ISSD Africa

Thematic Scoping Paper
Matching Global Commitments with National Realities

Thematic Working Group 3
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BACKGROUND of the Piloting Phase of ISSD Africa

The goal of the Piloting Phase of ISSD Africa is to support the development of a market-oriented, pluralistic, vibrant and dynamic seed sector in Africa for providing both female and male smallholder farmers access to quality seed of superior varieties. Superior varieties refer to both improved and local varieties most preferred by farmers. Currently, smallholder farmers face challenges in getting reliable access to sufficient quantities of quality seed of superior varieties at the right time and at an affordable price, which affects their agricultural productivity, income and resilience.

The Piloting Phase of ISSD Africa will experiment with and explore ways to address four themes defined by complex challenges that hamper seed sector development at local or national levels, but by their specific nature need to be tackled at the continental level. The project will operate in a niche that complements the work of national seed programmes and will recognize complex national realities, learn lessons from a diversity of intervention strategies and feed these into international dialogues.

Themes have been identified through previous analytical studies and workshops, and have been prioritized through an intensive consultative process. The priority themes selected are (1) Common challenges to promoting entrepreneurship in seed value chain; (2) Access to varieties in the public domain; (3) Matching global commitments with national realities; and (4) Supporting the AUC CAADP, ASBP and seed sector development.

The project seeks collaboration with a wide range of existing national seed programmes, to work on these four themes; in this way action learning activities are grounded in local realities among dissimilar strategies to seed sector development. Themes will be addressed through action learning, innovation trajectories, policy dialogues, capacity strengthening, and joint learning in eight to ten countries with relevant stakeholders and partners. The project will facilitate the establishment of an African-wide learning and innovation network of experts, seed programmes and associated organizations. The project will contribute to creating an enabling structure and a favourable environment for experimenting, documenting, sharing and learning, enhancing collaboration and promoting synergy in seed sector development.

INTRODUCTION to Theme 3: Matching global commitments with national realities

Several African countries have made commitments to international agreements and protocols that directly or indirectly effect their agricultural sector, including its key building blocks: seed and germplasm. A key question in this respect is how governments can implement their international commitments in ways that foster a viable and pluralistic seed sector?

Many of the international commitments countries make (through bilateral, regional or global agreements) in the areas of economic development, trade, environmental conservation, intellectual property and climate change, pursue high level policy objectives without any explicit consideration of the contributions that different seed systems can make in providing farmers' access to quality seed. This is normal, given the high-level orientation of most of those agreements. However, it can happen that in the pursuit of their otherwise laudable objectives – e.g., economic development, consumer protection, promotion of innovation through securing property rights – they can also have inadvertent negative effects on the day-to-day functioning of informal and mixed formal/informal (i.e. intermediary) seed systems. Consequently, one very important focus of Theme 3 will be to identify flexibilities for countries to implement their existing international obligations in ways that support the practices and realities of farmers in multiple seed systems, with a particular emphasis on their access to quality seed/reproductive materials.

At the same time, countries in the region can benefit from increased awareness of the potential benefits from integrated seed system development in the context of their negotiations of future international agreements, to ensure that they include the 'policy space' and support for integrated seed sector development from the very beginning. To this end, the project will identify opportunities to make technical contributions to ongoing and future policy development processes within the region, to encourage the adoption and implementation of policies that support a dynamic seed sector which integrates and takes advantage of multiple seed systems. This means 'policies' that foster pluralism and build upon the recognition of the importance of the diversity of seeds systems on the ground, including informal and intermediary seed systems. For the purposes of this paper, 'policies' covers the whole spectrum of policies, laws, legislation, regulations, executive orders, administrative guidelines, and publicly funded programs and projects.

Our main hypothesis is that by cultivating an enabling policy environment for innovation and the coexistence of different seed systems, a wider range of farmers and seed entrepreneurs will benefit, enhancing farmers' access to quality seed of both improved and local varieties. An increased access to quality seed of varieties most preferred by farmers will support food and nutrition security, economic empowerment and development.

Delineation of the theme

The first Thematic Working Group (TWG) meeting took place in Nairobi, 16-17 September 2014. During this meeting, the TWG members reflected on the delineation of the theme, the current state of affairs, and key challenges where breakthroughs are needed. A second 'Action Planning' meeting was held in Entebbe, 12-13 February 2015. Given the available time and resources for this 2-year inception phase, the group had to make some strategic decisions on what issues to focus on and which to leave aside for now.

