



APRODEV PCD DISCUSSION PAPER

SEEDS AND FOOD SECURITY: The impact of EU seed laws on food security in Africa

December 2014

The APRODEV PCD Discussion Paper series will assess the impact of EU non-development policies on its stated food and nutrition security objectives. The purpose of these assessments will be to highlight areas where the EU is violating its legal obligation to policy coherence for development. This information could be of use to the various political struggles of social movements for the right to food and farmers' rights, as well as the political efforts of civil society organisations and parliamentarians who are trying to hold EU member states and officials to account for policies that harm development.

In 2013, the EU developed a comprehensive plan to implement the commitments set out in its food security, resilience, and nutrition policy frameworks. The Food and Nutrition Security Implementation Plan commits amongst others, to improve smallholder resilience and rural livelihoods in developing countries. In its 2010 Policy Framework on Food Security the EU acknowledges that 'investments in the smallholder sector yield the best returns in terms of poverty reduction and growth' and it therefore commits to 'enhancing the incomes of smallholder farmers and the resilience of vulnerable communities'.

While the Implementation Plan acknowledges that non-development EU policies and processes can impact on food and nutrition security outcomes, it does not commit to measure any policies for coherence, with the exception of 'political dialogue'. Instead, this task is left to the 2010-2013 PCD Work Programme, which is beset with serious shortcomings. These undermine its ability to create the political momentum and action necessary to enforce the EU's legal commitment to policy coherence for development.

To help address this lack of political will to measure and act on the EU's legal obligation to policy coherence, APRODEV has developed a series of indicators, based on EU commitments made in its resilience, food security and nutrition policy frameworks, as well as in relation to the Convention on Biological Diversity and the International Treaty on Plant Genetic Resources for Food and Agriculture. These indicators will be used in each PCD discussion paper to assess the impact of EU non-development policies on food security.

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The APRODEV PCD Discussion Paper on Seeds and Food Security was written by members of the APRODEV Working Group on Trade, Food Security and Gender. Drafting team: Written by Karin Ulmer with support from Gunnel Axelsson-Nycander, Tina Goethe and Kato Lambrechts. Final editing: Kato Lambrechts. Additional comments received from Susanne Gura and Mariam Mayet.

The positions in this document reflect the opinion of the editorial team but do not necessarily imply agreement by all of the APRODEV members.

APRODEV is the Brussels – based Association of World Council of Churches related Development Organisations in Europe. From 1 January 2015, APRODEV's new name will be the ACT Alliance Advocacy to the EU. For more information see www.aprodev.eu or contact aprodev@aprodev.net

Executive Summary

This discussion paper outlines how seed law reforms in Europe and developing countries are contributing to the erosion of seed diversity, which is vital for climate change adaptation and food security. The first part of the paper reviews ongoing EU seed law reforms and seed law reviews under way in Africa, and shows how EU development assistance and trade links are influencing African seed law reforms.

The second part of the paper assesses whether EU development assistance for African seed law reforms is coherent with its food security objectives. These objectives are set out in the EU food security policy framework. APRODEV has used this framework and the EU's international commitments to safeguard biodiversity to develop a set of indicators against which to measure policy coherence. Our analysis shows how EU development assistance is supporting seed law reforms in Africa which fail to recognise and protect farmers' rights and seed diversity, both of which the EU aims to promote in its food security framework. African seed laws, like those of the EU, are increasingly prioritising plant breeders' rights and uniformity of commercial seeds. Furthermore, the EU has been trying to negotiate trade agreements which include provisions on intellectual property protection. This is to support the EU commercial seed industry, which is seeking to expand its global market share and thus requires governments in developing countries to adopt seed laws which will facilitate cross-border trade in seeds and protect commercial seed varieties.

The analysis in the paper draws on the research of civil society organisations in Africa, in particular the Alliance for Food Sovereignty in Africa (AFSA). It aims to raise awareness among EU policy makers and civil society organisations in Europe and Africa (including APRODEV members) of the impact on food security and resilience of EU seed law reforms, and especially EU support for African seed law reforms.

To ensure that EU development assistance supporting African seed policy reform is coherent with EU food security objectives, APRODEV recommends the following:

- EU financial and technical support for African seed policy development should include the facilitation of consultation among all stakeholders, in particular national farmer organisations and civil society organisations that promote seed diversity.
- DG SANCO and DG DEVCO must ensure that the EU's commitments to farmers' rights in the ITGPRFA are reflected in all technical assistance and financial support for seed policy development.
- The EU needs to support and facilitate efforts to scale up local seed bank community projects.
- The EU needs to facilitate and support efforts to learn lessons from local seed exchange and knowledge systems, share success stories of farmer-bred varieties, and link experiences from local seed banks to policy processes.¹
- The EU has to support IPR regimes that enhance the development of locally adapted seed varieties and farmer saved seeds.
- The EU should refrain in any way from putting pressure on or creating incentives for developing country governments to adopting UPOV 1991, in particular through bilateral and regional free trade agreements, economic partnership agreements, and international frameworks such as the G8 New Alliance.
- Assess EU seed laws and EU support for African seed laws against the objectives set out in the EU's food security framework.
- Assess EU seed laws and EU support for African seed laws against its human rights obligations.

¹ www.no-patents-on-seeds.org, www.seedsoffreedom.info, www.seedforall.org, www.saveourseeds.org, www.seedfreedom.info

PART I AN OVERVIEW OF EU AND AFRICAN SEED LAWS

1-Introduction

Seeds are the source of life, and form the basis of crop farming. The genetic diversity of crops is vital for future food security and the ability of farming systems to adapt to climate change. This diversity has been maintained for centuries by millions of traditional farming communities, subsistence farmers and indigenous women and men, who nurture, conserve and maintain thousands of food crops, livestock species and species of wild relatives. Yet, the FAO estimates that about 75 percent of agro-biodiversity has been lost through the replacement of a high number of local varieties and landraces by a far smaller number of genetically more uniform commercial varieties.²

The increasing concentration and global reach of the commercial seed breeding industry has contributed to the erosion of this crop diversity. EU and US-based companies are driving this expansion. Their global operations are valued around 40 billion Euro, of which the international seed trade account for 10 billion Euro. This trade is concentrated on a few main crops - corn, soya, cotton, pulses, grains, wheat and increasingly horticulture. Most of these crops are cultivated as inputs for industrial processing, using intensive production methods.³

Despite its commercial value, the industrial food chain produces just 30 percent of global food supply, but uses 70 percent of the world's agricultural resources. In contrast, smallholder farming and the peasant food web supplies 50 percent of the world's cereals, 60 percent of the world's meat and 75 percent of the world's dairy, while using only 30 percent of the world's agricultural resources. The peasant food web relies mainly on informal and local or cross-border seed markets.⁴

EU seed laws have been designed to support the growth of the European seed industry during the agricultural industrial transformation. In the early stages of agricultural industrialisation, public breeding played an important role; however, the trend towards privatisation has diminished this role. In developing countries, the public sector, including seed breeding institutions which provided seeds free from intellectual property rights (IPRs) and adapted to local needs, has been dismantled as part of the structural adjustment programmes of the 1980s and 90s.

As a result, a few global seed companies now dominate global markets; they have bought most seed companies in developing countries. To help them expand their markets, these companies are pushing EU governments to harmonise seed laws, and African governments to adopt seed marketing rules similar to those in the EU.

Existing seed regulation regimes across the world tend to focus mainly on facilitating cross-border trade in commercial seeds and protecting the rights of plant-breeders rights, while neglecting the rights of farmers who, for centuries, have nurtured and provided free access to this seed and relied on the informal trade of seed and plant varieties.⁵

² <http://www.fao.org/docrep/007/y5609e/y5609e02.htm>

³ See European Seed Association at www.worldseed.org or <http://www.amseed.org/issues/international/key-issues/#key1>. Besides, there is a broader context providing an influential background. International seed trade has increased rapidly over the last decade and the EU seed industry is the most competitive. The US seed industry challenges many of the EU Sanitary and Phytosanitary (SPS) and Technical Barriers to Trade as leading to 'certain trade distorting EU policies'. The US also calls on improving 'efficiency' of the European Food Safety Agency (EFSA) and delays in approval processes, challenging EU policies on biotechnology products as 'unreasonable'. They also aim to lobby against the EU regulation 1107/2009 on placing of plant protection products on the market which requires treated seed to be labeled.

⁴ See FAO and WHO (2013) ICN2 Second International Conference on Nutrition-Enhancing the role of smallholder farmers in achieving sustainable food and nutrition security, by Action Contre la Faim, Paris; in there: page 4: Kremen, et al (2012) Diversified farming systems: an agroecological, systems-based alternative to modern industrial agriculture. *Ecology and Science* 17(4):44. See also ETC, the Action Group on Erosion, Technology and Concentration at www.etcgroup.org.

⁵ The Brazilian government seems to be changing direction, and has adopted a new agroecology plan which aims to strengthen indigenous seed systems; see Brasil Agroecológico Plano Nacional de Agroecologia e Produção Orgânica at <http://www.agriculturesnetwork.org/news/brazil-agroecology-plan>; see also FAO Symposium on Agroecology, 18-19/09/2014 at <http://www.fao.org/about/meetings/afns/en/>.

