non-commercial purposes was not as expressly restricted. However, these rights can still be legally exercised if they fall under the exceptions provided by Article 28 of the SADC PVP Protocol, but subject to certain conditions.

With respect to harvested material, regulated under Article 27(3), it should be noted that UPOV 1978 does not require extending the exclusive rights to harvested materials or other marketed products, with the exception of ornamental plants that are used for propagating purposes (Correa et al. 2015). However, the SADC PVP Protocol's regulation of harvested material is not as draconian as that of the Arusha PVP Protocol, which, in Article 21(3)(b), extends restrictions even to the harvested products unless the breeder has had reasonable opportunity to exercise the right in relation to the propagating material.[20] There are, however, some provisions under exceptions to breeders' rights provided for by the SADC PVP as discussed further below, where farmers are allowed to some extent to use harvested material, including farm-saved seed and products of harvest obtained by planting propagating materials of protected varieties. However, for the Arusha PVP Protocol, the exceptions are still very limited for farmers categorised as smallholder commercial farmers and large-scale commercial farmers, whereas for the SADC PVP Protocol, the range of exceptions is broad as they relate simply to 'farmers', with no distinction made as to which categories of farmer the provisions will apply.

Essentially derived varieties

By extending protection to essentially derived varieties, under Article 27(4), (5) and (6) the Protocol places significant restrictions on farmers' ability to freely use protected varieties for research and breeding purposes, thus limiting the development of new varieties from the protected varieties – especially for farmers who breed and adapt varieties to their local conditions by selection.

Article 5(3) of UPOV 1978, explicitly allows the use of a protected variety as an initial source of variation for the purposes of creating other varieties or for the marketing

20. Article 21 (3) (b) of the Arusha PVP Protocol states: "Subject to Articles 22 and 23, the acts referred to in paragraph (1) items (a) to (g), in respect of ... (b) products made directly from harvested material of the protected variety falling within the provisions of paragraph (a)".

of such varieties. In this case, the breeder's authorisation is only required in cases of repeated use of the protected variety. However, this option is not available under the SADC PVP Protocol as it is based on UPOV 1991.

Exceptions to breeders' rights

As briefly mentioned above, Article 28 of the SADC PVP provides two main exemptions for farmers with regard to the use of farm-saved seed of propagating material of protected varieties. The first exemption is in relation to 'private and non commercial use' as also provided for in Article 15 (1) (i) of UPOV 1991 and the other is what is commonly refered to as 'farmers' privilege' - 'acts done by a farmer to save, use, sow, re-sow or exchange for non-commercial purposes on his or her farm using propagated material of the protected variety. However, there are still a few limitations pertaining to these exemptions that need to be clarified and defined in the regulations.

Article 28 (a) of the SADC protocol states that; a 'plant breeder's right shall not extend to acts done privately and for non-commercial purposes'. There is a need to clearly define what private and non commercial purposes entail. The use of the term 'private and non-commercial' could signify the use of protected varieties for subsistence purposes only. However, standardised UPOV 91 interprets "private and non-commercial use" in its narrow sense. According to UPOV's explanatory notes:

> *5. "The wording of Article 15(1)(i) of UPOV 1991 indicates that acts which are both of a private nature and for non-commercial purposes are covered by the exception. Thus, non-private acts, such as exchange, even where for non-commercial purposes, may be outside the scope of the exception.*
> *6. Furthermore, the wording indicates that private acts which are undertaken for commercial purposes do not fall within the exception. Thus, a farmer saving his own seed of a (protected) variety on his own holding might be considered to be engaged in a private act, but could be considered not to be covered by the exception if the said saving of seed is for commercial purposes."*[21] *(wording in brackets added by the author).*

The UPOV explanatory notes then goes onto giving examples of what the exemption does allow. According to the explanatory note:

> *"The wording of Article 15(1)(i) suggests that it could allow, for example, the propagation of a variety by an amateur gardener for exclusive use in his own garden (i.e. no material of the variety being provided to others), since this may constitute an act which was both private and for non-commercial purposes. Equally, for example, the propagation of a variety by a farmer exclusively for the production of a food crop to be consumed entirely by that farmer and the dependents of the farmer living on that holding, may be considered to fall within the meaning of acts done privately and for non-commercial purposes. Therefore, activities, including for example "subsistence farming", where these constitute acts done privately and for non-commercial purposes, may be considered to be excluded from the scope of the breeder's right, and farmers who conduct these kinds of activities freely benefit from the availability of protected new varieties."*

It is our view that the UPOV explanatory note takes this too far—beyond the realms of reasonable and fair exceptions in order smallholder farmers to freely save, re-use, exchange and sell all farm-saved seed under their control, including protected varieties, with other farmers in accordance with age-old practices.