ISSD acknowledges the coexistence of multiple seed systems in any country, which all play their role in providing farmers with seed. The diversity of seed systems in African countries can be generalized into three clusters: informal seed systems; formal seed systems; and intermediary systems that are on their way towards formalized regulation. Examples of informal seed systems are the various forms of farm-saved seed use and exchange. Formal seed systems include public and private seed companies, which may operate at national and at international levels. Relief seed, community-based seed systems and market-oriented local seed businesses operate in the intermediary cluster. By recognizing that each seed system has its own benefits and limitations, and requires an unique approach in strengthening it, ISSD aims to foster pluralism and guide national policymaking in its design to strengthen multiple seed systems.

The ISSD concept has evolved as a response to the predominant and exclusive focus on formal seed systems in seed sector development policies, which operate with a linear perspective expecting that informal seed systems will gradually evolve into formal and commercial systems. Despite all past public and private efforts in seed sector development, informal or farmer-managed seed systems continue to dominate in most African countries, supplying more than 80% of the total food crop seed used by farmers.[1] Smallholder farmers in particular rely on farmer-saved seed for many crops since seed is simply not available (or affordable) through other sources. Smallholder farms, when defined as being 2 hectares or less, represent 80% of all farms and are responsible for the bulk of food production in Sub-Saharan Africa, in some countries contributing up to 90%.[2]

It is against this background that the Thematic Working Group started to discuss the various international agreements that African countries are involved in and which impact their national policies in relation to seed and farmer livelihoods. Obviously, there is a very broad spectrum of policy issues that is relevant in this respect. as a general approach, the group identified the following five categories to be discussed in more detail: agricultural and economic development plans; seed laws; intellectual property rights (IPRs); access and benefit-sharing (ABS); and climate change. Some topics (e.g. Biosafety) which were also recognized as very important were set aside for now since only 3 Action Learning Questions can be formulated and analysed during this 24-months piloting phase. Other topics were integrated into the selected categories (e.g. aspects of traditional knowledge protection and farmers' rights will be addressed in the context of the work on access and benefit-sharing policies, IPRs) for the same reason.

Each of the selected categories are introduced below, describing the current state of affairs, the key challenges and potential breakthroughs in light of the ISSD approach.

Current state of affairs: Where are breakthroughs needed?

Agricultural and Economic Development Plans

All around the world, there is a trend in national, sub-regional and regional economic development planning to embrace transformative models of intensified agricultural commodity production, with aspirations for vertical integration into global markets. Sub-regional and regional African economic and agriculture development plans – including those that involve the creation of common markets – generally evince the same priorities and approaches. On one hand, it seems that these overarching plans are directly influencing national and regional seed and plant variety protection laws, in as much as they focus almost entirely on supporting the development of formal seed systems linked to intensified agricultural production systems, even though these systems represent only a very small proportion of African agriculture. On the other hand, some of those same economic plans also include more nuanced commitments to development based on sustainable use of local resources, strengthening local institutions and traditional practices, and enhanced use of indigenous African biological diversity, local knowledge and foods. To date, there is little evidence that these commitments have been picked up on, or promoted, in the form of national or regional seed or IPR regulations. National ABS regulations generally do reflect such commitments, but on the ground success stories are still relatively rare. However, there are some interesting exceptions to these trends, which will be examined in the action research activities described below.

To set the stage of appreciating the 'place' of national and regional seed, plant variety protection and access and benefit-sharing laws – both those that conform to the increasingly common formal-sector focussed regulations and those exceptions – in the overall framework of economic development planning, we will investigate the following theoretical framework questions:

> *What are the high-level national and regional economic development goals with respect to the agricultural sector and how are they reflected in regional seed, plant variety protection, and access and benefit-sharing policies? To what extent do those policies reflect the diversity of existing seed systems?*

This is not research that will stand on its own, but will complement, and create a context for appreciating seed, IPR and ABS laws analysed in action research activities described below. It may also set the stage, ultimately, at the end of the action research activities, for doubling-back to re-examine the national and sub-regional economic development plans of the most studied countries and regions, to identify options for revisions to such plans in their future iterations, to make space for lessons learned.

Seed Laws

The term 'Seed Laws' refers to a wide range of laws, policies and regulations that deal with plant health, crop protection, and the purity and quality of seed. Many countries have adopted (or are in the process of adopting or adapting) national seed laws with the aim to strengthen the seed sector by assuring that certain quality standards and regulatory conditions for the production and trade of seed are being adhered to. The economies of most African countries are based on agriculture and therefore functional seed systems are deemed to be critical in agricultural development plans as articulated in the Comprehensive Africa Agriculture Development Programme (CAADP) and the recent Malabo Declaration.