Hence, these regimes risk undermining the rights of farmers everywhere to use, exchange and sell farm-saved seeds. They can have further detrimental effects on smallholder farmers such as forcing them to purchase costly commercial varieties such as hybrid seeds which require costly agro-chemical inputs to deliver the expected higher yields. Olivier de Schutter, ex-UN Special Rapporteur on the Right to Food, argues that "... the professionalisation of breeding and its separation from farming leads to the emergence of a commercial seed system, alongside the farmers' seed systems through which farmers traditionally save, exchange and sell seeds, often informally. This shift has led to grant temporary monopoly privileges to plant breeders and patent-holders through the tools of intellectual property, as a means to encourage research and innovation in plant breeding. In this process, however, the poorest farmers may become increasingly dependent on expensive inputs, creating the risk of indebtedness in the face of unstable incomes."⁶

Globally, agricultural systems are highly interconnected through trade and the exchange of knowledge. Therefore, agricultural developments in developed countries strongly influence what happens in developing countries, in particular with regard to agricultural knowledge, science and technology.⁷

APRODEV believes that a new development paradigm is needed, which invests in the agency of people, and contributes to human dignity, the resilience of local and indigenous communities and stewardship of the creation.⁸ The move towards sustainable agriculture and the realisation of the right to food cannot be achieved without protecting the rights of farmers and the diverse varieties of seeds under their custodianship. APRODEV has concerns about seed systems in which the rights of commercial breeders take precedence over those of farmers and which neglect to support the contribution farmers make to strengthen biodiversity conservation and food security.

2- The shortcomings of EU seed laws

EU seed laws contain two main components: intellectual property rights (IPRs) and seed marketing legislation. Intellectual property rights confer rights to breeders for plant varieties that fulfil certain criteria. Seed marketing legislation regulates which plant varieties can be marketed, based on another set of criteria. Both IPR and seed marketing rules require varieties to be 'distinct, uniform, and stable' (DUS), while only IPR rules require them to be 'new' (N).

In 1996, the FAO adopted a Global Action Plan to conserve genetic resources for food and agriculture. It took the EU until 2009 to comply with this Plan by providing legal exceptions to allow the marketing of non-DUS 'conservation varieties' on the EU market. For half a century, tens of thousands of farmers' varieties, landraces, and other non-DUS genetically diverse seed have survived partly in gene banks and predominantly in Europe's gardens, orchards and fields through sales that were partly illegal. Many more such varieties, however, were lost. Many breeders of rare varieties have been reluctant to sell their seeds because of costly and cumbersome administrative procedures and requirements for registering and marketing the seed.

New Distinct Uniform and Stable (NDUS) testing criteria were introduced by the Union for the Protection of New Varieties of Plants (UPOV) 1991. Varieties have to comply with these criteria for an applicant to claim breeder's rights and intellectual property protection. Only *New* (not marketed before) and *Distinct, Uniform* (genetically homogenous) and *Stable* varieties can be protected by the criteria set out in UPOV 1991. A variety is new, distinct, uniform, and stable if these characteristics arise from the genotype rather than the observable physical or biochemical characteristics of the variety. NDUS criteria encourage genetic homogeneity and cannot protect diverse and traditional plant varieties, or cultivated landraces.

During the term of the previous Commission, the EU's seed marketing legislation was revised and presented in a package called 'Better Regulation', which also includes other plant- and animal food-related regulations and controls.

In May 2013, the Commission proposed new rules for 'Plant Reproductive Material (PRM)' – the new term chosen by the EU in its proposal for a law that assembles a dozen existing EU directives for seeds as

⁶ Olivier de Schutter (2009) Seed policies and the right to food: enhancing agrobiodiversity and encouraging innovation

⁷ UNCTAD (2013) Trade and Environment Report; in there: article by Hans Herren, page 172.

⁸ See ACT Alliance strategic plan 2015-2018 at www.actalliance.org

well as parts of plants used for vegetative propagation. This law covers ornamentals, food, fodder, biofuels and forestry.⁹ It aims to ensure the productivity, adaptability and diversity of Europe's crop production and forests and to facilitate their trading. Unlike prior directives, the proposals no longer cover only marketing, but also include the production of 'plant reproductive material', and they extend the scope of the law from a limited list of about 300 species to all known species – estimated at between 100 000 and 400 000. It plans to introduce a new register for all those who produce, use and trade seeds in the market. All farmers will have to register and report on their non-commercial breeding activities. Anyone who sells seeds through the internet, which includes most seed savers, will also have to register and report on their activities.

The 2013 proposal is based on a 2008 evaluation of European Community seed marketing legislation.¹⁰ It concluded that the existing legislation was positive, but recommended that it be simplified and national flexibilities be eliminated in response to increasingly complex and segmented food and crop markets. An evaluation of the 'conservation varieties' directives did not take place.

Seed savers, farmer organisations such as Via Campesina¹¹, organic breeders' organisations such as IFOAM¹² and environmental and civil society organisations such as Vienna Declaration have all criticised the proposal for a new EU seed law.¹³ They are concerned that the new law will undermine food sovereignty, the conservation of biodiversity, food security as well as the health and freedom of European citizens. They have criticised the proposed legislation's plan to cover *all* living plant materials traded, thus preventing any non-commercial seed production and marketing by imposing disproportionate administrative obligations on smaller or informal seed producers, while serving the interests of large seed companies. Instead, they are calling for laws, actions and regulations that will:

- Ensure Farmers' Rights to produce, exchange and sell seeds freely.
- Ensure fair competition. The EU seed market is highly concentrated, for example, 95 percent of the vegetable seed market is controlled by five companies.¹⁴
- Mainstream seed diversity. The current proposal subjects non-DUS varieties to a 'closed' catalogue of historical varieties, which will limit their diversity and future development, or it considers non-DUS plant material not as a variety and locks it in a heavily administrated niche market with limited seed quantity. By September 2014, only about 500 non-DUS agricultural and vegetable crop varieties were registered on the EU market, in contrast with over 20 000 DUS varieties for the same crops.
- Provide transparency on modern biotechnology breeding methods and intellectual property rights.
- Retain public control of the seed industry. The proposal suggests privatising public control, which will imply self-regulation by the seed industry. However, mere supervision of the authorities over industry is insufficient.¹⁵
- Halt compulsory certification, as there is no demand for it by consumers. Certification is designed to suit large seed companies and it is used in practice to enforce intellectual property rights.

A letter by MEPs from four major political groups to European Commissioners challenges the current EU seed law proposal as *de facto* leading to reduced genetic diversity in farming and food production in Europe and the world.¹⁶

The EU seed law review is subject to EU co-decision making procedures. In January 2014, the European Parliament's (EP) Agricultural Committee rejected the Commission's proposal with support from all

⁹ http://ec.europa.eu/food/plant/plant_propagation_material/review_eu_rules/index_en.htm

¹⁰ http://ec.europa.eu/food/plant/plant_propagation_material/review_eu_rules/index_en.htm

¹¹ <http://www.eurovia.org/spip.php?article809&lang=en>; <http://www.eurovia.org/spip.php?article818>

¹² <http://www.ifoam-eu.org/en/news/2013/05/06/press-release-seed-legislation-must-be-fit-agro-biodiversity>; http://ifoam-eu.org/sites/default/files/page/files/ifoameu_policy_seed_position20130530_0.pdf; http://www.ecopb.org/fileadmin/ecopb/documents/orgprints_Doringetal_2012.pdf.

¹³ <http://www.eu-seedlaw.net/>; the Vienna Declaration brings together 46 organisations from 20 EU countries and includes groups like EU IFOAM, ECVC, Arche Noah, BirdLife, etc.

¹⁴ http://greens-efa-service.eu/concentration_of_market_power_in_EU_seed_market/, with quote by R. Fraley, Monsanto: "What you are seeing is not just a consolidation of seed companies; it's really a consolidation of the entire food chain".

¹⁵ <http://ec.europa.eu/food/plant/propagation/catalogues/database/public/index.cfm?event=homepage>

¹⁶ Letter by MEPs Bart Staes, Martin Hausling, Jose Bove, Corinne Lepage, Karin Kadenbach, Pavel Poc, Kathleen Van Brempt, Richard Seeber on EU seed marketing legislation to Commissioner for Consumers and Health, Mr Borg, Commissioner for Agriculture, Mr Ciolos and Commissioner for Environment, Mr Potočnik from 14/12/2013.

major political parties. More than 1400 proposals for amendments have been submitted. In March 2014, the EP plenary rejected the draft EU seed regulation and requested the Commission Directorate-General for Health & Consumers (DG SANCO), to revise the seed legislation.¹⁷ The new proposal is expected to be on the agenda of the new elected European Parliament by early 2015. Meanwhile, negotiations between the Commission and Council have continued and the Commission is expected to re-submit the revised proposal for a second reading. Alternatively, it could re-launch the legislative procedure with a fully reviewed new proposal. One change already seems predictable: the forestry expert community has convinced all three parties responsible for the seed law review, namely the Commission, Council and the EP, to exclude and exempt forest plants from the Better Regulation proposal.

Given the importance of seed laws to sustainable agriculture and seed trade, and the obvious conflicting interests between breeders' and farmers' rights, the Commission should initiate a PCD assessment that evaluates the impact of the EU seed law review on its food security objectives in developing countries (TFEU Article 208.2 and Article 21.1 and 2).¹⁸ However, the Commission Directorate General for Development and Cooperation (DG DEVCO), has not requested such an impact assessment, and subsequently was not involved in the inter-service-consultation that precedes any new legislative proposals by the Commission. A corresponding request by APRODEV addressed to the PCD desk at the Commission DG DEVCO has also been declined.¹⁹

3- The shortcomings of African seed laws

In Africa, more than 80 percent of all seed is produced and disseminated through informal seed systems. These systems have generated a wide diversity of seed adapted to local agro-ecological conditions. Farmers' seed systems allow farmers to limit the cost of production by preserving a certain degree of independence from the commercial seed sector. The system of unfettered exchange in farmers' seed systems ensures the free flow of genetic material, thus contributing to the development of locally appropriate seeds and to the diversity of crops. In addition, these varieties are best suited to the difficult environments in which they live. They result in reasonably good yields without having to be combined with other inputs such as chemical fertilisers. And because they are not uniform, they may be more resilient to weather-related events or attacks by pests or diseases.²⁰

In the past, African governments have recognised the importance of conserving agro-biodiversity and protecting the rights of farmers to natural resources, and hence developed sui generis plant variety regimes specific to their needs. For example, the African Model Law for the Protection of the Rights of Local Communities, Farmers and Breeders and for the Regulation of Access to Biological Resources tries to balance breeders' rights with farmers' rights.²¹ However, implementation has been poor.²²

The centuries old practice by African farmers of freely using, exchanging and selling seeds and propagated material, underpin 90 percent of agricultural livelihoods on the African continent. Farmers in Africa rely heavily on seed that is saved on the farm, exchanged with family members and neighbours, bartered and bought on the local market; regardless of whether they cultivate local or modern varieties.

