

ISSD Africa



ISSD Africa Uganda National Seminar

Kampala, 23rd March 2016



Workshop participants in discussion

Organized by: Bioversity International, Regional office in Uganda

Commissioned by: ISSD Africa (Partnership between Tegemeo Institute, CDI-Wageningen UR, Future Agricultures Consortium, and Royal Tropical Institute, KIT)

Contents

Annexes.....	ii
1 Introduction	1
1.1 Background to ISSD Africa.....	1
2 Objectives of the National Seminars	2
3 Seminar Methodology	3
4 Plenary presentations	4
4.1 Opening	4
4.2 Synthesized findings for TWG 3 on Global Policies and National realities	4
4.2.1 Summary of the presentation on “National realities and global commitments for ABS in Uganda” by Dr. John Wasswa Mulumba	4
4.2.2 Summary of the presentation “Synthesis national realities and global commitments for ABS and climate change” by Dr. Gloria Otieno	4
4.2.3 Overview of the questions and answers	5
4.3 Synthesized findings for TWG 2 on Access to varieties in the public domain	7
4.3.1 Summary of the presentation on “Synthesis of Access to Varieties Action Learning Projects” by Dr. Ivan Ruwomushana	7
4.3.2 Summary of presentation on “Action Learning Project on role of agreements in access to potato varieties in Uganda” by Stephen Tindimubona.....	7
4.3.3 Summary of presentation on “Early generation seed status study” by Astrid Mastenbroek, ISSD Uganda	7
4.3.4 Overview of the questions and answers	8
5 Main outcomes of the working groups	9
5.1 Working groups.....	9
5.1.1 Identifying linkages to national policy processes	9
5.1.2 Identifying concrete entry points for change.....	9
6 Conclusions and future focus areas of ISSD Africa	10
7 Evaluation	11
7.1.1 Main ISSD function interested in.....	11
7.1.2 Thematic suggestions.....	11
7.1.3 Objectives of the National Seminars.....	12

Annexes

1. Seminar programme
2. Participants list
3. Overview of TWG action learning questions
4. Mapping of National Seed Stakeholders – Organisations and Projects/Programmes Engaged In
5. Mapping of upcoming relevant seed events
6. Working session results, per group

1 Introduction

In ISSD Africa we see integrated seed sector development as an approach to enhance reliable access of male and female smallholder farmers to sufficient quantities of quality seed of superior varieties at the right time and at an affordable price; and to increase male and female farmers' choice in terms of crop varieties, and seed quality, price and availability. Using the ISSD approach we work on four important challenges in the seed sector in Africa: (1) how to promote seed entrepreneurship; (2) how to increase access to varieties in the public domain; (3) how to match global commitments with national realities; and (4) how to support seed sector development under CAADP. For each challenge, a thematic working group has been created.

The first two phases of the ISSD Africa project have been concluded. The first phase, the Launch phase, involved the institutional embedding of the project, the start of thematic working groups and the preparation of the action-learning projects. The second phase, the Action-learning phase, involved the implementation of the action-learning projects and the validation of preliminary project results (partly concluded). We are currently preparing the third phase, the Consolidation phase, in which we will be synthesizing and sharing results of the action-learning projects.

During the inception meeting on 16 and 17 September 2014, thematic working groups reflected on the current framing of the themes, considered where a breakthrough is needed in the context of each theme, and formulated three to five action-learning questions to be addressed per theme; find the questions in Annex 4.

Based on the discussions during the inception meeting four theme scoping papers have been developed. These papers provide an introduction to the themes, with the current state of affairs, areas of breakthrough needed, and delineate the themes in the research questions. The scoping papers can be found on www.issdseed.org/resources.

From 9-11 February 2015, a three-day ISSD Africa training was organized in Kampala, Uganda, for national partners and country focal points. Following the ISSD Africa training, we organized a two-day action-planning meeting for the final preparation of the proposed action plans for the action-learning projects under each theme. Participants of the workshop were thematic working group members, as well as the national partners and country focal points.

The action-learning projects for thematic working groups have been implemented over the period of March 2015 – March 2016. The results of the projects of thematic working groups have been shared, discussed and synthesized during 3-day cross case analysis meetings, organized in Nairobi from 7-12 December 2015.

1.1 Background to ISSD Africa

The goal of ISSD Africa Programme 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.

The Programme uses the [ISSD approach](#), which has been endorsed by the African Union Commission as contributing to the implementation of the African Seed and Biotechnology Programme (ASBP) and the seed agenda of the Comprehensive Africa Agriculture Development Programme (CAADP).

[Click here](#) to read more on ISSD Africa.

2 Objectives of the National Seminars

The ISSD Africa project is currently running national seminars organized in 10 countries where action-learning projects have been implemented.

The national seminar in Uganda is part of the referred series of National Seminars.