For several years, considerable efforts are being made towards harmonisation of national seed laws and seed trade regulations, both on the global and regional level, in order to lower barriers to trade and promote competitive seed markets. International standards are set by the following treaties and organisation regarding three key components related to the trade in plants and the registration and release of new varieties: phytosanitary measures, seed testing, and seed certification.

- ***Phytosanitary measures*:** The International Plant Protection Convention (IPPC) is an international plant health agreement, established in 1952, that aims to protect cultivated and wild plants by preventing the introduction and spread of pests. Of its 181 signatories, 53 can be found on the African continent. Amongst other things, the IPPC develops International Standards for Phytosanitary Measures (ISPMs). Its primary focus is on plants and plant products moving in international trade.[3]
- ***Seed Testing*:** The International Seed Testing Association (ISTA) was founded in 1925 and establishes standard procedures in the field of seed testing in order to achieve uniformity in seed quality evaluation worldwide. ISTA accredits laboratories that are technically competent to carry out seed testing procedures in accordance with the international standards. These are the only labs that can issue ISTA's international seed analysis certificates, which are aimed to facilitate seed trading nationally and internationally. ISTA currently has 135 accredited laboratories worldwide, only 7 of which can be found on the African continent.[4]
- ***Seed Certification:*** The Organisation for Economic Co-operation and Development (OECD) has developed Seed Schemes to provide an international framework for the certification of seed, aimed to facilitate seed trade by reducing technical barriers, improving transparency and lowering transactions costs. The OECD Seed Schemes were set up in 1958 and authorise the use of labels and certificates for seed produced and processed for international trade according to the set principles. The OECD Seed Schemes are open to OECD countries as well as other U.N. Members and currently has 58 participating countries, including 6 from Africa.[5]

Next to these organisations several actors are actively involved in the promotion of seed laws on the international level, such as the International Seed Federation (trade and arbitration rules) and the UN Food and Agriculture Organisation, which is currently compiling a guide for national seed policy formulation.[6]

On the regional level, various regional economic communities of Africa have taken steps towards the regional harmonization of seed laws. These include the Common Market for Eastern and Southern Africa (COMESA), the Economic Community Of West African States (ECOWAS), the Southern Africa Development Community (SADC), and the East African Community (EAC). Most of these aim to establish a regulatory framework that is closely aligned to international standards. A key rationale for these regional initiatives is to facilitate the movement of seed between countries in order

to improve the availability of quality seed for farmers, so that farmer productivity and incomes rise, leading to increased food security and economic development in the regions.[7]

Despite these laudable objectives, regional harmonisation of seed laws and, in particular, the focus on a particular set of standards to facilitate international seed trade, have met with resistance from some societal organisations. One concern is that a harmonised trading systems will further accelerate the buyout of African seed companies, making farmers (and consumers) dependent on a few multinational seed companies.[8] Rather than supporting the development of national research capacities, and small and medium size seed companies, they will simply set the stage for introduction/supply of foreign bred materials.

From an ISSD perspective, a key question is how the regional and global standards relate to the diversity of seed systems that exist in a given country. It is clear that the harmonisation processes are aimed to facilitate seed trade and, in particular, the movement of quality seed across borders. Yet, as highlighted above, in most African countries only a relatively small proportion of seed systems (i.e. formal seed systems) cater to an international market and can adhere to the international standards. More clarity is needed on how current seed laws affect these farmers and in what manner seed laws can be adapted to support, for example, farmer-managed or community-based seed systems.

The challenge for African countries is to establish a regulatory framework that takes into account the different needs and wants relating to the various seed systems in order to increase the availability of quality seed of preferred varieties for all farmers. The TWG formulated the following Action Learning Question to collect and discuss best practices and lessons learnt on this matter:

> *How can national and regional seed laws support the development of a robust, integrated seed sector that supports smallholder farmers' needs?*

Intellectual Property Rights

Through Intellectual Property Rights (IPRs) people can protect their creations of the mind, be it a technical invention, a poem or a new plant variety. An IPR gives the right holder the exclusive right to use his or her creation for a particular period of time.