Laws that have the exclusive aim of protecting plant breeders' rights prohibit most of these informal practices. A series of seed legislation reviews or initiatives are under way in Africa in an attempt to align African plant variety protection and breeders rights with the UPOV 1991 convention. At the same time, multinational seed companies are increasing pressure on government to implement new seed trade regulations that will facilitate cross-border trade in seeds.

¹⁷ <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+REPORT+A7-2014-0112+0+DOC+XML+V0//EN>

¹⁸ These articles stipulate Policy Coherence for Development as an obligation for the EU. It requires the EU to 'take account of the objectives of development cooperation in the policies that it implements which are likely to affect developing countries'.

¹⁹ APRODEV correspondence with Commission officials, DG DEVCO Food Security & PCD Team, dd 23/11/2012.

²⁰ Contribution by Mariam Mayet, Director African Centre for Biosafety (AcBio) to the APRODEV paper.

²¹ For more information on the African Model Law, see the box in Chapter 7 and Annex in this paper.

²² UNDP (2008) Towards a balanced sui generis Plant Variety Regime: Guidelines to establish a national PVP law and an understanding of TRIPS-Plus aspects of Plant Rights; see also www.farmersrights.org/database/african_union.html.

UPOV, the Union for the Protection of New Varieties of Plants is an international convention with a secretariat hosted by the World Intellectual Property Organisation (WIPO) in Switzerland. It provides a legal framework within which to establish the intellectual property rights of breeders of new plant varieties. A rights title holder can authorize and charge license fees if seeds or plant parts of the protected variety are multiplied, sold, stocked, exported or imported. UPOV was negotiated without participation of any developing countries and adopted in Paris in 1961. It was revised in 1972, 1978 and again in 1991. As a result provisions that initially respected farmers' rights have to some extent gradually been dismantled. The fact that half of all IP titles have been awarded to ornamental, rather than food crop varieties shows that commercial gain, not food security, is the driving force behind UPOV revisions. As of September 2014, 72 countries and regional organisations have joined the Convention. Of these, 20 continue to adhere to older UPOV Conventions. For any new country or region wishing to join, only UPOV 1991 is open for accession. In international law, only World Trade Organisation (WTO) member states are obliged to establish intellectual property laws that cover plants, but least developed countries (LDCs) are exempted from doing so until 2021. The WTO TRIPS Agreement does not require WTO members to establish legislation that conforms to UPOV. To the contrary, WTO members are free to choose laws that suit their needs. Still, the technical advice provided to LDCs by WIPO and the EU exclusively promotes UPOV 1991 as the benchmark for IP legislation.

The EU signed up to UPOV 1991 in July 2005. Although three EU member states are not UPOV members – Belgium, Italy and Portugal – EU laws stipulate that the titles to breeders' rights granted in other EU member states be extended to their territory.

This is also the case for the francophone African Intellectual Property Organisation (OAPI), based in Cameroon. OAPI acceded to UPOV 1991 in July 2014. Thirteen out of 17 OAPI member countries are LDCs, and two are not WTO members. As a result of the OAPI accession to UPOV 1991, 20 million farmers have lost their rights to save, exchange, and sell IP protected varieties.²³ In addition to selling their varieties, which they could do before – foreign companies can now levy license fees in all OAPI member countries as there are no national flexibilities, which would have allowed member countries to choose which OAPI provisions to implement.

ARIPO – the anglophone African Intellectual Property Organisation – became a member of UPOV 1991 in July 2014, subject to ratification by African ARIPO member states. Of particular concern is that the UPOV 1991 model undermines smallholder farmers' rights to freely save, exchange and sell seed or planting material and fails to support mechanisms to prevent the misappropriation of genetic resources, protect traditional knowledge, promote diverse farming systems, and reward agro-biodiversity rather than uniformity. These elements are fundamental for the conservation of biodiversity and the protection of farmers' rights.²⁴

A number of seed policy review processes are under way in African countries and regional economic organisations:

- The Common Market for Eastern and Southern Africa (COMESA) proposal on seed trade harmonisation sets out distinct, uniform and stable testing criteria for farmers' varieties.²⁵ The proposal brings uncertainty to the protection of germplasm as it undermines the commitments of COMESA member states to international biosafety policies and legislation as set out in the Cartagena Protocol on Biosafety. The proposal has been drafted without consulting relevant stakeholders such as farmers' organizations, and without assessing its long-term impact on informal cross-border seed trade. The proposal may prevent any new legislation of national seed laws that protect farmers' rights, and could lead to the adoption of laws that could criminalise the marketing of farmers' varieties.²⁶
- The newly drafted Southern African Development Community (SADC) Protocol for the Protection of New Varieties of Plants resembles UPOV 1991. Those responsible for drafting the Protocol failed to consult with civil society or farmers' organizations.²⁷

²³ <http://www.apbrebes.org/news/regional-intellectual-property-office-french-speaking-african-countries-oapi-joins-upov-91>

²⁴ See Berne Declaration (2014) UPOV report on the impact of plant variety protection – A critique. The Berne Declaration argues that the UPOV assessment uses a set of narrowly defined indicators, omitting or ill-defining the impact of UPOV 1991 on key areas such as food security, biodiversity, seed availability for farmers and societal benefits.

²⁵ <http://foodtradeesa.com/wp-content/uploads/2013/06/COMESA-Seed-Harmonisation-Regulations.pdf>

²⁶ The AFSA (2013) Condemns COMESA's Approval of Seed Trade Regulation paper states (point 2) that there is no evidence to demonstrate the involvement of and consultation with the citizens in COMESA countries, particularly small-scale farmers, despite numerous pleas to COMESA to consult with small farmers; and (point 3) that submissions to a COMESA workshop organised by the ACTESA on 27-28/03/2013 in Lusaka have been ignored. See <http://www.acbio.org.za/images/stories/dmdocuments/AFSA-STATEMENT-COMESA-SEED-REGULATIONS.pdf>

²⁷ AFSA (2014) AFSA Makes Small Gains for Farmers' Rights in Draft SADC PVP Protocol, see <http://afsafrika.org/wp-content/uploads/2014/06/AFSA-Briefing2.pdf>.

- ARIPO has drafted a revised Plant Variety Protection Protocol in line with UPOV 1991, which was tabled for adoption in August 2015 in a Diplomatic Conference scheduled to take place in Tanzania. Again, if this Protocol were to be adopted at ARIPO level, every member country would have to enact it in national law, without any further national consultation.²⁸
- Legislation modelled on UPOV 1991 has been proposed for adoption in Tanzania in 2013, and presented to parliament in Ghana in 2014, in both cases without consultation of civil society or farmers' organisations.²⁹
- Seed laws are also under review in Malawi, Nigeria, Uganda and Burkina Faso. All these countries, with the exception of Uganda, have signed framework agreements under the G8 New Alliance on Food Security and Nutrition and have listed their pending or active seed law reforms as policy commitments to be monitored by G8 donors and private sector companies.³⁰

African civil society and farmer organisations consider most of these new seed laws as restrictive and inflexible legal regimes that grant strong intellectual property rights to commercial breeders but undermine farmers' rights.³¹ They anticipate that the adoption of UPOV 1991 will lead to increased seed imports and therefore to reduced domestic private breeding activity at the national level. This in turn will facilitate monopolisation by foreign companies of local seed systems and is likely to disrupt traditional farming systems upon which millions of African farmers and their families depend for their survival.³² Farming communities and governments will lose their ability to control the quality and quantity of seeds. This will lead to a decline in seed diversity, which is vital in building the resilience of African farming systems to climate change. This is why civil society and farmer organisations in Africa are highly critical of biotechnology corporations which seek to privatise individual germplasm. They argue that this is threatening the continuation and viability of African biological systems which have survived for millennia.³³

All of these developments are likely to have severe impacts on food security of rural communities which depend on small farming systems, on their access to and control of natural resources and productive goods such as seed, water and land, and on their participation in domestic markets where they have some bargaining power.

4-EU involvement in African seed policies

In APRODEV's analysis, the EU wants to 'harmonise' seed legislation across the world in order to integrate all countries into a global seed market so that it can export the EU model of industrial breeding, and discourage farmers and gardeners from developing, exchanging and selling their own varieties. The EU is promoting the global integration of seed markets through providing development assistance for African seed policy making, including UPOV 1991 commitments in bilateral EU free trade agreements, and supporting joint donor initiatives and international frameworks such as the New Alliance on Food Security and Nutrition launched by the G8 in 2012.

COMESA Regional Agricultural Inputs Programme

The EU has provided development assistance to facilitate the drafting process of the COMESA regulation on seed trade harmonisation. The COMESA Regional Agricultural Inputs Programme (COMRAP)³⁴ is funded under the EU Food Facility Programme³⁵ and the lead is with the EU Delegation in Lusaka. The

²⁸ AFSA (3/07/2014) Appeal to ARIPO, AU and UNECA for Protection of Farmers' Rights & Right to Food, see <http://afsafrika.org/afsa-appeals-to-aripo-au-and-uneqa-for-protection-of-farmers-rights-right-to-food/>

²⁹ <http://www.apbrebes.org/news/massive-protests-ghana-over-upov-style-plant-breeders-bill>

³⁰ G8 NA Cooperation Frameworks exist with Ethiopia, Tanzania, Ghana, Ivory Coast, Burkina Faso, Mozambique and forthcoming are Rwanda, Nigeria, Kenya and Malawi. See <http://www.feedthefuture.gov/resources/710>

³¹ An independent assessment of the CAADP Multi-Donor Trust Fund concludes that there is a lack of support to African institutions (incl. continental or regional networks of Non State Actors and knowledge institutions). Indirectly, this acknowledges that participation of farmer organisations has hardly gone beyond tokenism; see www.ecpdm.org/bn63.