The objectives of these seminars are:

- i. To present the synthesized findings of the action learning project across the continent to national seed sector stakeholders and policy makers
- ii. To embed the synthesized results of the different action learning projects in a wider seed sector and policy context and link the synthesized findings to national policy processes
- iii. To discuss how to translate these synthesized results into change agendas and to propose concrete entry points for change, as input for the proposal for a Comprehensive programme on ISSD in Africa

3 Seminar Methodology

(i) Mapping of policy makers and other stakeholders

In preparation of the national seminars and to be able to achieve objectives (ii) and (iii), a mapping of the national seed sectors and policy contexts was conducted, to get an understanding about the relevant organizations, projects/programmes involved in seed sector development and relevant seed sector events in the different countries. These mappings were conducted in the period 15 December 2015 – 31 January 2016. The results will be used as input for the discussions of the national seminars (planned for February/March 2016). Following the national seminars an advocacy strategy will be designed, building on the results of the mapping and the national seminars, on how to achieve breakthroughs on the ISSD Africa themes.

The mapping consists of three steps; (1) a mapping of relevant organizations; (2) a mapping of relevant projects/programmes; and (3) a mapping of relevant seed sector events. A detailed description and format for each step can be found on the next pages.

(ii) In the workshop a synthesis of key lessons of the different themes was provided, while the Action Learning Projects (ALPs) of the particular country was presented.

(iii) Presenters provide a list of key lessons/issues for follow-up (general and case study specific).

The provided list (depending on topics) was used in the working groups: Priorities and links with policy making: So some 6-7 issues listed for each working group.

(Sub) theme	Which policy makers?	Which stakeholders?	Which projects?	Which events?
Issues raised in the presentations				
.....				

(iv) During a plenary presentation of the working group results and the following discussion, possible changes were made to the referred list of priority issues.

(v) The priority list was further discussed in the working groups for desired change and action as well as role for ISSD Africa

(Sub) themes	Desired change(s)	Key steps	Stakeholders/ partners to be involved	Possible support of ISSD Africa (non-financial)
1.Priorities				
2.....				

(vi) In the plenary session working group matrices were presented and discussed.

(vii) The final next steps discussion is based on the expected role of ISSD Africa, as presented by the working groups and based on the evaluation forms, which also refer to the expectations for ISSD Africa

(viii) Closure

4 Plenary presentations

4.1 Opening

Dr. Milton Ayieko the regional co-ordinator for ISSD Africa gave opening remarks on ISSD Africa and its 4 thematic working groups in various countries in Africa. His opening remarks included an introduction to the workshop objectives, and expectations.

This was followed by a brief speech by Dr. Walter De Boef who emphasized the importance of creating an enabling environment for proper functioning seed systems for present and future food security. He also stated the Bill and Melinda Gates Foundation's interest in funding seed systems work in Africa and hoped that there would be positive impact throughout the continent.

4.2 Synthesized findings for TWG 3 on Global Policies and National realities

4.2.1 Summary of the presentation on "National realities and global commitments for ABS in Uganda" by Dr. John Wasswa Mulumba

The presentation gave an overview of the status of Uganda's commitments to global policies citing Access and Benefit Sharing (ABS) under the International Treaty for Plant genetic Resources for Food and Agriculture (ITPGRFA), The CBD/ Nagoya protocol and the seed policy. Dr Mulumba stated that recent developments in policy review have led to the review of the national PGRFA policy and strategy which are awaiting cabinet approval, and the development of a Memorandum of Understanding between key institutions i.e., the Plant Genetic Resources Centre (PGRC), the National Environment Management Agency (NEMA) and the competent authority for both treaties i.e., Uganda National Council for Science and Technology (UNCST) to review ABS legislation.

The seed policy is also currently under review and awaiting cabinet approval. One major milestone with the seed policy is that it has provisions for quality declared seed (QDS) as a category of seed which has enhanced the development of local seed systems and this would ideally improve smallholders' access to quality seed.

Dr. Mulumba's presentation also showed that CGIAR centres are very important in accessing and exchanging germ plasm in and out of the country citing that most of the interactions with CGIAR centres are with breeders and breeding programs. The national gene bank's role over the years has been involved in collection, keeping materials for breeders and in-situ conservation with local communities through community seed banks. Infact the national gene bank is currently working with four community seed banks to conserve a wide variety of beans in-situ and keep their material in duplicates. Breeders' networks in the region are also very important for access of materials however They are informal and not much data is available on what is being exchanged by who, and where.

Existing gaps and constraints identified in Uganda include:

- lack of properly managed information sharing mechanisms to trace and keep data on materials available and materials being moved in and out of the country through breeding programs
- many policies, laws pertaining to ABS and seed are still under review and need to be pushed through for cabinet approval, despite the fact that some of the provisions contained in the policies are already being implemented
- Regional initiatives at COMESA and EAC level which also require harmonization with national laws

4.2.2 Summary of the presentation "Synthesis national realities and global commitments for ABS and climate change" by Dr. Gloria Otieno

The presentation gave a synthesis of results from four countries: Zambia, Zimbabwe, Uganda and Rwanda on ABS and climate change. Germ plasm flows in the four countries indicate that:

- CGIAR centres have significantly contributed to the exchange and access of genetic resources over the years, moving thousands of collections in and out of these countries
- Breeding and research programs in these countries mainly get their material from CGIAR centres and to a very limited extent their national gene banks
- Breeders' networks and regional research projects (both formal and informal) are significant in the Access and Benefit Sharing (ABS) of plant genetic resources

- Intermediaries such as research organizations and local NGOs are important in providing access to varieties and material for communities and smallholders

The study shows that in all the four countries, temperatures have increased, seasons have shifted and rainfall has become more erratic. In addition, future projections in the four countries indicate that temperature would increase between 2 and 4 degrees and climate change in future would trigger new pests and diseases. Countries would increasingly need to look for germ-plasm further afield. Breeding programs would also need to prioritize climate-related stresses and disease resistance to develop new varieties for adaptation and would need to access material that is adapted in-situ and ex-situ.

The multilateral system of access and benefit sharing would therefore become an important avenue for accessing required germ-plasm for climate change adaptation either from other countries' gene banks or from collections held by CGIAR centres. Adaptable material held by communities would still need to be accessed through CBD/Nagoya protocol and hence mutually supportive ABS policy implementation should be a priority.

In addition, these countries are at different levels of implementing these global policies, and it will be increasingly important to create an enabling environment for accessing much needed germ-plasm.

4.2.3 Overview of the questions and answers

Question 1: Since the presentations show that Uganda is more dependent on germ plasm from outside the country and the process of germ-plasm transfer is complicated and bilateral in most cases, how ready is Uganda to become a recipient of germ plasm from outside?

Answer: *Uganda's national breeding programs have worked with CGIAR centres in exchanging material since 1970s and the Plant Genetic Resources Centre which houses the national gene bank is has been receiving germ plasm from international organizations and research centres. Due to climate change and related challenges, Uganda will need to access more germ plasm from abroad. Currently a review of Access and Benefit Sharing regulations (ABS) is going on with NARO-PGRC working with the Uganda National Council for Science and Technology (UNCST) which is the competent Authority on access for all genetic resources and the National Environment management Agency (NEMA). This will help make the access and exchange of genetic resources within the country easier.*

Question 2: The presentation on Global policies and national realities shows that due to climate change, we will need to access material that is adaptable. Do our national gene banks have the germ plasm needed for future climate change adaptation? What interventions does ISSD Africa have to understand this issue clearly and to put up measures to ensure future climate change adaptation?

Answer: *Uganda will indeed need germ plasm from further afield to be able to cope with climate related stresses. Although the national gene bank has collections, these may not be sufficient in future due to climate related challenges and therefore accessing genetic resources from other countries is paramount for climate change adaptation. ISSD Africa can ensure that climate change adaptation is integrated into its programmes especially with respect to identifying and making potentially adaptable varieties in local (informal), intermediate or formal seed systems.*

Question 3: How much is the on-going seed policy review and ABS processes inclusive to the extent of how much consultation is going on?

Answer: *During the seed policy review a number of stakeholders were involved in the process through stakeholder consultations. National farmer organizations presented their proposals as well as seed producers, seed traders and seed companies.*

Question 4: What is the role of smallholders in the policy processes especially in view of the fact that seed policies often promote the formal system? To what extent is the draft policy inclusive of this process?

Answer: *The revised seed policy contains provisions for intermediate seed systems and gives quality declared seed (QDS) as a category of seed, hence creating provisions for local seed businesses managed by smallholders or producer groups and private sector.*

Question 5: From the presentations, there are indications that climate change is a problem leading to increased (and new) pests and diseases, this will invariably lead to increased use of pesticides which will increase GHG emissions and exacerbate the climate change, what kind of measures in terms of policy are we putting in place to manage this issue?

Answer: *Climate change will indeed lead to increased and new pests and diseases and current agricultural practices could worsen the situation further. As a result, breeding and new crop development would have to be*

steered towards improvements that not only cater for climate challenges but also pests and diseases. Breeding programs need to plan ahead for these challenges. In addition, the current government policy in Uganda does not take into consideration the use of pesticides and its effect on the environment.

Question 6: Can we hear some insights as to the preparedness of the country to cope with climate change in terms of farmers' being able to access varieties that they can use?

Answer: *The Seed inspection and certification unit in conjunction with the variety release committee has been evaluating and releasing varieties with various specifications such as drought tolerance, pests and disease resistance, etc. that have been tested in various agro-ecological zones in the country. These varieties, once released, are accessible in the formal seed system. However, as we all know from research that the Ugandan seed sector is largely informal, more than 80 per cent seed used by farmers in the country are from informal systems, hence the need to develop intermediate systems that will improve access of relevant seed to farmers.*

4.3 Synthesized findings for TWG 2 on Access to varieties in the public domain

4.3.1 Summary of the presentation on “Synthesis of Access to Varieties Action Learning Projects” by Dr. Ivan Ruwomushana

The presentation gives a summary of findings from action learning projects in Kenya, Mali, Uganda and Zambia. The main question was “How to effectively get promising genetic material from breeders out to diverse users for commercial, but in particular for non-commercial, crops”.