Most African countries are a member to the World Trade Organisation, which has established minimum standards of intellectual property (IP) protection for all its member states through the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs, 1995). With respect to plant varieties, the TRIPs agreement obliges members to provide for the protection of plant varieties either by patents or by an effective sui generis system or by any combination thereof.[9]

No African country grants patent protecting on new plant varieties (some countries do allow for the patenting of plant material) and few countries have so far established a sui-generis system for that purpose. This is not surprising since 34 African countries are classified as Least Developed Countries (LDCs), which have till 2021 to comply with the TRIPS provisions or until the moment that they cease to be a LDC (and this transition period can be further extended).[10]

However, this situation is about to change as African regional organisations are in the process of establishing Plant Variety Protection (PVP) systems which are in line with the international standards set by the International Union for the Protection of New Varieties of Plants (UPOV). In 2014, the Organisation Africaine de la Propriete Intellectuelle (OAPI), the regional IP organisation of Western Africa, joined UPOV as its 5th member in Africa. In that same year, the African Regional Intellectual Property Organisation (ARIPO) of mainly East and Southern African countries had its draft PVP law approved by the UPOV Council to be in conformity with the UPOV 1991 Convention. Other regional organisations, such as SADC, COMESA and EAC have planned to do the same. Together, these regional organisations encompass almost all countries in Sub-Saharan Africa.

By establishing such PVP systems, African countries hope to incentivize breeding and the introduction of new varieties, allowing farmers to access a wide range of improved varieties to contribute to both economic development and food security.[11] Yet, these developments are strongly being opposed by several Civil Society Organizations (CSOs), which are of the opinion that the proposed legal frameworks are unsuitable for most African countries. A key concern is that an UPOV-based PVP system merely favors the interests of commercial breeders and marginalizes smallholder farmers by impeding traditional farming practices of using, exchanging and selling farm-saved seed.[12]

The dichotomies between proponents and opponents of the ongoing regional harmonization processes have taken center stage and can be found both at the regional and national levels in Africa. Yet, proponents and antagonists seldom if ever sit together to openly discuss their viewpoints, which obstructs processes of mutual learning and understanding. In

addition, many consider the topic extremely complex and misconceptions and uncertainties about the potential effects of PVP systems (both the UPOV system and alternative sui-generis systems) proliferate.

From an ISSD perspective it is important to look at the potential benefits and drawbacks of plant variety protection for different seed systems. ISSD aims to contribute to improved access to quality seed of better (adapted) varieties of food and cash crops. This requires investments in plant breeding in which plant breeders rights are likely to play an important role, in particular with respect to the formal and above all the commercial seed systems. However, many smallholder farmers in Africa have difficulties to access quality seed of genetically superior varieties from these formal seed systems due to physical and financial constraints, as well as due to limited availability of locally adapted varieties. These farmers may only access new varieties through the use and exchange of farm-saved seed.

The challenge for African countries is to strike a balance between protecting the interests of breeders in order to maintain the incentive function of plant breeder's rights in the commercial market, and the leeway provided to smallholder farmers that depend on informal sources for their seed security and survival, while also supporting intermediary seed systems such as local seed businesses. A related and equally pressing challenge is to establish a PVP system that is acceptable to the key stakeholders (notably farmers and breeders), as this is very likely a prerequisite for successful implementation.

Given the current social debate on this topic and the potential to make a valuable contribution by approaching this topic from an ISSD perspective, the Thematic Working Group formulated the following Action Research Question:

> *How can room be created for informal and intermediary seed systems in a UPOV '91 informed Plant Variety Protection system?*

Access and Benefit-Sharing

Access and Benefit-Sharing (ABS) provisions are included in a number of international agreements whose objectives include promoting the conservation and sustainable use of biological diversity and associated traditional knowledge, and more equitably redistributing benefits deriving from their use. Most African countries have ratified the Convention on Biological Resources (1993) which underscores countries' sovereign rights to regulate access to genetic resources within their borders, only allowing access to those resources subject to the national government's prior informed consent on mutually agreed terms.[13] The Nagoya Protocol, which came into force in November 2014, includes additional obligations on the part of member states related to access and benefit-sharing.[14] The Nagoya Protocol goes further than the CBD, requiring contracting parties to put measures in place to monitor the use of genetic resources obtained from other parts of the world, subject to access and benefit sharing agreements. It also requires members states, subject to considerable qualifying language, to put systems in place that reflect indigenous and local communities' rights of control over genetic resources and traditional knowledge, requiring their prior informed consent as a precondition for access. The CBD and the Nagoya Protocol aim to create incentives to conserve and sustainably use the world's biological diversity by rewarding providers through benefits which access-seekers agree to share with them. Of the first 50 Parties to the Nagoya Protocol half are from Africa.