Consequently, if the UPOV explanatory note's interpretation of the exemption of private and non commercial use is to be applied to the SADC protocol, this would result in practices such as exchange, selling and even trading of seed surpluses on the very local grain market being prohibited the SADC countries (De Jonge, 2014). As already

21. For UPOV explanatory notes on exceptions to the breeder's right under the 1991 Act of the UPOV Convention, see http://www.upov.int/edocs/expndocs/en/upov_exn_exc.pdf.

mentioned, the sharing and exchange of farm-saved seed among smallholder farmers is the bedrock of African agricultural systems that ensure food security and seed conservation. It is imperative that the 'private and non-commercial' use exemption be properly defined in order to allow all small holder farmers to do so, including resource poor farmers, (De Jonge, 2014) but not limited to these farmers.

It has correctly been argued that any uniform definition of size and income would in any case, not be feasible across the number of countries in a region, as significant economic differences exist between such countries (Munyi et al, 2016). This points again to the unviability of a regional harmonised system for a number of African countries and the need for country specific legislation to be crafted.

When it comes to the so called 'farmers' privilege', Article 28(d) is an improvement on the previous draft Protocol, where the proposed text severely limited farmers' rights through the following clause:

> *(d) acts done by subsistence farmers for the use for propagating purposes, on their own holdings, the product of the harvest which they have obtained by planting, on their own holdings the protected variety or varieties covered by Article 27(3)(a)(i) or (ii) to this Protocol.*

Exceptions to breeders' rights as they currently stand, as contained in Article 28(d) of the Protocol now provides that plant breeders' rights shall not extend to:

> *acts done by a farmer to save, use, sow, re-sow or exchange for non-commercial purposes his or her farm produce including seed of protected variety, within reasonable limits subject to safeguarding of the legitimate interests of the breeder's right. The reasonable limits and the means of safeguarding the legitimate interests of the breeder's right shall be prescribed.*

A great deal will depend on how "non-commercial purposes", "reasonable limits" and "safeguarding of the legitimate interests of the breeder's right" will be further elaborated. On the one hand, as noted above, "non-commercial purposes" should be clearly defined in such a way that it does not restrict the rights of farmers. On the other hand, "reasonable limits" and "safeguarding of the legitimate interests of the breeder's right" should be defined so as not to restrict the scope of use of the protected material and also so as to exempt smallholder farmers from paying royalties. Some suggestions for this in the regulations or national PVP legislations would be for 'non-commercial' to be broadly defined, so that smallholder farmers have full freedom to operate whether in local seed trade or among themselves when using protected varieties, including the right to exchange and sell seeds and propagating material. Furthermore, royalties could be limited to apply only to large-scale commercial farmers who operate above the commercial threshold (ACB 2018).

Countries that agree to be bound by both the SADC and the Arusha PVP Protocols will be confronted with the anomalies that are contained in the provisions for exceptions to breeders' rights between these two Protocols. The SADC PVP Protocol allows farmers to save, use, sow, re-sow or exchange produce from a protected variety for non-commercial purposes, subject to safeguarding the legitimate interests of the breeders under Article 28(d) (still to be defined). The Arusha PVP Protocol, however, provides extremely limited and narrow exceptions only to a list of agricultural crops and vegetables specified by the Administrative Council and associated with the historical practice of saving seed, and which excludes fruits, ornamentals, other vegetables or forest trees.[22] Article 22 (2) of the Arusha Protocol states:

> *(2) Notwithstanding Article 21, for the list of agricultural crops and vegetables with a historical common practice of saving seed in the Contracting States specified by the Administrative Council which shall*

22. See Article 22(2) of the Arusha PVP Protocol.

not include fruits, ornamentals, other vegetables or forest trees, the breeder's right shall not extend to a farmer who, within reasonable limits and subject to the safeguarding of the legitimate interests of the holder of the breeder's right, uses for propagating purposes, on the farmer's own holdings, the product of the harvest which the farmer has obtained by planting on the farmer's own holdings, the protected variety or a variety covered by Article 21(4) (a) or (b).