Findings from these studies indicate that access to variety information is a critical aspect of getting varieties in the public domain to users in breeding, research or directly to farmers. Variety information can be shared through various channels and combination of extension and information services such as effective ICT, and decentralization of seed production units to ensure proximity to users through community breeding, but also through the participation of various intermediaries such as agro-dealers. Innovative platforms can also be used to share information and link users and providers.

Access to foundation seed is another critical aspect of effectively providing access to varieties. Proper planning and seed demand articulation should precede foundation seed production. In these countries, foundation seed is mainly produced by NARs which are often underfunded, hence this constraint can be offset by providing subsidies and incentives to seed production units, or through innovative public private partnerships (PPPs) between NARs, private sector and local NGOs. Key enablers for successful production of foundation seed identified in these studies include a conducive policy environment that can foster seed system development by various stakeholders and joint planning.

Finally, case studies on variety use agreements between CGAIR centers, NARs, private sector, local NGOs and CBOs provide good avenues for effectively getting genetic material to users. However, for these agreements to work effectively there should be operationalization, arbitration and quality clauses to ensure all parties keep their end of the bargain.

4.3.2 Summary of presentation on “Action Learning Project on role of agreements in access to potato varieties in Uganda” by Stephen Tindimubona

The case study of seed potato producers in Uganda present two main types of material user agreements ie verbal agreements between the research organization Kabaale Zonal Agricultural Research Institute (KAZARDI) and Uganda National Seed Potato Producers Association (UNSPPA), where varieties of seed released by the NARs and CGIAR centres (CIP) are given to local NGOs and CBOs to multiply and produce seed. The stakeholders have also been working together through memorandums of understanding (MoUs) but these were not very binding and as a result KAZARDI recently signed a formal contract/ MTA for access, multiplication and distribution of quality potato seed for the western region of Uganda. The agreements are mainly royalty free, with no costs involved in access to new variety seed potatoes.

Although these agreements have contributed to the availability of clean and good quality potato seed to smallholders, they are associated with high risks for non-compliance from the parties involved and in addition, MTAs may restrict the distribution of certain varieties preferred by farmers.

4.3.3 Summary of presentation on “Early generation seed status study” by Astrid Mastebroek, ISSD Uganda

This presentation provided a case study of Early Generation Seed (EGS) production for major food security crops in Uganda, citing the processes, stakeholders, challenges and gaps.

According to this study, key players in the seed value chain include CGIAR centres, NARs and breeding programs which are key in production of breeder seed; these are then linked with NARs, IARC and seed companies who produce foundation seed; and finally private sector, local NGOs, farmer groups or local businesses who the produce and sell the seed.

Some bottlenecks identified in EGS production are limited technical human and financial resources within NARs for the production of EGS and foundation seed; weak contractual arrangements with seed companies to produce seed; there is no seed demand articulation which should ideally inform EGS production to ensure quantity and timeliness of seed to farmers. At a policy level, there are weak quality assurance mechanisms to support the production of quality EGS. These bottlenecks can be addressed by providing incentives such as subsidies for EGS production to reduce costs, partnerships involving private sector throughout the value chains and proper seed demand articulation and planning to inform EGS production.

4.3.4 Overview of the questions and answers

Question 1: One of the key issues coming out of the presentations is lack of information on seed demand as a constraint to accessing seed and varieties in the public domain, what can be done to improve information flows and articulate seed demand?

Answer 1: *Seed demand articulation is indeed a problem that starts all the way down the value chain in terms of articulating the demand of pre-basic, basic seed at breeder level and foundation seed; this requires careful and articulate planning with relevant authorities at the district level with local agricultural and planning offices and sharing this information with EGS producers as well as seed companies.*

Answer 2: *Drawing from a project by Farm concern international funded by Gates foundation, the projects work with seed entrepreneurs at the grassroots in the proximity of the communities to make sure there is constant interaction between the farmers and the entrepreneurs who are able to predict and estimate seed demand, but it also ensures timely and availability of seed all year round.*

Question 2: The Second presentation by Stephen Tindimubona articulates how potato farmers have worked with NARO using MoUs to produce potato seed for sale. Are these MoUs sustainable in the long run?

Answer: *The MoUs have been for the most part successful, however bearing in mind that they are not contracts and that the demand for potato seed keeps fluctuating, it becomes very difficult to issue a permanent contract to seed producers.*

Question 3: Are there any action learning points of how seed units can function to improve access to varieties in the public domain? Are they run by local NARs or are they partnerships of some sort?

Answer: *An example of a seed unit for pigeon peas and groundnuts in Malawi that is housed by ICRISAT and in conjunction with the NARS that is functioning very well. Here in Uganda NARO is developing its private wing and this presents an opportunity for NARO to come up with seed units which can be run in partnership with private sector or public research organizations. Currently NARO is discussing under the auspices of ISSD Uganda about having a seed unit for forage legumes with other private sector seed producers and this is sort of a pilot to see if it can work and if this can be up and out-scaled in future.*

Question 4: What is the impact of the current on-going subsidy program under the Operation Wealth Creation on access to seed and varieties in the public domain?