Under the aegis of the Food and Agriculture Organisation of the United Nations, the international community developed the International Treaty on Plant Genetic Resources for Food and Agriculture, 2004 (ITPGRFA).[15] While it is explicitly in harmony with the CBD, under the ITPGRFA, member states exercise their sovereign rights with respect to PGRFA to create the multilateral system of access and benefit-sharing for 64 major crops and forages. According to some estimates, these crops account for up to 80 percent of all human consumption; however, a number of important global (e.g. tomato, soybean) and regional (e.g. fonio, okra) food crops are not included in the multilateral system. On the basis that countries are highly interdependent upon the genetic resources of those food-security crops, the multilateral system aims to promote a system of facilitated access to these genetic resources. There are currently 132 contracting countries to the ITPGRFA, amongst which 36 are from Africa. The multilateral system embraces a 'multiplier model' whereby counties get access to the genetic resources of the listed crops from all other 131 members states in exchange for making their own materials available through the same system. The multilateral system also includes genetic resources of crops and forages in international collections hosted by international organizations that make agreements with the governing body of the ITPGRFA. The ITPGRFA includes a benefit-sharing fund to which recipients must make payments when they commercialize products that incorporate multilateral system germplasm, and they do not allow others to use it for further research and breeding.[16] The fund supports conservation and sustainable-use related activities that are particularly focussed on farmers in developing countries.

Another organisation that entertains ABS-related questions at the global level is the World Intellectual property Organisation (WIPO). Most African countries are a WIPO members. The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) has been supporting intergovernmental negotiations amongst WIPO members since 2000 with the objective of reaching agreement on one or

more international legal instruments that ensure the effective protection of genetic resources, traditional knowledge and traditional cultural expressions.[17] Preventing the misappropriation of these resources and promoting fair benefit-sharing between holders of these assets and those that want to access and commercialize these resources is a central discussion topic.

On the regional level, the Organization of African Unity adopted a set of guidelines entitled the 'OAU Model Law for the protection of rights of local communities, farmers and breeders and for the regulation of access and benefit-sharing' in 2000.[18] The African Union is currently in the process of developing additional guidelines for adoption to accompany the model law, to bring it up to date with the coming into force of the Nagoya Protocol. The African Union has also just initiated a project to raise awareness about the ITPGRFA and the multilateral system in particular and to provide technical support for countries implementing the multilateral system. Another African regional ABS policy initiative is the Swakopmund Proptocol on the Protection of Traditional Knowledge and Expressions of Folklore, which has been established under ARIPO in 2010 and currently has 9 signatories.[19] The protocol aims to protect traditional knowledge holders against any infringement of their rights and protect expressions of folklore against misappropriation, misuse and unlawful exploitation beyond their traditional context.

From an ISSD perspective, one key question is how international and national legislation on ABS may impact upon the use and exchange of seed and crop diversity within and across seed systems. Many uncertainties and complexities still exist in relation to this overall question. Some crops fall under the multilateral system while others do not, and not all the PGRFA of an Annex 1 crop in contracting parties are automatically included in the multilateral system.[20] If the PGRFA is not in the multilateral system, then it is governed by the rules put in place to implement the CBD and/or the Nagoya Protocol. A complicating factor is that few African contracting parties have put mechanisms in place to either provide or receive materials under the multilateral system, and even fewer have had a chance to put systems in place to implement the Nagoya Protocol.

In order to focus our activities on this topic, the TWG decided to first look to the needs and perspectives of farmers as providers, recipients and users of crop, forage and tree biodiversity. Apart from recognition for their traditional farming practices, farmers can, do and will benefit from access to crop biodiversity that is adapted to biotic (e.g. fungi; insects) and abiotic stresses (e.g. drought; salinity). Since climate changes are responsible for increasing both biotic and abiotic stresses, farmers' facilitated access to crop diversity will be more important than ever in the years to come (Jarvis et al 2014, Fujisaka et al 2009).[21] Farmers are also providers of adapted germplasm and traditional knowledge. The challenge for African countries is to establish and implement ABS policies that recognize and support these farmers' practices, needs and interests. The formulated Action Learning Question links with the topic on climate change, which is discussed in more detail below:

> *How can Access and Benefit-Sharing policies make valuable contributions to seed systems that promote farmers' resilience to climate change?*