Furthermore, this would still be subject to payment of royalties of small-scale farmers and large-scale commercial farmers.[23] However, small-scale commercial farmers may be put at an economic disadvantage compared to those in Europe as will be discussed further below, as they will be required to pay remuneration to the breeders. In addition, the Arusha PVP regulations under Rule (15) (2) further elaborate that "the Administrative Council shall specify a list of agricultural crops and vegetables with historical practice of saving, using , sowing and resowing or exchanging seeds and acreage/tonnage that defines a smallscale farmer in each Member State based on the criteria established at the national level". This shows that exemptions only apply to smallholder farmers who will be exempted from paying royalties.

The exclusion of fruits, ornamentals, other crops, or forest trees may put farmers within the ARIPO region at a disadvantage vis-à-vis those from other member states that may not limit use of seed-saving to specific crops. For crops not on the list, there are no exemptions for the seed-saving of smallholder farmers. The Arusha PVP Protocol also does not explicitly provide for farmers to freely exchange and sell farm-saved seed of protected varieties, including engaging in local rural trade, a practice which underpins agricultural systems in ARIPO countries.

Article 29: Exhaustion of plant breeders' rights

A right holder given the sole right to commercially exploit a product may exercise the right by selling the product. The seller's rights over that product are then considered to be exhausted and the buyer of the product would then have certain rights, depending on the exact nature of rights granted under the relevant legislation.

Article 29 of the SADC Protocol, which is based on the UPOV 1991 standards, limits the scope of exhaustion of rights. It states that breeders' rights will not extend to any material of varieties protected under the Protocol that has been sold or otherwise marketed in the SADC region by the breeder or with the breeder's consent, provided that there is no further propagation of the variety or that it does not involve an export of material of the variety which enables propagation of the variety into a country that does not protect varieties of that plant genus. Export of the material is allowed if it is for final consumption purposes. It is worthwhile to note that the TRIPS Agreement gives WTO members complete freedom to determine the scope of exhaustion of rights.

'Material' is defined as propagating material of any kind, harvested material including entire plants or parts thereof and any product made directly from the harvested material.

The limited exhaustion of rights contained in the draft Protocol raises a number of concerns. The Protocol opts for regional exhaustion of rights rather than international exhaustion of rights. With the latter option, breeders' rights would be exhausted once the material is sold or otherwise marketed in any part of the world. The text is currently limited to material commercialised in the SADC region. The Protocol only allows exhaustion of rights once the material has been sold by the breeder or with the breeder's consent. The scope of exhaustion should extend to material that has been placed on the market even without the breeder's consent, for example where it is put on a market through the use of compulsory license, the rationale being that even in the case of compulsory license, the breeder would still have obtained equitable remuneration. Thus, it should not be entitled to further remuneration on the same variety.

23. See Article 22(3) of the Arusha PVP Protocol.

Article 31: Maintenance of protected variety

The Protocol in terms of Article 31 places, throughout the duration of protection, an obligation on the right holder to make available, at the request of the SADC PBR Office, "reasonable samples" of the protected variety. To ensure that this obligation is fulfilled the Protocol also requires the right holder to provide all such information and assistance as requested, including facilities for the inspection by or on behalf of the SADC PBR Office of the measures taken for the maintenance of the variety. Indeed, the matter of timely deposit of samples in reasonable quantities is important. In this regard, the PVP Protocol contains several gaps.

Article 31 seems to suggest that at the request of the SADC PBR office, the right holder will maintain samples of the protected variety at its facilities. Maintenance of the samples may be verified or inspected by the SADC PBR Office. Thus, the Protocol does not explicitly provide for a SADC centralised mechanism or a one-stop centre, for the deposit and maintenance of the samples. Further, there is no mention of who will bear the expense of maintaining the samples.

The Article 31 requirement is ad-hoc and discretionary in that samples are to be made available only at the request of the SADC PBR Office. If no request is made, no samples will be made available. It would seem prudent to mandatorily require the applicant to deposit samples of seeds or any other propagating material at the time of filing an application for PBR. Failure of the applicant to provide the relevant samples should result in the application being abandoned.