³² http://www.grain.org/bulletin_board/entries/4802-aripo-s-plant-variety-protection-law-criminalises-farmers-and-undermines-seed-systems-in-africa

³³ See <http://www.theafricareport.com/East-Horn-Africa/gmos-the-seeds-of-the-privatisation-of-knowledge.html>

³⁴ http://www.ifdc.org/Projects/Recent2/East_Southern_Africa_Division/COMRAP/About-COMRAP/

³⁵ The 2008 EU Food Facility was set up in response to the food crisis. It uses 1 bn Euro converted funds from unspent EU CAP 2003-2008 budget which was exceptionally granted See <http://www.fao.org/europeanunion/eu-in-action/eu-food-facility-details/en/>

implementation partners are COMESA and the Alliance for Commodity Trade in Eastern and Southern Africa (ACTESA). The main objective of COMRAP is to increase agricultural productivity through improved access to finance, fertilizer and seeds. The project targets three million smallholder farmers and aims to improve financial services, establish agro-dealer networks and support commodity value chains for seed and plant material.

World Seed Project

COMRAP is part of the EU's support to the World Seed Project, which aims to deliver high-tech hybrid seed to farmers to enhance crop productivity and to facilitate the development of new plant varieties.³⁶ The project was developed by the FAO, OECD, UPOV, International Seed Federation (ISF) and the International Seed Testing Association (ISTA). It builds on different intervention areas and actors. The FAO will facilitate revision of seed regulatory frameworks. UPOV will establish and implement systems of plant variety protection. ISTA will enhance seed quality assurance for better on-field performance through improved seed sampling, seed testing and storage capabilities. The OECD will develop an internationally acceptable seed certification system that will also apply to national seed trade. ISF will facilitate the growth of the local seed industry to ensure farmers' access to high-tech or internationally traded varieties and seeds.³⁷

G8 New Alliance on Food Security and Nutrition

The G8 New Alliance on Food Security and Nutrition, launched by President Obama in 2012, aims to reform seed policies in line with UPOV 1991. Tanzania has already adopted UPOV 1991 compatible policies in 2013, and a seed law modelled along UPOV 1991 is presented for vote to the Ghanaian parliament. Both countries are part of the ten selected G8 pilot countries. There is evidence that donor payments in support of agriculture under the G8 initiative are conditional to policy reforms in the seed sector.³⁸ The EU welcomes the G8 initiative and the promotion of private sector investment in agriculture by improving the business environment and reducing the risks for investors. The EU supports actions in the area of risk management, agricultural research, improved soil and pest management and better seed varieties and nutrition.³⁹ In response to APRODEV questions on increasing market concentration in the seed sector, the Commission, DG DEVCO argues that it is assisting COMESA to establish a Competition Commission, now based in Malawi.⁴⁰ However, this has not prevented Syngenta from acquiring the Zambian seed company MRI Seeds in 2013 nor Monsanto's and Group Limagrain's acquisition of Africa's SeedCo in 2014.⁴¹

EU bilateral trade agreements

Three European and US corporations - Monsanto, Syngenta and DuPont - control half of the global seed market.⁴² These global corporate breeding companies are lobbying for higher levels of intellectual property protection in all the markets where they sell their products. The EU is using trade deals to promote enforcement of IPR and international standards to promote DUS varieties. The European Seed Association and the US industry seek to join forces to influence standard setting under the International Plant Protection Convention and to sponsor quicker and smoother access for traded seeds.⁴³

³⁶ http://www.un.org/en/ecosoc/julyhls/pdf13/imp_forum_fao.pdf

³⁷ Information received by APRODEV correspondence with Commission officials dd. 14/05/2013

³⁸ AFSA (Nov 2014) G8 NAFSN and Seed Policy Reform in Africa, non-published internal paper

³⁹ Press Release European Commission 18/05/2012, see http://europa.eu/rapid/press-release_IP-12-490_en.htm

⁴⁰ The COMESA Competition Regulations of 2004 is the basis for the Competition Commission which became operational in January 2013, see www.comesacompetition.org

⁴¹ See <http://www.comesacompetition.org/>, and <http://afsafrica.org/acquisition-of-africas-seedco-by-monsanto-groupe-limagrain-neo-colonial-occupation-of-africas-seed-systems/>, and article by Tina Goethe, Bread for All (2014) Syngenta – the better development player?

⁴² Studies show that 4 to 5 companies control between 75-95% of seed markets in the sector of vegetable, of sugar beet, of maize. The biggest three seed companies Monsanto, Syngenta and Dupont dominate over 50% of the seed market. See Ivan Mammana (2014) Concentration of market power in the EU seed market, a study commissioned by The Greens in the EP. At the same time, diversity of cultivated crops declined by 75% during the 20th century. According to the FAO, at present, only 30 crops constitute 90% of the calories in the human diet, and only three species (rice, wheat, maize) account for more than half of the humane calorie supply. FAO (1997) First report of the State of the World's Plant Genetic Resource for Food and Agriculture, see at <http://apps3.fao.org/wiews/docs/SWRFULL2.PDF>

⁴³ www.worldseed.org. See also letter by the American Seed Trade Association from 10/05/2013 to US Trade Representative on TTIP negotiations. Both, the European Seed Association and the US seed industry see the EU US trade talks explicitly as a potential to identify opportunities of 'mutual benefit' to influence seed standards in global agriculture.

Initially, the EU scheduled inclusion of UPOV 1991 in the negotiations of the Economic Partnership Agreements (EPA) with African, Pacific and Caribbean countries. However, the 2007-2008 initialled texts – that is, ready for signature – were limited to trade in goods only. The 2013-2014 accessible final text of the EPAs with West Africa and SADC suggest that UPOV 1991 provisions are not included. However, all EPA texts include ‘rendez-vous’ clauses, which commit parties to continue negotiations after a certain date – for example 5 years after entry into force of the agreement - on trade-related issues, including intellectual property rights.

PART II APRODEV PCD ASSESSMENT OF SEED AND FOOD SECURITY POLICIES

This section assesses whether EU seed policies and EU support for the seed sector in developing countries are coherent with its commitments to food security and biodiversity. The assessment is made against a number of indicators, which are drawn from the EU’s food security framework and its commitments under the Convention on Biological Diversity (CBD)⁴⁴ and the International Treaty on Plant Genetic Resources for Food and Agriculture. These indicators are set out in the annex to this report.

5- Assessing EU seed policies

As mentioned in the introduction, developments in agricultural knowledge, science and technology in the EU will affect agricultural, trade and research agendas in developing countries because of the highly interconnected nature of global seed markets and the world market leadership of the EU seed industry. EU domestic seed policies may therefore have an impact on African seed laws either directly by setting a benchmark for policy standards in African countries or indirectly through the penetration of African markets by EU seed companies.

INDICATOR: AGRICULTURAL RESEARCH AND INNOVATION MAINTAIN A WIDE BIODIVERSITY OF CROPS WHICH CAN BE ACCESSED BY SMALL-SCALE FARMERS

- [2.f] Does the EU and its Member States support research and innovation which have clear benefits
- for smallholder farmers [in the EU and globally], including strengthening adaptation to climate
- change and improving tolerance to stresses, drought and floods, while maintaining a wide
- biodiversity of crops and varieties and access to them?

No. New EU seed policies risk weakening EU market diversity, in particular the market access of independent and small-scale European farmer breeders and seed savers, who play a crucial role in maintaining and further developing agricultural biodiversity. Sustainable intensification is possible only when there is seed variety.

This assessment uses the 2013 Commission proposal, discussed in section two, as a reference point.⁴⁵ European parliamentarians argue that de facto the 2013 EU seed law proposal will lead to reduced genetic diversity in farming and food production in Europe and the world. As mentioned in section two, the legislation aims to cover *all* traded living plant materials and to rule out non-commercial seed production and marketing by farmers and independent seed savers by putting a disproportionate administrative burden on smallholders and small seed savers and producers. The proposal is biased in favour of demands by industrial seed companies who already control the market and thereby undermine access and benefits for smallholder farmers and small seed enterprises.⁴⁶

⁴⁴ Art 27 of the CBD compels each Party to “protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements”.

⁴⁵ Although it has been rejected by the EP, it continues to be negotiated between the Council and the Commission. At the time of finalising the paper, it was uncertain whether and what kind of proposal would be presented to the EP.

⁴⁶ See footnote 16 for letter by MEPs dd 14/12/2013 and footnote 14 for study on increased market concentration.

The proposal makes it difficult to register non-DUS plant material which is not considered a variety and locked in a heavily administered niche market with limited seed quantity. It therefore fails to mainstream seed and crop diversity. It also introduces compulsory seed certification for *all* varieties. Organic seed producers use private organic certification schemes which have a fast growing market, while public seed certification is considered unnecessary and too expensive by most seed users.

Market access is therefore hampered for farmers and gardeners active in conservation and breeding, organic breeders, seed savers selling small amounts of seeds, and genetic diversity initiatives. Hence, there is a risk that supply will not meet future market demand for seed diversity.

Both current EU seed laws and the 2013 proposal recognise that small and independent seed savers produce seed for the EU commercial market. They proclaim to be designing an enabling environment for these producers. However, the analysis from a number of stakeholders' show that this is evidently is not the case.

6- Assessing EU support for African seed policies

INDICATOR: PARTICIPATION IN NATIONAL POLICY MAKING

- [4.f] Are farmer organisations, civil society, private sector, vulnerable groups and other stakeholders involved in the development and review of national and regional agriculture and food security policies and strategies? In this respect, is EU development assistance used to support policy development capacity and inter-sectoral coordination mechanisms?