Answer: *The subsidy program creates a system where the unpredictability of seed demand becomes worse, creating oversupply of seed in some sectors and periods of lack of stocks. Hence there is need for harmonization between local level actors such as NGOs, NAADs, OWC and local government to pass on the correct information that is required to produce quantities of seed in advance.*

5 Main outcomes of the working groups

5.1 Working groups

5.1.1 Identifying linkages to national policy processes

The working group discussion was centered on identifying key issues for policy consideration, stakeholders and developing agenda points along those considerations. Issue identified included

- Advocacy for the draft PGRFA policy, national seed policy and seed regulations to be pushed through the cabinet for consideration, through awareness raising of the cabinet committees on importance of these issues through the PGRC and Seed certification units or USTA
- Developing ABS regulations for mutually supportive implementation of Nagoya protocol and ITPGRFA through an already existing MoU between UNSTA, NEMA and NARO-PGRC
- Review of regulations on counterfeit seed and revision of the penalties
- Harmonization of national policy and legislation with regional initiatives in COMESA and EAC
- Proper planning and articulation of seed demand throughout the seed value chain
- Development of QDS guidelines in –line with other countries in the region

5.1.2 Identifying concrete entry points for change

The working group discussed key points for agenda change in ISSD Africa and included

- Inclusion of climate change as a key aspect of seed system development, new variety development, access and benefit sharing and seed demand articulation.
- Finding innovative ways to improve access to material in the public domain using various partnerships and intermediaries
- Creating an information sharing platform for stakeholders on available material for breeding or use through ABS mechanisms; list of varieties with specific traits developed by breeders across the region; information on demand for EGS or seed in the region specifically linked to regional climate related challenges; which would also be linked with climate information.
- Mapping stakeholders and identifying partnerships for future collaboration in the next phase of ISSD.
- Having a clear understanding by country programs such as ISSD_uganda between the roles to be undertaken at a country level and those to be undertaken at a continental level to avoid duplicity

6 Conclusions and future focus areas of ISSD Africa

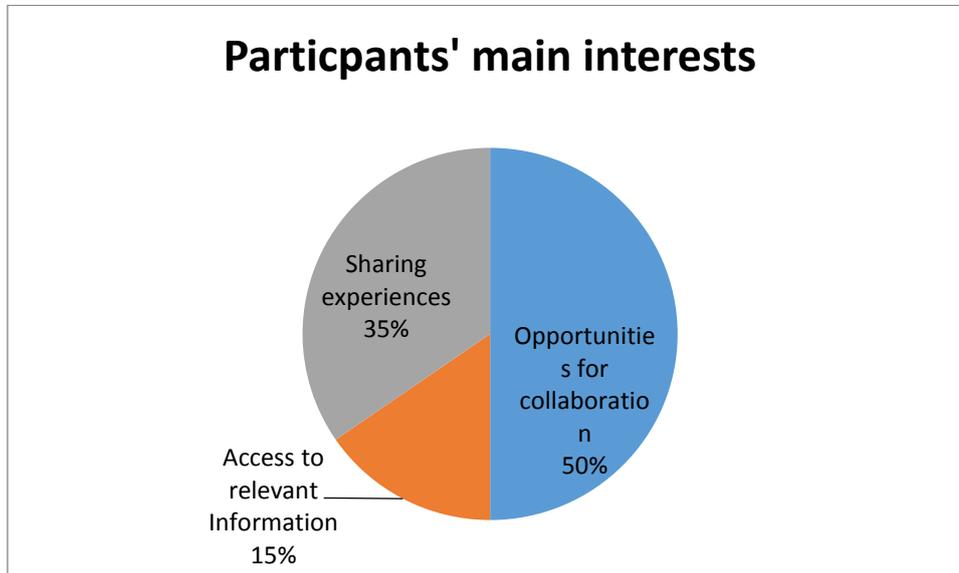
The national seminar was timely in bringing stakeholders together to discuss issues pertaining to seed sector development in the country and in Africa at large. The stakeholders present ranging from government policy makers, seed inspection and certification, CGIAR centers, NARS and breeding programs, private sector representatives and farmer organizations contributed to a rich discussion with concrete conclusions on the way forward for seed sector development in Uganda and in Africa.

We can conclude that climate change is and will continue to dictate the genetic resource needs of countries, access and benefit sharing across the region will help countries in accessing their genetic resource needs for breeding and climate change adaptation. New variety development will also be largely dictated by climate change and breeding programs will need to access information and the requisite genetic resources to develop varieties that are climate resilient. As a way forward, stakeholders feel that ISSD Africa's future programs should integrate climate change and information sharing mechanisms as key tenets of seed systems development in Africa. Harmonization of countries' policies and laws with global commitments and regional initiatives will also improve the access of genetic resources and seed especially by smallholders and will stimulate the growth of seed trade within the region.