Article 33: Compulsory licenses

Article 33 of the Protocol allows any interested person, on payment of a prescribed fee, to apply to the SADC PBR Office for a compulsory license on the grounds that (i) it is necessary to safeguard the public interest in any SADC member state and (ii) the right holder unreasonably refuses to grant the person a license. It also states that an application for a compulsory license can only be made after three years following the grant of PBR and the right holder will be paid "equitable remuneration".

Compulsory licenses (CLs) are critical policy instruments for governments as well as other persons to use to override exclusive rights granted to the breeder, subject to payment of adequate remuneration to the breeder. However, in its present form, Article 33 suffers from several shortcomings and is likely to prevent SADC governments or other interested persons from making effective use of the instrument.

CLs are national policy tools but in the case of the Protocol, CLs will be considered and administered by the SADC PBR Office. Article 33 requires that an application for a CL be made to the SADC PBR Office, which suggests that the decision on whether or not to grant a CL will be taken by the SADC PBR Office. As a result, even when a government wishes to intervene by granting a CL to override a breeder's rights over a variety, it will have to seek the approval of the SADC PBR office. This effectively undermines the sovereign right of member states to take measures that are in its national interests. It is thus important that individual SADC member states are given complete freedom to impose restrictions on the exercise of breeders' rights in their country as they deem fit.

Further noting the socio-economic challenges that currently prevail in SADC member states, and the potential abuse of PBR rights that are granted to breeders, it would be beneficial to incorporate more specific grounds that could lead to the issuance of a compulsory license. Such grounds may include: issues pertaining to food security or nutritional and health needs; anti-competitive practices by the right holder; the importation of a high proportion of a plant variety offered for sale; not meeting the requirements of the farming community for propagating material of a particular variety; socio-economic conditions and the development of indigenous and other technologies, and availability of the seed or propagating material at a reasonable

price. In this regard it is important to draw on Article 33 of the African Model law (2001).[24]

There is no justification for allowing the issuance of CLs only after the expiration of three years from the date of the grant of PBRs. This requirement is not even found in UPOV 1991. The provision unnecessarily restricts the use of CLs. If a government finds there to be solid reasons for issuing CLs, it should be allowed to do so. If such conditions do not exist, the grant of CLs can always be refused. Thus, there is no valid reason to subject important policy flexibilities to arbitrary conditions.

There is also no justification for allowing the grant of CLs only after the right holder has refused to grant a voluntary license. There are scenarios such as public non-commercial uses, national emergencies and situations of extreme urgency, to remedy anti-competitive practices, where governments must have complete freedom to issue a CL, without having to show that negotiations with the right holder have not been successful.

Lastly, Article 33 is short on details. For instance, it is unclear about the period within which a decision will be taken on the CL application, whether a hearing will be held, who will participate in the hearing, how equitable remuneration will be decided, and so on. The lack of detail creates uncertainty and makes it impossible to operationalise CLs efficiently and effectively.

Article 36: Nullification of plant breeder's rights

In accordance with Article 36(1), the SADC PBR Office has complete authority to nullify a breeder's right on grounds that the conditions provided for with regard to NDUS were not complied with at the time of the grant, the PBR was granted to a person who is not entitled to it or the breeder's right was obtained through fraud, misrepresentation or concealment of any material fact. Article 36(2) goes on to say that the breeder's right shall not be declared null and void for reasons other than those mentioned in sub-article 1. This sub-article limits the grounds upon which the SADC PBR Office can nullify and cancel a PBR.

Importantly, under both UPOV 1978 and UPOV 1991, contracting parties are not allowed to introduce other grounds for nullity or forfeiture/cancellation. Under alternative *sui generis* PVP systems, countries would be free to include other grounds critical for the safeguarding of national interests, such as where the protected variety is not commercialised in a sufficient quantity to meet the demand or where the right holder is engaged in anti-competitive practices (Correa et al. 2015).

Furthermore, it is important that each member state has full flexibility to nullify breeders' rights over a protected variety. Currently in the Protocol, this is not allowed as only the SADC PBR Office has authority to nullify and cancel breeders' rights. But the flexibility is important, as member states may have specific national circumstances that may warrant the nullification of PBRs.