No, consultations have been inadequate and civil society has been excluded from discussions on new seed laws in Tanzania and Ghana. COMESA and SADC invited NGOs to their negotiations on regional seed harmonisation only after external pressure.

Seed policy formulation and implementation in Africa tends to be limited to the participation of 'seed sector stakeholders' and farmer organisations who are considered to be involved in the production and distribution of certified seed. These processes have therefore excluded many organisations who produce and distribute seed outside the certified system and who generate a functioning seed pool, as well as farmer organisations whose members cannot by law be involved in the production and distribution of certified seed but on whom seed system developments have a major impact. This includes any organisations not registered as a seed producer or distributor but who support their members to improve and save seed on their farms.

For example, Alliance for Food Sovereignty in Africa (AFSA) has made formal submissions to COMESA and SADC on their seed law proposals expressing their concern that regional seed regulations will impede, inhibit or restrict farmers from continuing seed conservation and development efforts. AFSA has criticised the flawed consultation process publicly. After pressure from various sides, AFSA was eventually invited to attend the COMESA workshop on Harmonised Seed Trade Regulation in Addis Ababa in April 2014, but at very late stage when the final draft legislation was presented for adoption.⁴⁷ In March 2014 consultations with civil society and farmer organisations took place on the SADC proposal for a PVP protocol in response to calls by civil society for an independent and participatory impact assessment, made back in March 2013. As a result, farmers' rights are now acknowledged in the SADC PVP protocol.⁴⁸

⁴⁷ APRODEV lobbied the European Commission to open up a COMESA meeting on harmonisation of seed laws to African CSOs and farmer organisations, see letter by APRODEV to Commissioner Piebalg and EU Delegation in Lusaka 17/03/2014. See also letter by MEP Eva Joly to COMESA Secretary General dd. 26/03/2014.

⁴⁸ This clause reads now: "Acts done by a farmer to save, use, sow or re-sow, or exchange for non-commercial purposes his or her arm produce including seed of a protected variety, within reasonable limits subject to safeguarding the legitimate interests of the holder of the breeder rights. The reasonable limits and the means of safeguarding of legitimate interests of the holder of the breeder rights shall be specified in the regulations made by the contracting parties." Submission by CSOs to SADC Executive Secretary and SADC FANR Director (2/04/2013) Civil Society concerned with the draft protocol for the protection of new varieties of plants in SADC, see <http://www.ip-watch.org/weblog/wp-content/uploads/2013/04/CSO-submission-SADC-April-20131.pdf>.

In contrast, Tanzanian civil society and farmers organisations have not been consulted on their country's accession to UPOV 1991⁴⁹, and in Ghana, concerns raised by civil society and farmers' organisations have not been taken into account in the Plant Breeders Bill pending in Parliament since February 2014.⁵⁰

INDICATOR: ACCESS TO SEEDS FOR SMALL-SCALE FOOD PRODUCTION

- [4.a] Is sustainable small-scale food production the focus of EU assistance?
- [1.b] Do EU policies support intensification approaches for small scale farmers, particularly women, which are sustainable and ecologically efficient?

*No. The COMESA seed regulations supported by the EU are creating a market system that favours genetically uniform commercial seed. The regulation is not informed by the needs of smallholder farmers and does not aim to facilitate their participation in regional markets. The seed regulation does not contain any measure to safeguard on-farm seed diversity and the maintenance of heterogeneous crop varieties, which is vital to future food security and climate resilience. This will undermine the EU's support to local community seed banks, which aim to strengthen small-scale farmers' livelihoods and access to seeds.*⁵¹

The EU has provided funding to the COMESA technical group, which has drafted the seed legislation, in collaboration with AFSTA and ACTESA. But no thought has gone in the creation of a suitable system for farmers' varieties. The EU has not made any assessment of the long-term impact of the new seed regulations on farmers' rights and their ownership, access to and control over their natural resources and innovations.⁵²

Control, ownership and affordability of seeds are of crucial importance to the food security and resilience of poor farmers. The suicide of Indian farmers following their indebtedness as a result of the rise in Bt-cotton seed prices in a monopolistic market has been well documented.⁵³ When promoting sustainable small-scale food production and ecological efficiency, the EU should ask whether inputs such as seeds are suitable and well adapted to farmers' needs as well as to local soil and climatic conditions.

- [4.e] Does the EU focus on ecologically efficient agricultural intensification for smallholder farmers, and in particular women, by providing support for effective and sustainable national policies, strategies and legal frameworks, and for equitable and sustainable access to resources, including seed?

No. Proposed COMESA seed laws, supported by EU, risk undermining the development of farmer-bred seed varieties which are necessary for preserving and developing agro-biodiversity, which is essential for small and larger-scale ecologically efficient agricultural intensification.

Proposed COMESA seed laws will undermine the rights of farmers to access and exchange seeds because they cannot afford expensive certified seed which will replace farmers' varieties on the market, put their ownership of germplasm at risk, provide incentives to seed monopolies, and undermine the sovereign rights of states over germplasm.

⁴⁹ See Tanzanian Alliance on Biodiversity at <http://envaya.org/TABIO>

⁵⁰ See Ghana CSO appeal to Ghanaian Parliament dd. 20/02/2014 at <http://foodsovereigntyghana.org/ghanas-plant-breeders-bill-lacks-legitimacy-it-must-be-revised/>

⁵¹ See footnote 26 for AFSA statement on COMESA seed regulation.

⁵² According to APRODEV correspondence with Commission official, A. Lorkeers, DG DEVCO, dd 9/09/2014, the Commission has ongoing activities on community seed banks in country programmes such as Ethiopia, Burkina Faso and some Latin American countries. However, these are decentralised programmes which are part of bigger agricultural or Non-State Actor programmes and therefore, no further systematic information or records are available at EU headquarters in Brussels.

⁵³ Christian Aid (2005) The damage done: Aid, death and dogma.

INDICATOR: ACCESS AND SUITABILITY OF IPR REGIMES FOR FARMERS**The African Model Law - Protecting communal livelihoods, equitable benefit sharing and indigenous technologies**

The forerunner to the AU, the Organisation of African Unity, adopted the African Model Law for the Protection of the Rights of the Local Communities, Farmers and Breeders and for the Regulation of Access to Biological Resources (the African Model Law) in 1998. In 2001, a chapter was added on Plant Breeders' Rights in response to requirements in the WTO's Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPs) for countries to have *sui generis* laws on breeders' rights. The African Model Law sought to protect communal livelihoods, equitable benefit sharing from the use of natural resources, indigenous technologies and practices, innovations and biodiversity.

For example, Article 30 grants the right-holder the exclusive right to sell and produce the protected variety, but these rights do not extend to essentially derived varieties or to harvested material. Article 31 allows farmers to propagate, grow and use plants or propagating material as an initial source of variation for the purpose of developing another new plant variety. *Article 26 and Article 31 of the Model Law include the right to use the protected varieties to develop farmer varieties and to save, use, multiply, process and exchange farm-saved seed of protected varieties. The farmers may also use the farm-saved seed/propagating material of a protected variety provided it is not on a commercial scale.*

Despite being adopted at the AU level and used to inform African common positions in international trade and biodiversity negotiations, few countries have so far domesticated the law. Today, it is dismissed by most African governments as being outdated.

All intellectual property regimes can make exceptions to exclusive intellectual property rights of plant breeders in the public interest or to achieve social and policy objectives. One such exception is that in certain situations parties may use the protected variety without the permission of the right-holder and without remuneration. Another arrangement is to use compulsory licences which allow third parties to use the variety without right holder's consent but only upon the payment of adequate compensation. For example, in Africa, farmers use to improve hybrid seeds, especially maize, by recycling them. This seed either adapts to, and finds a niche in the local agro-ecology, or passes out of use. Farmers also recycle 'improved' open-pollinated varieties, mostly legumes.

- [2.i] Does the EU support the development of intellectual property regimes that maximise the access of poor farmers to new technologies and inputs?

No. Farmer-bred seed varieties are important new inputs for poor farmers. However, such varieties are not protected or promoted under UPOV 1991 or UPOV 1991-plus regimes. Poor farmers generally cannot afford new commercial varieties, given their high price as a result of the monopoly rights created by IP regimes.

The SADC draft Protocol for the Protection of New Varieties of Plants (Plant Breeders' Rights) does recognise farmers' rights; however these rights still need to be translated into the national laws of member countries.

In Ghana, the Plant Breeders' Bill, which is modelled on UPOV 1991, both restricts and prohibits farmers from selling and exchanging seeds. The Bill limits farmers' use of farm-saved seed on its own holdings to 'personal use'. It provides incentives only for uniform varieties and does not explicitly require plant breeders to disclose the origin of plant genetic material, which means farmers cannot claim IP rights when seed companies use their genetic material. There are also no provisions to prevent IP protection being granted to varieties that adversely affect public interests.⁵⁴

ITPGRFA, the International Treaty on Plant Genetic Resources for Food and Agriculture sets out the rights of farmers and expects members to take explicit steps to realise the rights of farmers to use, sell, save and exchange farm-saved seeds, to protect their traditional knowledge and to allow for their participation in national decision-making. The EU is a contracting party and has signed up to ITPGRFA in 2004. Ghana and Tanzania are also contracting parties to the ITPGRFA, as are the majority of COMESA and SADC countries, with the exception of South Africa, Botswana, and Mozambique.

⁵⁴ <http://www.apbrebes.org/news/massive-protests-ghana-over-upov-style-plant-breeders-bill>

According to the Commission, the adoption of legislation on plant breeders' rights will not affect the informal seed sector and customary practices.⁵⁵ It argues that only so-called *new* (not marketed before), *distinct*, *uniform* (homogenous) and *stable* varieties can be protected by this type of IP regime. Old varieties and heterogeneous material are not covered by the legislation and can continue to be freely saved, used and exchanged by farmers. However, events in Colombia (see box below) have shown how national laws that do not recognise the rights of farmers to save, exchange and use seed can lead to criminalisation of these activities, and the destruction of farmers' livelihoods. Therefore, even if legislation does not appear to 'affect' the informal seed sector, it will in reality fail to protect the traditional seed varieties of farmers.