7 Evaluation

7.1.1 Main ISSD function interested in

What are main interests in the ISSD Africa Network? During the evaluation the participants (n=23), came up with the following priorities



**** Multiple responses allowed**

7.1.2 Thematic suggestions

Suggestions for themes/topics/challenges to be tackled at continental level the next phase of ISSD Africa:

- Integration of climate change in ABS of genetic resources, breeding and seed sector development
- Identifying innovative collaborative partnerships for improving access (for smallholders) to varieties in the public domain, but also access to breeder's material and EGS
- Improvement of information sharing mechanisms (through information sharing platforms) for ABS, breeding and seed sector development
- Harmonization of national policies with regional policy initiatives to improve access to genetic material for breeding and use; but also to improve access to varieties in the public domain and stimulate seed trade in the region
- Capacity development for Climate change, ABS and seed demand articulation to facilitate planning for present and future climate related challenges.



ISSD Africa National Seminar, Uganda

7.1.3 Objectives of the National Seminars

- (i) To present the synthesized findings of the action learning project across the continent to national seed sector stakeholders and policy makers
- (ii) To embed the synthesized results of the different action learning projects in a wider seed sector and policy context and link the synthesized findings to national policy processes
- (iii) To discuss how to translate these synthesized results into change agendas and to propose concrete entry points for change, as input for the proposal for a Comprehensive programme on ISSD in Africa

Outline tentative programme

08.30 – 09.00	Registration Miracle Arikiza – Bioversity International
09.00 – 09.15	Official opening –Milton Ayieko, ISSD Regional Coordinator
09.15 – 09.30	Introduction, objectives and programme seminar Milton Ayieko, ISSD Regional Coordinator
09.30 – 10.15	Synthesized findings of action learning projects under Thematic Working Group 3: <ol style="list-style-type: none"> 1. National realities and global commitments for ABS in Uganda by John Mulumba- (10 Minutes) 2. Synthesis national realities and global commitments for ABS and climate change by Gloria Otieno (10 Minutes) 3. Synthesis of Access to Varieties Action Learning Projects by Ivan Ruwomushana (10 Minutes) <p style="text-align: center;">Plenary discussions (15 minutes) Session Chair: Milton Ayieko</p>
10.15 – 10.45	Coffee/tea break
10.45 – 11.30	Synthesized findings on of action Learning projects under Thematic Working Group 2 <ol style="list-style-type: none"> 4. Action Learning Project on role of agreements in access to potato varieties in Uganda by Stephen Tindimubona (10 Minutes) 5. Early generation seed status study by Astrid Mastenbroek, ISSD Uganda (15 minutes)

	Plenary discussions (10 minutes) Session Chair: Ivan Ruwomushana
11.30 – 12.30	Discussion groups: linkages to national policy processes Session Chair: John Wasswa Mulumba
12.30 – 13.30	Lunch
13.30 – 14.30	Plenary presentation and feedback Session chair: John Wasswa Mulumba
14.30 – 15.30	Discussion groups: Identifying concrete entry points for change (input for proposal development) Session chair: Gloria Otieno
15.30 – 16.00	Coffee/tea break
16.30 – 17.30	Plenary presentation and feedback Session Chair: Gloria Otieno
17.30	Closing

Annex 2 List of participants in the ISSD AFRICA National Seminar

- 1 Gloria Otieno (Dr.)**
Genetic Resources & Food Security Policy Specialist
Bioversity International - Uganda
P.O.Box 24384, Kampala-Uganda
Tel: +256 414 286 213
Tel: +256 786 666 083
Mobile: +256 786 666 083
[Email: g.otieno@cgiar.org](mailto:g.otieno@cgiar.org)
- 2 Robert Guloba (Mr.)**
Volunteer
Participatory Ecological Land-use Management (PELUM)
Plot 155, Kira Road, Kamwokya
P.O. Box 35804, Kampala, Uganda
Tel: +256 414 533 973
Mob: +256 753 053 999
Email: pelumuganda@pelumuganda.org
[Email: rbguloba@yahoo.com](mailto:rbguloba@yahoo.com)
- 3 Andrew Kiggundu (Dr.)**
Senior Research Officer/Programme Leader
National Agriculture Research Organisation –National
Agriculture Research Laboratories
P.O.Box 7065 Kampala-Uganda
Tel: +256 414 2566102
Mob: +256 772 516 652
[Email: akiggundu@gmail.com](mailto:akiggundu@gmail.com)
- 4 Kiwuka Catherine (Ms.)**
Research Officer
National Agriculture Research Organisation –PGRC
P.O.Box 40, Entebbe
Mob: +256 782 678056
[Email: kiwukakathyrn@gmail.com](mailto:kiwukakathyrn@gmail.com)
- 6 Tomson Okot-Chon (Mr.)**
Senior Programme Manager
Farm Concern International
Plot 14A, Kimera Road, Naguru-Kampala
Mob +256 756 008 229
Mob +256 704 669 417
Email: tomson.oko@farmconcern.org
- 7 Joshua Okonya (Mr.)**
Research Associate
CIP
Plot 47 Ntinda II Road, Naguru-Kampala
Tel: +256 312 266 250/3
Mob: +256 774 447 593
[Email: j.okonya@cgiar.org](mailto:j.okonya@cgiar.org)
- 8 Astrid Mastenbroeks (Ms)**
Chief of Party
ISSD Uganda
Tel: +256 787 007619
[Email: atrid.mastenbroek@wur.nl](mailto:atrid.mastenbroek@wur.nl)
- 9 Rwomushana Ivan (Dr.)**
Scientist
ICIPE
P.O.Box 30772 Nairobi-Kenya
Tel: +254 208 632 029
Mob: +256 719 250 415
[Email. irwomushana@icipe.org](mailto:irwomushana@icipe.org)