Article 37: Cancellation of the breeders' rights

Article 37 provides an exhaustive list of grounds for the cancellation or termination of PBRs, after it has been granted. The grounds include: if (i) the variety no longer

24. Article 33 of the African Model law is based on the Restrictions to Plant Breeders' Rights and states that:
1) Where the Government considers it necessary, in the public interest, the Plant Breeders' Rights in respect of a new variety shall be subject to conditions restricting the realization of those rights. These restrictions may be imposed, inter alia: a) where problems with competitive practices of the Rights holder are identified; b) where food security or nutritional or health needs are adversely affected; c) where a high proportion of the plant variety offered for sale is being imported; d) where the requirements of the farming community for propagating material of a particular variety are not met; and e) where it is considered important to promote public interest for socio-economic reasons and for developing indigenous and other technologies;
2) Where restrictions are imposed on a Plant Breeders' Rights: a) the grantee shall be given a copy of the instrument setting out the conditions of the restriction; b) a public notice shall be given; c) the compensation to be awarded to the holder of the Rights shall be specified; d) the Rights-holder may appeal against the compensation award.
3) In particular, and without prejudice to the generality of the foregoing provisions, the relevant Government authority shall have the right to convert the exclusive Plant Breeders' Rights granted under this Act to non-exclusive Plant Breeders' Rights (compulsory license of right).

meets the criteria of uniformity and stability; (ii) the breeder fails to provide the SADC PBR Office with information, documents or material necessary for verifying the maintenance of the variety; (iii) the breeder fails to pay fees, and (iv) the breeder fails to propose a suitable denomination where the earlier denomination is cancelled.

Since it is based on UPOV 1991, the Article suffers from a number of gaps and defects. For instance, it is unclear whether the SADC PBR Office can initiate cancellation of the grant of a PBR, who will examine and take the decision on the cancellation and termination of the PBR, and whether the PBR grant can be invalidated on application of an interested person. It would definitely have been important for the Protocol to include a post-grant opposition mechanism.

The grounds provided by the Article are extremely narrow and exclude important grounds such as (i) where the grant has been based on incorrect or false information furnished by the applicant; (ii) documents required for the registration of the PBR have not been provided by the breeder; (iii) the breeder has failed to provide the necessary seeds or propagating material to the person to whom a compulsory license has been issued; (iv) the PBR grant is not in the public interest, and (v) the breeder has failed to comply with the provisions of the Article and the regulations or the direction of the Registrar.

It is important that each member state has full flexibility to cancel breeders' rights on grounds other than those mentioned in Article 37. Currently in the Protocol, this is not allowed as the decision to cancel or terminate breeders' rights can only be taken at the regional level. So, if a country finds the protection of a variety to be prejudicial to its interests, it has no power to cancel the grant. This undermines the national sovereignty of each country member.

Article 40: Protection of existing varieties

Article 40 of the Protocol allows PBRs to be granted for an existing variety that is not new on the date of entry into force of this legal framework, with licenses granted on reasonable terms to allow continuation of any exploitation initiated in good faith. This suggests that the Protocol will apply retrospectively to grant protection to existing varieties, even if they do not fulfill the criteria of novelty.

The value of this Article is not clear. If certain varieties are already being cultivated in a country, there seems to be little value in granting protection over an existing variety. In fact, if this is allowed, there is likely to be a rush of applicants seeking breeders' rights over existing varieties, consequently making it more difficult for farmer-managed systems to continue using the varieties.

Conclusion and recommendations

Consideration of distinctions between the SADC and Arusha PVP protocol

Several SADC member states (more than half) are also members of ARIPO. SADC member states who are members of both ARIPO and SADC will be confronted with the anomalies contained in the provisions for exceptions of breeders between the two PVP Protocols.[25] This is bound to cause confusion about which Protocol to ratify due to major differences in the main provisions of the Protocols. SADC member states who are members of both ARIPO and SADC will have to take into account three major distinctions between the SADC and ARIPO's Arusha PVP Protocols on national sovereignty, disclosure of origin and farmers' rights.

25. See Annex 2 and ACB's paper, The Arusha Protocol and Regulations: Institutionalising UPOV 1991 in African seed systems and laws.

A rather disturbing element in the SADC PVP Protocol is that the Protocol does not make any provision for contracting parties to object regionally to the grant of a PBR implementation in its territory, as has been provided for in the Arusha PVP Protocol.

Two positive provisions have been included under the SADC PVP Protocol. First, the requirement to ascertain that genetic material has been lawfully acquired and to disclose the source of the material is a key step towards the safeguarding against misappropriation of genetic material. However it does not go so far as to require that farmers are able to participate in benefit sharing.