The Commission further argues that seed trade harmonisation and more seed uniformity would help to (re)establish a regional market for seeds. However, plant breeders' rights are granted only when a variety is new, distinct, uniform, and stable. These aspects refer to characteristics arising from genotype, rather than observable physical or biochemical characteristics. A regime promoting such characteristics encourages homogeneity and is unable to protect more diverse or traditional plant varieties, or cultivated landraces.

- [2.f] Does EU make sure that innovations based on research that it has supported are accessible to farmers and suited to their needs?

No. Failing to support farmers' seed systems could increase their dependence on the commercial seed sector, and thus their cost of production and vulnerability to the impacts of climate change, and pests and diseases.

- [1.a] Do EU policies contribute to enhancing incomes of smallholder farmers and the resilience of vulnerable communities?

No. The EU does not support IP regimes that require plant breeders to disclose the source of the genetic material they are using. This and other information would show whether they have used traditional varieties and how these have been bred, thus allowing those who have contributed genetic material to the new plant variety to benefit from the new variety. These benefits could include a share of the income from marketing and selling the variety. Only a mandatory disclosure of origin requirement in IP regimes will make fair benefit sharing possible.

African governments have called for intellectual property systems to incorporate a mandatory disclosure of origin requirement, which would require plant breeders to seek prior and informed consent to use genetic material and share the benefits of the new variety with those who have developed the genetic material. In existing IP systems, applicants seeking plant breeders' rights only need to prove that the variety satisfies *NDUS* criteria. However, they are exempt from providing a comprehensive list of information that would be critical to ensure fair benefit sharing. This would include information on the method by which the plant variety has been developed, the source of the genetic material, whether prior written consent has been given by the community in cases where the plant variety has been developed from traditional varieties, and compliance with laws regulating genetically modified organisms and access to genetic and biological resources. There are existing IP laws, for example the 2004 Malaysian OVO Act, Section 12, which include all these elements.⁵⁶

How seed laws can undermine farmers' rights, livelihoods and resilience – the case of Colombia

In 2010, the Colombian government adopted Resolution 970 which makes it illegal for Colombian farmers to save seeds, and gives the government full control over the seed market. Farmers who are caught selling farm-saved seeds of protected varieties, or indigenous seeds which have not been formally registered, can face fines or even prison sentences. In 2011, 70 tonnes of rice seed were destroyed by the Colombian government, and between 2010 and 2012 it has burned more than 4000 tonnes of seed. In August 2014 Colombian farmers facing bankruptcy as a result of the government's actions organised a 20-day nationwide strike, which was supported by many other sectors of society. The strike led to violence and killing, but eventually the government offered to suspend Resolution 970.

⁵⁵ See APRODEV correspondence with Commission officials from DG DEVCO and DG SANCO dd 14/05/2013, and response from Isabelle Clement-Nissou; and APRODEV NGO meeting with DG Trade and DG SANCO on 9/09/2014.

⁵⁶ See Malaysia Act 634, Protection of new plant varieties act 2004

This situation has been aggravated by recent Colombian free trade agreements with the US and the EU. The EU-Colombia FTA was signed in 2013 and includes provisions that strengthen plant breeders' rights and the enforcement of IPR. Article 232 of the Agreement stipulates that parties to the FTA shall cooperate to promote and ensure the protection of plant varieties based on UPOV 1991.⁵⁷ The farmer's movement has requested the Colombian government to stop its control over the seed market, and to suspend and review the FTAs with the EU, the US and with China.⁵⁸ The government has already rejected an earlier request, in 2012, for a PVP law that would provide farmers with more flexibility.⁵⁹ This leaves Colombian farmers with stricter national legislation than EU farmers, who are entitled to use their farm-saved seeds under legislation that aims to conserve and protect varieties.⁶⁰

INDICATOR: PROMOTING FARMER'S RIGHTS, BIOSAFETY AND AGROBIODIVERSITY

Farmer's rights are anchored and defined by the FAO and in the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGFRA). The EU is a signatory to the ITPGFRA which sets out farmers' rights and expects members to take explicit steps to recognise and protect the rights of farmers to use, sell, save and exchange farm-saved seeds, to protect the traditional knowledge of farmers, and to allow their participation in national decision-making.⁶¹ Unsurprisingly, there are tensions between exclusive breeders' rights and farmers' rights.

Farmers' rights are defined in FAO Resolution 5/89 as 'rights arising from the past, present, and future contributions of farmers in conserving, improving and making available plant genetic resources, particularly in centres of origin/diversity'. Such rights are also recognised in Article 9 of the ITPGFRA. These farmers' rights include exceptions to the exclusive rights granted to plant breeders, and allow for the development of appropriate *sui generis* law which permits farmers to claim exclusive intellectual property ownership of the plant varieties they develop in their own breeding systems, and to recognise their rights through benefit-sharing mechanisms such as financial payments and technology transfer.

- [5.a] Is the EU supporting African governments in fulfilling their responsibility for protecting and promoting farmers' rights?

No. We have found no evidence that EU is supporting or encouraging African governments to protect or promote farmer's rights in the new seed laws.

- [5.b] Does the EU support African seed laws that limit the rights that farmers' have to save, use, exchange and sell farm-saved seed/propagated material?

⁵⁷ http://trade.ec.europa.eu/doclib/docs/2011/march/tradoc_147704.pdf

⁵⁸ GRAIN (2013) Colombia farmers' uprising puts the spotlight on seeds. See film Documental 9.70 directed by Victoria Solano at <https://www.youtube.com/watch?v=TKQ8U2kHAbI>, and <http://colombiareports.co/colombia-agrees-freeze-decree-banning-non-certified-seeds/>

⁵⁹ <http://sullivanlaw.net/colombian-court-strikes-law-approving-1991-plant-variety-protection-convention/>

⁶⁰ See APRODEV correspondence with Commission official, DG SANCO, Paivi Mannerkorpi dd 9/09/2014 where the Commission argues that the issue at stake is the use of non-certified seed by farmers in Columbia as stipulated in Law 970, rather than the protection of new varieties. Apparently, Colombian national legislation is stricter than EU laws on the use of non-certified seeds by farmers. The Commission argues that EU farmers can use seed of their own harvest, both farm-saved and, under certain conditions, protected varieties, for further sowing. This means that there is no obligation on EU farmers to buy and use certified seed each year. On the contrary, EU farmers commonly buy certified seed only every two to four years to improve their seed, for example in case of cereals such as wheat or barley. The use of farm saved-seed could range between 50 and 80 % for some plant species, with annual variations in different EU member states.

⁶¹ Article 9.2 of ITPGFRA: "The responsibility for realizing farmers' rights, as they relate to plant genetic resources for food and agriculture, rests with national governments. They shall take measures to protect and promote farmers' rights, including protection of traditional knowledge, right to equitably participate in sharing benefits from utilization of plant genetic resources, the right to participate in making decisions at the national level on matters related to the conservation and sustainable use of plant genetic resources". Article 9.3: "Nothing shall be interpreted to limit any rights that farmers' have to save, use, exchange and sell farm-saved seed/propagated material, subject to national law and as appropriate."

The fifth Session of the Governing Body of the ITPGFRA that took place in Muscat, Oman, September 2013 reaffirmed its commitment to the implementation of farmers' rights. See Resolution 28/9/2013 where governments agree to review and adjust laws that will allow farmers to save, use, exchange and sell seeds, and to improve access to genetic resources.

Yes. EU development assistance is promoting regional seed harmonisation regulations that contain provisions which are modelled on UPOV 1991. These undermine and limit farmers' rights. African smallholders may in future have less legal protection to continue their use of farm-saved seeds than their European counterparts. This is in part because the EU is supporting regional seed laws modelled on UPOV 1991, and pushing African governments to adopt intellectual property regimes that protect breeders' rights, in the absence of national laws that protect farmers' rights.

The laws governing plant breeders' rights proposed by COMESA, ARIPO, and the governments of Ghana and Tanzania are all silent on the protection of farmers' rights. In contrast, the seed regulation proposed by SADC now includes a provision that acknowledges farmers' rights, following pressure by civil society and farmer organisations.⁶²

7-Conclusions

The above analysis has clearly shown that EU financial and technical assistance supports the development of seed policies in Africa that are modelled on European seed registration, marketing and certification regulations as well as the provisions of UPOV 1991. These seed policies disregard the rights of farmers to use, save and exchange seeds, and could jeopardize seed diversity as a result. This will contribute to the vulnerability of farmers to climate change and make them more food insecure.

The EU's own seed policies promote a logic of international seed trade that both promotes and relies on distinct, uniform and stable varieties. The introduction of seed testing, certification and other marketing tools discriminate both directly and indirectly against non-conforming varieties. The EU is attempting to export this model through trade negotiations and through support for policy frameworks such as the G8 New Alliance. The latter aims to 'lock-in' or influence seed law reforms in Africa. African countries are easing controls on cross-border seed trade to allow corporate seed companies, including those based in the EU, to sell more NDUS IP protected varieties.

A human rights impact assessment of UPOV 1991 echoes these concerns.⁶³ The report recommends that UPOV should review and revise those aspects of its rules (Articles 14 & 15) that adversely affect the informal seed sector, and the interests of developing countries.

EU seed policies and support for African seed policies will be coherent with the EU's food security policy framework, which aims to 'enhance incomes of smallholders and the resilience of vulnerable communities, only if they respect and promote farmers rights, and bio-diversity. The EU should use the commitments set out in its food policy security framework and international obligations to biodiversity to design indicators that would help it assess the coherence of its seed policies with its development objectives.