- 5 Gorretie Ssemakula (Dr.)**
Principal Research Officer
National Agriculture Research Organisation
P.O. 7084 Kampala
Tel : +250 414 573 016
Mob: +250 782 884 709
[Email: nankingag@yahoo.com](mailto:nankingag@yahoo.com)
- 11 Namugga Prossy (Ms.)**
Research Office
National Banana Research Programme
P.O.Box 421, Kabale, Uganda
Tel: +256 418 646 496
Mob: +256 782 361 597
[Email: namuggak@gmail.com](mailto:namuggak@gmail.com)
- 12 Walter De Boef (Dr.)**
Senior Programme Officer, Seed Systems
Bill & Melinda Gates Foundation
P.O.Box 23445, Seattle, WA,USA
Tel. +1 206 612 4635
Email: walter.deboef@gatesfoundation.org
- 13 Miltone Ayieko (Dr.)**
Regional Co-ordinator
ISSD Africa
P.O.Box 20498-00200, Nairobi-Kenya
Tel: +254 720 895 454
Mob: +254 791 389 451
[Email: mayieko@tegemeo.org](mailto:mayieko@tegemeo.org)
- 10 Biryomumaisho Benia B**
Finance Officer
Uganda National Seed Potato Producers
Association (UNSPPA)
Mob: +256 782 069 576
Mob: +256 701 969 576
[Email: bbirybenia@yahoo.co.uk](mailto:bbirybenia@yahoo.co.uk)
- 16 John Mulumba (Dr.)**
Curator
National Agriculture Research Organisation –
PGRC
P.O.Box 40, Entebbe
Tel: +256 414 320 638
Mob: +256 782 671 698
[Email: jwmulumba@yahoo.com](mailto:jwmulumba@yahoo.com)
- 17 Devine Nakedde (Ms.)**
Senior Agricultural Inspector - MAAIF
P.O.Box 82 Kampala, Uganda
Tel: +256 414 320 801
Mob: + 256 772 461 357
[Email: dina041170@gmail.com](mailto:dina041170@gmail.com)
- 18 Arikiza Miracle (Mr.)**
Administration Assistant
Bioversity International
P.O. Box 24384, Kampala, Uganda
Tel: +256 414 286 213
Fax: +256 414 286 949
Mob +256 782 994 557
[Email: M.Arikiza@cgiar.org](mailto:M.Arikiza@cgiar.org)

- 14 Tindimubona Stephen (Mr.)**
Executive officer
Uganda National Seed Potato Production Association
P.O.Box 329 Kabale, Uganda
Mob: +256 772 657 621
Mob: +254 751 657 621
[Email: sbtindi@gmail.com](mailto:sbtindi@gmail.com)
- 15 Masereka Nelson (Mr.)**
Executive Secretary
Uganda Seed Trade Association (USTA)
Tel: +256 414 234 803
Mob: +256 782 423 767
Mob: +256 702 423 767
Email: nelsonmasereka@gmail.com
- 21 Brenda joyce (Mrs.)**
Senior Agricultural Inspector
Ministry of Agriculture Animal Industry and Fisheries
P.O.Box 7260, Kampala, Uganda
Mob.: +256 701 403 365
Mob: +256 772 403 365
Email: brendaagric.maaif@gmail.com
Email: bkisingiri@agriculture.go.ug
- 22 Masiko William (Mr.)**
Driver
Uganda National Seed Potato Production Association
P.O.Box 329 Kabale, Uganda
Mob +256 783 651 994
- 19 Sarah Mayanja (Ms.)**
Research Associate
International Potato Center
P.O. Box 22274 Kampala, Uganda
Tel: +256 414 312 266 250/3
Mob +256 751 806 750
[Email: s.mayanja@cgiar.org](mailto:s.mayanja@cgiar.org)
- 20 Joyce Adokorach (Ms.)**
Research Officer
National Agriculture Research Organisation –
PGRC
P.O. Box 40 Entebbe, Uganda
Tel: +256 414 320 638
Mob +256 788 567 139
Email: joyceadokorach@yahoo.com
- 23 Brian Isabirye (Dr.)**
Theme Leader
ASARECA
P.O.Box 765 Entebbe, Uganda
Mob. +256 772 352 739
Email: b.isabirye@asareca.org

Annex 3 Overview of TWG action learning questions

Discussion Questions Session 1: Identifying linkages to national policy processes

1. What are the key policies for realizing integrated seed systems in Uganda? And at what stage are these Key Policies
2. What are the Gaps in Policy that are important for Integrated seed sector
3. Who are the key stakeholders and how can they be engaged?
4. What needs to be done?
5. How do we link these with Climate change, ABS and seed policies?