Climate Change

The African continent has warmed approximately 0.5°C over the last century. The average temperature is predicted to rise a further 1.5–4°C by the end of this century. Overall precipitation is predicted to decrease and/or become increasingly irregular in the Sahel, southern Africa, and East Africa, with between 75 and 250 million people exposed to increased water stress by 2020.[22] Already farmers in many parts of the continent are complaining that irregular rainy seasons are having negative impacts on their crops, exposing them to higher levels of risk than in previous decades. The IPCC predicts that the impacts of climate change on crop production will be the most severe in sub-Saharan Africa, where the agriculture sector accounts for a large share of GDP and the vast majority of the rural poor and smallholder women and men farmers depend on agriculture for their livelihoods.

It is projected that agricultural production will be severely compromised in many African countries, leading to food shortages and malnutrition. Crop models indicate that by 2050 the average yields of rice, wheat and maize will decline by up to 14%, 22% and 5% respectively in sub-Saharan Africa. A number of studies have confirmed that countries whose agricultural production is negatively impacted by climate changes will become increasingly dependent upon crop, forage and tree reproductive materials (seeds, cuttings, etc) from other countries.[23] The farmers, plant breeders, agro-dealers, extension agencies, natural resources managers in negatively affected countries will need to look for genetic resources (and related information) that have evolved in other parts of the world with climates similar to those which they are currently facing as a result of climate change. Once identified and obtained, the populations, varieties or species concerned can be evaluated on site, working closely with farmers and national agricultural research organizations, or private companies. Materials that perform well can be introduced directly into production systems, or they can be further enhanced through selection or breeding. The ability for farmers and breeders to source, share, evaluate, improve,

distribute and use crop, forage and tree seed (or other reproductive material) that is adapted to changing climatic conditions is an increasingly important characteristic of climate resilient seed systems.

To date, there are no African regional policies promoting increased capacity to adapt to climate change through strengthened seed systems. Of the 50 countries that have completed National Adaptation Programmes of Action (NAPAs) to date, 34 are from Africa. A study by Bedmar Villanueva et al reveals that 18 countries NAPAs, -- 10 of them are African countries -- stress the importance of increasing use of crop diversity as part of strengthening their capacity to adapt to climate changes, reducing farmers risk and contributing to agricultural production system resilience.[24] There are a number of initiatives at regional and sub-regional level wherein climate change and ABS issues are being treated in isolation. In our search for synergies and potential breakthroughs, we have formulated the aforementioned Action Learning Question that specifically links ABS with climate change adaptive capacity. We repeat it again here:

> *How can Access and Benefit-Sharing policies make valuable contributions to seed systems that promote farmers' resilience to climate change?*

ACTION Learning Question 1:

How can national and regional seed laws support the development of a robust, integrated seed sector that supports smallholder farmers' needs?

Many of the regional economic communities in Africa (e.g. SADC, ECOWAS, COMESA, EAC) are taking steps towards the regional harmonization of seed laws. COMESA, for example, established the COMESA Seed Trade Harmonisation Regulations in 2014 in order to: a) facilitate the safe movement of seed within Member States by harmonizing phytosanitary measures; b) make movement of seed more efficient by ensuring that varieties listed in the COMESA catalogue are of high and known quality; c) encourage investment in seed business in the Member States; d) increase access to existing varieties in the Member States; and e) stimulate the breeding and availability of improved varieties resulting in increased variety choices for all farmers.[25]Apart from safeguarding the safe movement of seed within the region, it is clear that the process of harmonisation aims to create a more enabling environment for private sector investments in seed trade. Currently, the seed industry is faced with many different standards and regulations in each country. To comply with all these different regulations is a time-consuming and costly endeavour. Together with the fact that commercial seed markets in most African countries are still small, with relatively low effective demand, this means that for many crops there are few incentives for private sector investments.