A more thorough analysis than what has been undertaken in this briefing should allow it to develop a list of indicators based on the following questions:

- Are exceptions for small-scale farmers sufficiently defined in seed law?
- What are the limitations of exceptions?
- Does the seed law prohibit smallholders from exchanging, bartering or selling the product of their harvest if it is derived from replanting of farm saved seeds of a protected variety?
- Is private seed activity carried out for non-commercial purposes restricted to consumption by a farmer and the dependants exclusively or does it allow neighbours and community to benefit from this activity, for example in small amounts or in local rural trade?
- Does the seed law aim at replacing traditional varieties with uniform and distinct (NDUS) varieties and compel farmers to purchase seeds for every planting season or pay royalties to the breeder in the case of reusing farm-saved seeds?

⁶² AFSA Appeal to ARIPO Members for Postponement of Diplomatic Conference and National Consultations dd 3/11/2014. APRODEV letter to EU Delegations in ARIPO countries dd 1/12/2014. See also section on African seed law.

⁶³ Berne Declaration (2014) Owning Seeds, Accessing Food – A Human Rights Impact Assessment of UPOV 1991 based on case studies in Kenya, Peru and The Philippines, co-published by Bread for the World and Misericordia.

8-Recommendations

Bringing coherence to EU support for seed policies in developing countries

- EU financial and technical support for African seed policy development should include the facilitation of consultation among all stakeholders, in particular national farmer organisations and civil society organisations that promote seed diversity and sustainable smallholder agriculture.
- DG SANCO and DG DEVCO must ensure that the EU's commitments to farmers' rights in the ITGPRFA are reflected in all technical assistance and financial support for seed policy development.
- The EU needs to support and facilitate efforts to scale up local seed bank community projects.
- The EU needs to facilitate and support efforts to learn lessons from local seed exchange and knowledge systems, share success stories of farmer-bred varieties, and link experiences from local seed banks to policy processes.⁶⁴
- The EU has to support IPR regimes that enhance the development of locally adapted seed varieties and farmer saved seeds.
- The EU should refrain in any way from putting pressure on or creating incentives for developing country governments to adopting UPOV 1991, in particular through bilateral and regional free trade agreements, economic partnership agreements, and international frameworks such as the G8 New Alliance.
- Assess EU seed laws and EU support for African seed laws against the objectives set out in the EU's food security framework.
- Assess EU seed laws and EU support for African seed laws against its human rights obligations.

⁶⁴ www.no-patents-on-seeds.org, www.seedsoffreedom.info, www.seedforall.org, www.saveourseeds.org, www.seedfreedom.info

Annex 1

APRODEV List of Indicators on EU Policy Coherence for Development with regards to Food Security

APRODEV has developed the following set of indicators as a tool to assess coherence of EU policies as regards global food security. Most indicators are based on the EU's own statements in the EU policy framework on food security.⁶⁵ A basic assumption and point of departure in the EU policy framework on food security is that *evidence shows that investments in the smallholder sector yield the best returns in terms of poverty reduction and growth*, and therefore, that the policy framework *concentrates on enhancing incomes of smallholder farmers and the resilience of vulnerable communities*.⁶⁶ In addition, some indicators are based on EU commitments made in relation to the Convention on Biological Diversity (CBD)⁶⁷ and the International Treaty on Plant Genetic Resources for Food and Agriculture.⁶⁸ The EU and its Member States should support 'right to food'-based political and legal frameworks in developing countries (SWP 2013:6). This includes support for food security governance at all levels and participation of civil society and farmer organisations in policy making.

The indicators are formulated as questions and clustered into a group of general questions that are relevant in different policy contexts, as well as questions that are particularly relevant in specific policy contexts.

1) General

- a. Do EU policies contribute to enhancing incomes of smallholder farmers and the resilience of vulnerable communities? (COM, 2)
- b. Do EU policies support or undermine intensification approaches for small scale farmers, particularly women, which are sustainable and ecologically efficient? (COUNCIL)
- c. Do EU policies support or undermine equality in small scale farmers' secure access to assets (in particular land and water) and services? (COUNCIL)
- d. Does EU actively support greater participation of civil society and farmer organisations in policy making and research programmes? Does EU increase their involvement in the implementation and evaluation of government programmes? (COM 4.1)

2) EU policies that have an impact on [agricultural] research and regulations of technology

- a. Do EU policies support or undermine pro-poor, demand-led agricultural research for development, extension and innovation with clear benefits for small-scale farmers and suited to their needs? (COUNCIL) Do EU policies increase the likelihood that such research is accessible to, and used by, smallholder farmers and in particular, women? (IMP)
- b. Does EU increase substantially its support to demand-led agricultural research for development, extension and innovation? Has it reached 50 percent by 2015? (COM 4.1)
- c. Does EU-supported research promote technologies that are not sustainable or that are incompatible with national capacities to regulate and manage risks? OBS! Here we would be looking for a negative answer! (COM 4.1)
- d. Does EU promote more demand-driven research and innovation in the public domain? (COM 2.1)
- e. Does EU-supported research give sufficient attention to traditional knowledge and diversified food crops (including local varieties)? (COM 2.1)

⁶⁵ Commission Communication (31/3/2010, COM (2010)127 final): An EU policy framework to assist developing countries in addressing food security Challenges (SEC 2010) 379 referred to as (COM); Council conclusions on an EU policy framework to assist developing countries in addressing food security challenges 3011th FOREIGN AFFAIRS Council meeting, Brussels, 10 May 2010, referred to as (COUNCIL); and Commission Staff Working Document (27/3/2013 SWD(2013) 104 final): Boosting food and nutrition security through EU action: implementing our commitments, referred to as (IMP).

⁶⁶ COM, 2.

⁶⁷ Article 27 of the CBD compels each Party to "protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements."

⁶⁸ The EU is a contracting party to ITGPRFA (2004/869/EC) and has ratified the Treaty on 31/03/ 2004, although no reference to it is made in the EU FSPF. Article 9 of the ITGPRFA on Farmers' Rights recognises the enormous contribution local and indigenous communities and farmers have made and will make for the conservation and development of plant genetic resources, agrees that the responsibility for realizing Farmers' Rights rests with national governments to take measures to protect and promote Farmers' Rights, including protection of traditional knowledge, the right to equitably participate in sharing benefits and to participate in making decisions, and affirms the rights farmers have to save, use, exchange and sell farm-saved seed/propagating material.

- f. Does EU make sure that innovations based on research that it has supported are accessible to farmers and suited to their needs? (COM 2.1)
- g. Does the EU and its Member States support research and innovation which have clear benefits for smallholder farmers, including strengthening adaptation to climate change and improving tolerance to stresses, drought and floods, while maintaining a wide biodiversity of crops and varieties and access to them? (COM 2.1)
- h. While taking into account the expressed needs and concerns beneficiary countries, does EU make sure that these [needs and concerns] are based on the availability of unbiased information on benefits and risks of any new technologies? Does EU make sure that they are based on the availability of national regulatory frameworks and the capacity to enforce them? (COM 2.1)
- i. Does EU support the development of intellectual property regimes that maximise the access of poor farmers to new technologies and inputs? (COM 2.1)

3) EU policies that have an impact on agriculture in EU and on EU trade

- a. Does the EU and its Member States acknowledge that developing countries can make use of existing trade policy space, including through border measures, given food security concerns, whether at a national or regional level? In this respect, does EU take into account that the objective should be to aim at a sustainable agri-food chain? (COM 2.1)
- b. Do reforms of the Common Agricultural Policy take global food security objectives into account? (COM 3.2)

4) EU development assistance and publicly supported investments

- a. Is sustainable small-scale food production the focus of EU assistance to increase availability of food in developing countries? (COM 2.1)
- b. When supporting small-scale agriculture, does EU assistance prioritise intensification approaches that are sustainable and ecologically efficient, respecting the diverse functions of agriculture? Do they include optimising agri-inputs, integrated pest management, improved soil and water management and stress resistant crop varieties? (COM 2.1)
- c. Does the EU and its Member States support the further application in developing countries of the *Voluntary Guidelines to support the progressive realisation of the Right to Food in the context of national food security*, including "right-to-food" based political and legal frameworks? (COM 2.2)
- d. Do agriculture programmes supported by the EU include a nutritional dimension, including strengthening diversification of smallholder agriculture, promoting production of micronutrient-rich food, especially local varieties and species? (COM 2.3)
- e. Does EU focus on ecologically efficient agricultural intensification for smallholder farmers, and in particular women, by providing support for effective and sustainable national policies, strategies and legal frameworks, and for equitable and sustainable access to resources, including land, water, (micro) credit and other agricultural inputs? (COM 4.1)
- f. Are farmer organisations, civil society, private sector, vulnerable groups and other stakeholders involved in the development and review of national and regional agriculture and food security policies and strategies? In this respect, is EU development assistance used to support policy development capacity and inter-sectoral coordination mechanisms? (COM 3.1)

5) The International Treaty on Plant Genetic Resources for Food and Agriculture

- a. Is the EU supporting African governments in exercising their responsibility for protecting and promoting Farmers' Rights?⁶⁹
- b. Does the EU support African seed laws that limit the rights that farmers' have to save, use, exchange and sell farm-saved seed/propagated material?⁷⁰

⁶⁹ "The responsibility for realizing farmers' rights, as they relate to plant genetic resources for food and agriculture, rests with national governments. They shall take measures to protect and promote farmers' rights, including protection of traditional knowledge, right to equitably participate in sharing benefits from utilization of plant genetic resources, the right to participate in making decisions at the national level on matters related to the conservation and sustainable use of plant genetic resources." (Art 9.2.)

⁷⁰ "Nothing shall be interpreted to limit any rights that farmers' have to save, use, exchange and sell farm-saved seed/propagated material, subject to national law and as appropriate." (Art 9.3.)