Second, exemptions for breeders' rights in the SADC PVP Protocol allow farmers to save, use, sow, re-sow and exchange farm-saved seed and other propagating material of protected varieties subject to reasonable limits and safeguarding the interests of the breeder. The Arusha PVP Protocol provides only limited exceptions for specific categories of farmer and subject to a list of agricultural crops and vegetables, specified by the Administrative Council and associated with the historical practice of saving seed in the contracting states, and which excludes fruits, ornamentals, other vegetables and forest trees.

Development of SADC PVP regulations and some recommendations for recognition of farmers' rights

Since the SADC PVP Regulations have yet to be developed, there are critical factors that should be addressed by any technical team/committee that will be tasked with the drafting process.

As highlighted above, the SADC PVP Protocol has— inconceivably—failed to make provisions for members states to object to the application of PBRs within their territories and since the Protocol has already been adopted, it would be very difficult to rectify this omission. It is an open question whether regulations could cure such a fundamental defect of the Protocol. A recommendation would be that in drafting the regulations this is taken into account so that member states have, at the very least, the flexibility to object to the application of PBRs in their countries prior to a PBR being granted at the regional SADC level.

Specifically, and especially in relation to farmers' rights, there will be need to be broader interpretations of 'private and non-commercial purposes' as outlined under Article 28(a). In addition, with regard to Article 28(d), wide definitions would have to be made for the farmer in relation to the following concepts mentioned in that sub-article: (i) 'private and non-commercial purposes', (ii) 'reasonable limits' and (iii) 'safeguarding the interests of the breeder'.

We propose that if regulations are prescribed on these, they should implement farmers' rights and not limit any of their (farmers') activities in regard to the use of protected varieties. This also requires appropriate definitions of 'farmer' that takes into account the different categories of farmers within the SADC region, such as smallholder farmers, versus small-scale commercial farmers, versus large-scale commercial farmers in terms of, for example, size of cultivated land, type of crop being planted or total income or profit from seed/crop sales per year, and as per agreement through consultations with member states as these factors vary in different countries.

While exemptions from payment of royalties should be allowed for smallholder farmers and small-scale commercial farmers, large-scale commercial farmers could be subject to payment of royalties. In a set of comments submitted to ARIPO regarding draft regulations, CSOs stressed that even the European Union (EU) exempts small-scale farmers (including small-scale commercial farmers) from paying remuneration for saving and re-using protected seed and propagating these on their own holdings, where such seed and propagating material appears in list of protected varieties, with the result that such farmers are in a far better economic situation than African farmers. It would be unethical and grossly unfair to place African small-scale commercial farmers at a greater disadvantage than their wealthier European counterparts. At the very least, they should be given an exemption from paying remuneration, as is the case in the EU (ACB and TWN 2016).

Other than taking into consideration specific definitions and exemptions for farmers' rights, there is a need for transparency and adequate participation in the development of SADC PVP regulations for the implementation of the PVP Protocol. This policy-making process should be inclusive of all concerned stakeholders, including African farmers' and civil society organisations, and should entail a series of proper consulations to promote an unbiased decision-making process before and after the regulations are drafted and endorsed.

Recomendations for SADC member States

In light of the issues highlighted on the SADC PVP Protocol, particularly the highly restrictive and inflexible centralised PVP regime based on UPOV 1991, we urge SADC member states not to ratify the SADC PVP Protocol. In a separate publication,[26] we have argued similarly as to why SADC/ARIPO members should also not ratify the ARIPO PVP Protocol. However, if SADC member states decide to ratify the SADC PVP Protocol then they should take into account the recommendations highlighted in this paper, especially with regard to the development of the regulations.

In particular, least developed countries within SADC should take advantage of the extension period—as provided for in the TRIPS Agreement—to develop suitable and flexible PVP systems that balance breeders' rights and farmers' rights.