ISSD aims to promote the availability and accessibility of quality seed of superior varieties – i.e. both improved and local varieties most preferred by farmers. For some seed systems, harmonisation of seed laws can support this goal by triggering private investments due to lower transaction costs and an expanded market size for seed trade. Several African organisations (e.g. ASARECA - Association for Strengthening Agricultural Research in Eastern and Central Africa; FANRPAN - Food, Agriculture and Natural Resources Policy Analysis Network) are supporting regional harmonisation of seed laws through research and capacity building. This support is mainly aimed at strengthening formal seed systems.From an ISSD perspective, it is important to take the whole spectrum of seed systems into account when drafting and implementing seed laws. For example, seed certification rules aimed to strengthen formal seed systems should not render the use, exchange and local trade of farm-saved seed or unregistered (farmers') varieties illegal as this is the predominant source of seed for smallholder farmers. Apart from preventing potential negative effects of seeds laws on informal and intermediary seed systems, a key challenge is to establish seed laws that strengthen those other seed systems as well. For instance, alternative seed testing procedures such as Quality Declared Seed can be applied to seed systems that cannot fulfil the criteria and carry the costs of formal quality control while still ensuring a certain standard of seed quality.[26]

In order to support African policymakers on both the national and regional levels in the development and implementation of seed laws that take into account the diversity of seed systems that exist in a given country, this Action Learning Activity aims to do three things:

1) Present a clear overview of the status-quo and trends regarding the space for informal/intermediary seed systems in African seed laws. For this purpose, a review of the seed laws (i.e. the seed acts and, if available, seed policies/strategies) from all African countries and regional organizations will be undertaken;

2) Make an inventory of seed law provisions that have been or can be applied to support informal and intermediary seed systems. This will be done on the basis of a review of (academic) literature on the topic and the information collected under step 1;

3) Trigger discussion on the outcomes of step 1 and 2 amongst key stakeholders in Africa by (co-)organizing at least one dialogue with policymakers, implementing agencies and other stakeholders on the regional and/or national level together with partner organisations. Information collected through the above desk-top studies will be presented and discussed during the dialogue as well as inputs coming from partner organisations.
Active collaboration will be sought with other organisations and activities, including related Action Learning Activities within ISSD Africa (e.g. TWG 1 field study on alternative quality control systems). A regional dialogue on the matter may be organised in collaboration with COMESA and/or AfricaSeeds.

ACTION Learning Question 2:

How can room be created for informal and intermediary seed systems in a UPOV '91 informed Plant Variety Protection system?

Plant variety protection is generally considered an important tool for supporting formal and, in particular, commercial seed systems. Through the granting of an exclusive right on the commercialization of new varieties, it provides an incentive to invest in plant breeding and for the organization of seed markets. What is less clear is its function with respect to informal and intermediary seed systems. As explained above, the formal sector only caters for approximately 10% of total seed demand in most African countries. The majority of African farmers are smallholders who are highly dependent on the customary practices of using farm-saved seed, exchanging seed amongst themselves, or trading seed on local grain markets. Also for improved varieties, smallholder farmers source their seed mainly from the informal sector, which apart from its physical availability also keeps seed affordable. It is important that a PVP system does not create extra impediments to the accessibility of new, improved but PVP protected varieties for such farmers.

Many (but not all) African countries and regional organisations that are currently updating or developing a PVP system base their legislation on the UPOV 1991 Convention, which is the latest UPOV Convention and the one countries need to assign to if they want to become a UPOV member State. In order to assist African countries to develop a PVP system that strikes a balance between protecting the interests of breeders (in order to create incentives for plant breeders and seed companies in the commercial market) one the one hand, and those of smallholder farmers (that depend on informal sources for their seed security and survival) on the other, while also supporting intermediary seed systems such as local seed businesses, the above Action Research Question has been formulated.

The Action Research Question will be approached from two directions:

1. *A desktop study resulting into a Discussion Paper on Plant Variety Protection in Africa from an ISSD perspective.*

   This study will take stoke of the legal possibilities to accommodate the needs of smallholder farmers and local seed businesses in PVP systems. For that purpose, the legal flexibilities within the UPOV 1991 Convention (e.g. private and non-commercial use exemption) will be analysed but also interesting examples from other (draft) PVP laws will be discussed. Ultimately, the Discussion Paper will explore the opportunities for a differentiated approach to PVP, i.e. a PVP system that creates different levels of protection in relation to different crops and/or farmers. The Discussion Paper will be widely disseminated and key stakeholders will actively be invited to comment in order to stir and feed ongoing discussion and mutual learning on the topic.

2. *Regional and national meetings that create space for an open dialogue on PVP in Africa between key stakeholders.*

   The social controversies that exist with respect to the current harmonisation processes of PVP laws in Africa, in combination with the many uncertainties and misconceptions that seem to exist regarding the potential effects of these laws on different farming systems, warrant the need for the creation of open dialogues between proponents and opponents. The goal is to create space for key stakeholders to meet and discuss their viewpoints in order to start a process of mutual learning and understanding, both at the regional and the national level. Such dialogues may, ideally, feed into both national policymaking and regional harmonization processes and inform and facilitate the development or implementation of more balanced PVP systems.Key stakeholders to be invited to these meeting are policymakers, civil society organisations, farmers, public breeders, breeding companies, plant variety registration officers, etc.