Annex 2

African Model Law - Balancing Breeders' with Farmers' Rights

The African Model Law includes provisions on compulsory licencing that further defines public interest and that includes anti-competitive behaviour of the right holder. For example, it include instances where food security, nutritional or health needs are adversely affected; where a high proportion of the plant variety offered for sale is imported; where the requirements of the farming community for propagating material or a particular variety are not met; where it is considered to promote the public interest for socioeconomic reasons and for developing indigenous and other technologies; and any other reason that the government may deem necessary in the public interest, in situations of emergency or to alleviate poverty.

Other alternative and sui generis laws provide examples and precedents for seed laws that acknowledge, respect and promote farmers' rights in the informal seed markets. For example, the Thai PVP law deals with different categories of varieties and distinguishes between new varieties, domestic and wild varieties, and local varieties, so as to accord differential protection to different categories. The Thai PVP law does not accord exclusive protection to all varieties, but rather seeks to provide incentives to breeders of domestic farmers' varieties. For general domestic and wild varieties, the Thai PVP Act (Chapter 5) details access and benefit sharing (ABS) rules and gives more specific protection rights for registered local community varieties (Chapter 4). The community would then receive exclusive rights to conserve, use, research, sell and commercialise if so desired, similarly to new plant variety rights.⁷¹

The Malaysian PVP law grants a breeder's right if the plant variety is NDUS to cater for commercial breeders, but then provides that where a plant variety has been bred, discovered and developed by a farmers, local community or indigenous people, a breeder's rights is awarded if the plant variety is new, distinct and *identifiable*. This is done to accommodate small-scale breeder seeking protection for their varieties. In this regard, the criteria for protection have been distinguished instead of the varieties.⁷²

For access and benefit sharing, the Indian Plant Variety Protection requires that an applicant for Plant Breeder's Rights protection include: commitment to refrain from involving terminator technology, to include complete passport data of parental lines and geographical location and any contribution from any farmer or village or community, and a declaration that a variety has been lawfully acquired. All these criteria are important to safeguard against misappropriation of genetic resources and associated traditional knowledge and to operationalise benefit sharing.

Annex 3

Recommendations to the EU for seed laws that enhance smallholders' income and resilience of communities:

- Support legislation that promotes the conservation of agricultural biodiversity for livelihood security and food sovereignty, promoting farmers' rights and self-determination and citizen involvement in the decision making process.
- Any seed law needs to explicitly list provision on disclosure of origin; and needs to explicitly ensure that intellectual protection will not be granted to varieties that adversely affect public interests (see MEP letter).
- Prevent monopolistic market structures and strengthen decentralised ecological breeding.
- Ensure that farmers' rights and livelihoods as well as agro-biodiversity are protected, that farmers' and gardeners' demands on crop seed exchange are taken into consideration; and that the justified and specific demands of organic agricultural breeders concerns on open-pollinated varieties are addressed.
- Extensive consultations involving all stakeholders including the farming communities and civil society need to result in a balanced and equitable legislative proposals.
- Provide appropriate safeguards to protect the interests of smallholder farmers and public interests. Explicitly provide for farmers to sell and exchange seeds, and to use farm saved seed on farmers' own holdings.

⁷¹ See ABC (2013), in there: Reference to Thailand Plant Varieties Protection AC B, B.E. 2542 1999

⁷² See ABC (2013), in there: Laws if Malaysia Act 634, Protection of new plant varieties act 2004

Annex 4

Recommendations by African CSO on African seed law to their governments:

- Refrain from signing on to UPOV 1991 which is titled in favour of commercial breeders' rights. UPOV 1991 is a rigid and inflexible regime for Plant Variety Protection and is heavily tilted in favour of commercial breeders and undermines farmers' rights.
- African CSO and Farmer Organisations need to be consulted and their Farmers' Rights must be respected.
- Replace *Uniform* and *Stable* with *Identifiable* (see example of Malaysian law in annex 2), as this would allow including plant populations that are more heterogeneous. In this way interests of farmer breeders would be taken into account and there would be incentives to all breeders to bring more genetically diverse varieties to the market. The justification is that sufficiently (genetic) uniform in its principle characteristics actively discourages variability in plant variety and undermining breeders who cultivate landraces that exhibit diverse traits. *Stable* means remaining unchanged over time and after repeated propagation. This precludes the protection of cultivated landraces and other traditional plant varieties inasmuch as such varieties are inherently unstable and in permanent evolution and adaptation.
- *New* varieties should make reference to the concept of common knowledge to be defined as including written and oral information.⁷³
- Protect *Distinct* farmers' varieties against misappropriation including protection of unimproved or wild germplasm.⁷⁴
- Include a mandatory disclosure of origin requirement that includes proving prior informed consent and benefit sharing.
- Compulsory licencing provision must include a clear definition of the public interest and prevent anti-competitive behaviour of the right holder.
- Seed law must make clear reference to Farmers' Rights as stipulated in Article 9 of the ITGPRFA which include exceptions to the exclusive rights granted to plant breeders, appropriate sui generis law for farmers own on farm breeding systems, ensure generous benefit-sharing mechanisms.
- ARIPO – the African Regional Intellectual Property Organisation – has drafted a revised Plant Variety Protection Protocol in line with UPOV 1991 tabled for adoption in March 2015. This redrafting must be inspired by the African Model Law and must seek to protect communal livelihoods, equitable benefit sharing from the use of natural resources, indigenous technologies, innovations and practices and biodiversity.⁷⁵
- The Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture should give priority to identify existing inconsistencies between ITPGRFA and UPOV/WIPO in order to remove provisions that are seen as hindering the full implementation of Farmers Rights.⁷⁶

⁷³ ABC (2013) Slavishly following UPOV 1991: A critique of Mozambique's Plant Variety Protection Law.

⁷⁴ For example, in the case of Turkey Purple Carrot, Monsanto's subsidiary Seminis purchases farmer's seeds and obtained PVP in US and EU; see TWN (2014) Biopiracy of Turkey's Purple Carrot.

⁷⁵ See AFSA Briefing (2014) Appeals to ARIPO, AU and UNECA for protection of farmers' rights and right to food. ARIPO Member States as of June 2014: Botswana, Gambia, Ghana, Kenya, Lesotho, Liberia, Malawi, Mozambique, Namibia, Rwanda, Sao Tome and Principe, Sierra Leone, Somalia, Sudan, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe. ARIPO has signed up to UPOV 1991 on 10/07/2014.

⁷⁶ See adopted Resolution 8/2013 of the ITGPRFA on the implementation of Article 9 (on Farmers' Rights), which requests the Secretary of the Treaty to "to invite UPOV and WIPO to jointly identify possible areas of interrelations among their respective international instruments". This was aimed at highlighting the inconsistencies between the language of ITPGRFA which promotes farmers rights and the activities/instruments of UPOV and WIPO, which are seen as hindering full implementation of farmers' rights.

Annex 5

Glossary

CBD - Convention on Biological Diversity: instrument to champion fair and equitable sharing of benefits arising from the utilisation of genetic resources. Including a disclosure of origin provision is recognised as an important tool to safeguard against biopiracy.

Cartagena Protocol on Biosafety: Is a supplement to the Convention on Biological Diversity (CBD). It seeks to protect biological diversity from the potential risks posed by GMOs resulting from modern biotechnology.

Nagoya Protocol: Is part of the Convention on Biological Diversity (CBD) treaty. The Nagoya Protocol was adopted in October 2010 in Japan and deals with access to genetic resources and the fair and equitable sharing of benefits arising from their utilisation to the CBD. It also covers traditional knowledge and sets out a number of obligations for its contracting parties referring to access, to benefit-sharing, to compliance and to implementation.

IP - Intellectual Properties: Onus is with the applicant to prove that he or she has complied with the necessary requirements and is thus entitled to protection. Any prove includes the disclosure of origin of the genetic material used in the development of the variety. Provisions allow to explicitly ensuring that IP will not be granted to varieties that adversely affect public interests.

PVP - Plant Variety Protection: PVP legislation allows for innovative approaches that balances the interests of breeding industry and farmers' interests. Sui generis systems allow for full flexibility provided under WTO to develop an effective sui generis system for plant variety protection that is unique and suits developing countries' need. For example, India, Thailand and Ethiopia have designed their own PVP regime to reflect their agricultural frameworks and realities.

PBR - Plant Breeders Rights in line with UPOV 1991: New Distinct, Uniform, Stable (NDUS) Testing

Seed marketing: Seed law harmonisation: includes certification, registration, costs and procedures for putting seed on the market and how seed markets are regulated and how quality control is ensured. Certification relates to special IPR and plant breeder's rights. Registration is often done in centralized catalogue as pre-condition for release on market, and involves costs.

Hybrid seeds are produced by cross-pollinated plants and are the predominant seeds used in agriculture.

Open pollination is an alternative to hybrid seeds and relies on insects, birds, wind or other natural mechanism.

Vegetative or clonal propagation is a form of asexual reproduction by which new organisms arise without production of seeds or spores. Artificial forms of vegetative propagation includes use of particular cultivars or grafting which is particular popular for fruit trees.

Sui generis means 'of its own kind, unique', and allows for most flexible option regarding PVP.

TRIPS is governed by WTO and requires states to protect new plant varieties using patents.

Comparison of different plant protection systems

	Alternatives System	UPOV 78	UPOV 91	Patent (in Europe)
Seed sales by farmer permitted	Yes	No	No	No
Seed exchange permitted	Yes	Yes	No	No
Propagation of seed on own farm permitted	Yes	Yes	Optional but to limited extent	Optional but to limited extent
Free use of protection plants for continued breeding	Yes	Yes	In principle yes, but to limited extent	No
Possibility to protect traditional farm owned plant varieties	Yes	No	No	No

Erklärung von Bern & Pro Specie Rara (2014): Saatgut – bedrohte Vielfalt im Spannungsfeld der Interessen. In: Umwelt Forum und Entwicklung by Susanne Gura (2014), Coordinator of APBREBES, www.apbrebes.org