For African countries that are bound by the TRIPS Agreement, it does provide the flexibility for a *sui generis* system tailored to meet national interests and agricultural systems, thereby meeting WTO obligations while also ensuring an equitable seed regime, unlike UPOV's standard, one-size-fits-all model, developed to suit an already established European seed and agribusiness context. Examples exist, such as in India, Malaysia and Thailand, that have developed PVP systems responding to their local agricultural context.[27]

Further, we propose that:

- Each country should undertake independent and participatory impact assessments to assess what impact an intended PVP system will have on smallholder farmers and rural communities. It must be noted that UPOV 1991 poses a threat to the realisation and enjoyment of human rights, particularly the right to food, through restrictions on the use, exchange and sale of protected seeds which, coupled with high and increasing seed prices and reducing household income may affect access to food, healthcare and education.[28] Therefore such an assessment must consider the respect and protection of human rights including the right to food, livelihoods and crop diversity. A UPOV-based PVP system will have detrimental impacts on seed security and agricultural and food systems, with no perceived or forseeable benefit to farmers and local farming systems.
- Before any decisions are made with regard to the signing and ratification of the SADC PVP Protocol by any member state, adequate consultations need to be undertaken with concerned stakeholders, including African smallholder farmers, indigenous and local communities and and CSOs. This should involve a series of public dialogues and consultations, taking into account the results of the impact assessment studies.
- Member states should ensure that their obligations under international agreements including the CBD, the ITPGRFA and the Nagoya Protocol on Access and Benefit Sharing as well as a range of international instruments to protect human rights, are reflected in their PVP laws, particularly in regard to the implementation of farmers' rights and safeguards against biopiracy.

26. See ACB 2018b.
27. See Correa et al. (2015).
28. See Berne Declaration et al. (2015).

Annex 1

Comparisons between UPOV 1978 and UPOV 1991

Subject	UPOV 1978 Act	UPOV 1991 Act
Flexibility	Contains number of flexibilities for farmers and breeders.	More restrictive.
Minimum scope of coverage	Increasing number of genera or species required to be protected, from five at time of accession, to 24 eight years later.	Increasing number of genera or species required to be protected, from 15 at time of accession, to all genera and species ten years later (five 5 years for member states of earlier UPOV Act).
Eligibility requirements	Novelty, distinctness, uniformity and stability.	Novelty, distinctness, uniformity and stability.
Minimum exclusive rights in propagating material	Prohibits production for purposes of commercial marketing, offering for sale; marketing; repeated use for the commercial production of another variety.	Prohibits production or reproduction; conditioning for the purposes of propagation; offering for sale; selling or other marketing; exporting; importing or stock for any of these purposes without authorisation of breeder.
Minimum exclusive rights in harvested material	No such obligation, except for ornamental plants used for commercial propagating purposes.	Same actions as above if harvested material obtained through unauthorised use of propagating material and if breeder had no reasonable opportunity to exercise his or her right in relation to the propagating material.
Breeders' exemption	Mandatory. Breeders free to use protected variety to develop a new variety.	Permissive, but breeding and exploitation of new variety "essentially derived" from earlier variety require right holder's authorisation.
Farmers' privilege	Implicitly allowed under the definition of minimum exclusive rights.	Allowed at the option of the member state within reasonable limits and subject to safeguarding interests of the right holder.
Minimum term of protection	18 years for grapevines and trees; 15 years for all other plants.	25 years for grapevines and trees; 20 years for all other plants.

Source: Helfer (2004)

Annex 2

Main comparisons between SADC and ARIPO PVP Protocols

	SADC PVP Protocol	Arusha Protocol
Approval and adoption	Adopted by the 37th Ordinary Summit of Heads of States and Governments of SADC in Pretoria, South Africa on 19 and 20 August 2017. No regulations developed to date.	The Protocol was adopted by a Diplomatic Conference of ARIPO at Arusha, Tanzania, in July 2015. The Regulations were adopted by ARIPO's Administrative Council in Malawi, November 2017.
Signatories	Angola, Democratic Republic of Congo, Zambia, Eswatini and Namibia.	Ghana, The Gambia, Mozambique, São Tomé and Príncipe, and Tanzania.
Comes into force	When and while two thirds ratify/accede to the Protocol.	When four countries ratify/ accede. So far none have ratified.
Member states	16 member states: Angola, Botswana, Comoros, Democratic Republic of Congo, Eswatini, Lesotho, Madagascar, Malawi, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Zambia, Zimbabwe.	19 member states: Botswana, The Gambia, Ghana, Kenya, Eswatini, Lesotho, Malawi, Mozambique, Namibia, Sierra Leone, Liberia, Rwanda, São Tomé and Príncipe, Somalia, Sudan, Tanzania, Uganda, Zambia and Zimbabwe.
Member states that are LDCs	9	13
Member states who are members of the ITPGRFA	11	14
Objections	No provision or mechanism to enable member states to object to a PBR applying in its territory. Pre-grant objections by any person must be submitted within 60 days after an application for PBRs is made (Article 22(2)).	Article 4(1) of the Protocol and Rule 12 of the Regulations, allows contracting parties to object to a PBR being extended to its territory, within six months from the date on which the PBR application is filed. Provides three months for a pre-grant objection (Article 16). $250 fee for objection (Rule 5(2)). The decision to prevent the PBR in a territory needs to be justified to the ARIPO PBR office (Rule 12(1)(a)(iii)).