The desktop study will be executed together with researchers from the Law and Governance Group of Wageningen University, the Netherlands, and the Intellectual Property Unit of the University of Cape Town, South Africa. Together with co-funders, we plan to organise one regional meeting that brings together key stakeholders on the international level, and one to three country meetings. One interesting and potential focus country in this respect is Ethiopia, which is

currently drafting a PVP bill that aims to establish strong breeders' rights for some crops (e.g. flowers) while including particular exemptions for other crops (e.g. food crops) and/or with respect to certain farmers (e.g. smallholders).

ACTION Learning Question 3:

How can Access and Benefit-Sharing policies make valuable contributions to seed systems that promote farmers' resilience to climate change?

In recent years, a number of projects in Africa have supported pilot initiatives to strengthen climate resilient seed systems. Multi-stakeholder national research teams have been trained to use new tools and methods to combine scaled-down (high resolution) data on climate change, with data on crop suitability, geographic information, and genebank accession collection coordinates to identify genebank materials that are good candidates for being adapted to the climatic conditions in selected, vulnerable, reference sites. These projects also support participatory evaluation of those materials and their improvement or direct diffusion through various seed systems. The lessons national teams have learned going through these processes have raised awareness about the need for tailored policy supports to ensure that farmers, breeders, researchers and others can access, use and further distribute adapted materials through seed systems. Indeed, in four African countries (Uganda, Rwanda, Burkina Faso and Cote D'Ivoire) access and benefit sharing policy development is a directly linked outcome of these projects. All four countries are developing national policies for mutually supportive implementation of the ITPGRFA's multilateral system of access and benefit-sharing and the CBD and Nagoya Protocol. Effective, tailored implementation of these international access and benefit-sharing agreements is important for the sustainable evolution of climate resilient seed systems in these four countries.

The COMESA-EAC-SADC tripartite Programme on climate change was launched in 2013. Among other things, the tripartite programme seeks to increase the capacity of African member states to respond and adapt to climate change. The tri-partite programme has included availability and exchange of adapted crop and tree germplasm among the issues to be investigated at a regional level, though little or no work has been undertaken on this issue yet under the tripartite programme framework. UN FAO and the CGIAR Research Program on Climate Change Agriculture and Food Security (CCAFS) are partners in this tri-partite program. The African Union commission has been supporting implementation of the Nagoya Protocol and the International Treaty. It also provides policy and political guidance to enhance coordination and harmonization of Africa's activities in the field of climate change and desertification within the overall framework of the Climate for Development in Africa (CLIMDEV).

This action learning activity will seek to bring these various initiatives and programs together, making links between thematic issues, and the organizations that are addressing them. The activity will involve the following component activities:

1. Three to five country case studies collecting and synthesizing information regarding:
    a. Predicted climate changes in those countries and the impacts of those changes on crop production systems;
    b. Potential sources, both domestic and international, of adapted germplasm for deployment in the climate stressed systems;
    c. Patterns of exchanges of genetic resources and information between international, national and community organizations in the countries concerned, linked where possible to climate change adaptation related efforts;
    d. Situations where access and benefit sharing arrangements have successfully contributed to research and development outcomes, including adapting to climate change, and where access and benefit sharing issues have presented challenges;
    e. Options for policy interventions in the countries to ensure that PGRFA can be accessed for climate change adaption subject to equitable forms of benefit sharing (also linked to increasing farmers capacity to adapt to climate change).

2. Present the studies to meetings bringing together representatives from national programs genetic resources programs, African Union commission, CGIAR-CCAFS, FAO, CBD Secretariat, ITPGRFA Secretariat, and the COMESA-EAC-SADC tripartite Programme on climate change. One such meeting will be held at the end of 2015, co-hosted by the African Union commission. Other possible meetings could be hosted by the ASARECA, and the COMESA-EAC-SADC tripartite Programme.

3. The organizations concerned will consider how to mainstream treatment of access and benefit-sharing and seed systems approaches to their ongoing programmes of work, with the possibility of support for additional action research activities within those organizations for considering policy options.

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Picture credit: Peter Casier (CGIAR)

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