	SADC PVP Protocol	Arusha Protocol
NDUS: Distinctiveness	It must be clearly distinguishable from any variety that is a matter of common knowledge a*nywhere in the world*. Further, Article 9(2) outlines factors for a variety to be of common knowledge such as: • Exploitation of the propagating material or harvested material of the variety has already been marketed for commercial purposes; • Entry of the variety in an official list or register of varieties in any SADC member state or outside the SADC region or precisely described in any professional publication; or • Inclusion of the variety in a publicly accessible plant varieties collection must include events that would not necessarily be known to the public, for instance the addition of a variety to a reference collection. It should also include any form of publication (not just limited to 'professional' publication).	If it clearly distinguishable from any other variety whose existence is a matter of common knowledge at the time of filing the application. No definitions of what constitutes common knowledge.
Duration of protection	25 years for trees and vines and 20 years for all other genera and species. It further states that the Advisory Council may extend these periods by up to five years (optional five-year extension), thus going beyond UPOV 1991.	25 years for trees and vines and 20 years for all other genera and species. (Article 26)

	SADC PVP Protocol	Arusha Protocol
Exceptions	Article 28(d) Acts done by a farmer to save, use, sow, re-sow or exchange for non-commercial purposes his or her farm produce including seed of a protected variety, within reasonable limits subject to the safeguarding of the legitimate interests of the holder of the breeder's right.	Article 22(2) The limited farmer exception allowed by the Protocol is allowed only for agricultural crops specified by the Administrative Council on condition royalty is paid by the farmer to the breeder. Fruits, ornamentals, vegetables and forest trees are explicitly excluded from the scope of the exception of the Protocol. Article 22(3) The conditions for the implementation of the provisions under paragraph (2), such as the different level of remuneration to be paid by small-scale commercial farmers and large-scale commercial farmers and the information to be provided by the farmer to the breeder, shall be stipulated in the regulations.
Disclosure of origin	Requires a declaration that parental, genetic material was obtained lawfully (Article 13(5)(e)), but does not ensure obligations to these other international agreements are met.	Fails to provide any provision or mechanism to ensure lawful acquisition of genetic material.
Protection of existing varieties	Article 40 allows for the granting of a PBR retrospectively to existing varieties, even if they do not fulfill novelty criteria.	No provision.

Source: ACB 2018b

	ARIPO	SADC	ITPGRFA	UPOV member (1978 or 1991)	WTO member	Least developed country designation	National PBRs law in place
Angola		•	•		•	•	
Botswana	•	•			•		
Comoros		•		•*		•	
DR Congo		•	•		•	•	
Djibouti			•		•	•	
Eswatini	•	•	•		•		
Gambia	•				•	•	
Ghana	•		•		•		
Kenya	•		•	•***	•		•
Lesotho	•	•	•		•	•	
Liberia	•		•			•	
Madagascar		•	•		•	•	
Malawi	•	•	•		•	•	
Mauritius		•	•		•		
Mozambique	•	•			•	•	•
Namibia	•	•	•		•		
Rwanda	•		•		•	•	•
Sao Tome & Principe	•		•			•	
Sierra Leone		•	•		•	•	
Somalia	•					•	
South Africa		•		•**	•		•
Sudan	•		•			•	
Tanzania	•	•	•	•***	•	•	•
Uganda	•		•		•	•	•
Zambia	•	•	•		•	•	•
Zimbabwe	•	•	•		•		•
Total	**18**	**16**	**20**	**4**	**21**	**18**	**8**

* through the African Intellectual Property Organization (OAPI) ** UPOV 1978 *** UPOV 1991

Adapted from Munyi et al., 2016

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