Discussion Session 2: Identifying concrete entry points for change

- 1) What are the issues and gaps that need to be addressed at the level of the thematic working groups 2 and 3
- 2) What is the change agenda?
- 3) Who are the change agents ie stakeholders and partnerships?
- 4) What are the capacity issues and gaps?

Annex 4 Mapping of National Seed Stakeholders – Organisations and Projects/Programmes

Name organization?	From which sector?	Funded by?	Involved in which seed system?	Which seed topics are they working on?	Influential in which policy processes/dialogues?	Opportunities for linking with ISSD Africa?	Name contact person Email address
Uganda national seed potato producers association (UNSPPA)	Local NGP/CBO	Cooperative	Formal, intermediate	Access to varieties in the public domain Seed multiplication and seed trade	Access to varieties in the public domain, development of intermediate seed systems	yes	Stephen Tindimuboma Email: sbtindi@gmail.com
Farm Concern International	International NGO	Various (USAID, etc)	Intermediate and formal	Access to varieties in the public domain, seed multiplication and seed trade	Access to varieties in the public domain, development of intermediate seed systems	yes	Tomson Okot Chot tomson.okot@farmconcern.org
Plant Genetic Resources	NAR	Government of Uganda	Formal, intermediate, informal	Access and benefit sharing, Early generation seed development Development of intermediate seed systems (community seed banks)	ABS; Access to varieties in the public domain; development of intermediate seed systems	yes	Dr. John Wasswa Mulumba jwmulumba@yahoo.com
Seed Inspection and certification Unit -MAAIF	National government	Government of Uganda	Formal, intermediate, informal	Access and benefit sharing, Early generation seed development Development of intermediate seed systems (community seed banks)	ABS; Access to varieties in the public domain; development of intermediate seed systems	yes	Divine Nakedde Email: dina041170@gmail.com
Uganda National Council for	National Government	Government of	Formal	Access and benefit sharing, access to	ABS, and IPRs	yes	Eliza Nahayo e.nahayo@uncst.go.ug

Science and technology	nt	Uganda		varieties in the public domain			
National Environment Management Agency (NEMA)	National Government	Government of Uganda	Formal	Access and benefit sharing, access to varieties in the public domain	ABS, and IPRs	yes	Christine Akello cakello@nemaug.org
National Agriculture Research Organisation – National Agriculture Research Laboratories	National government	Government of Uganda	Formal	EGS production, Access to varieties in the public domain, user agreements	IPRs, Access to varieties in the public domain	yes	Andrew Kiggundu akiggundu@gmail.com
International Potato Centre	CGIAR	CGIAR	Formal, Intermediate, informal	Access and benefit sharing, access to varieties in the public domain, EGS production, user agreements	ABS, IPRs, Access to varieties in the public domain	yes	Sarah Mayanja s.mayanja@cgiar.org
International institute for Tropical Agriculture (IITA)	CGIAR	CGIAR	Formal, Intermediate, informal	Access and benefit sharing, access to varieties in the public domain, EGS production, user agreements	ABS, IPRs, Access to varieties in the public domain	yes	Pamela Pali p.pali@cgiar.org
National Banana Research program	Government	Government	Formal, informal intermediate	EGS production, Access to varieties in the public domain, user agreements	IPRs, Access to varieties in the public domain	yes	Namuga Prossy namuggak@gmail.com
National Agricultural research Organization	Government	government	Formal, informal intermediate	EGS production, Access to varieties in the public domain, user agreements	IPRs, Access to varieties in the public domain	yes	Goretti Semakula nankingag@yahoo.com
ASARECA	NGO	Various	Formal, informal intermediate	EGS production, Access to varieties in the public domain, user agreements	IPRs, Access to varieties in the public domain, ABS	yes	Brian isabirye b.isabirye@asareca.org
Bioversity International	CGIAR	CGIAR	Formal, Intermediate, informal	Access and benefit sharing, IPRs, access to varieties in the public domain	ABS, IPRs, Access to varieties in the public domain	yes	Gloria Otieno g.otieno@cgiar.org

Participatory Ecological Land Use Management (PELUM)	NGO	Various	Formal, informal and intermediate	Access and benefit sharing, Access to varieties in the public domain,	ABS, IPRs, Access to varieties in the public domain	yes	Josephine Akia josephineakia@pelumuganda.org
--	-----	---------	-----------------------------------	---	---	-----	--

Annex 5 Mapping Relevant Seed sector Events

Name forum/ event/ policy dialogue/ meeting/ workshop	Date	Topics of discussion	Open/closed event?	Opportunity for linking with ISSD Africa?

Annex 6 Working group results (One Table per Working Group)

Summary Key issue arising from discussions

Discussion Session 1: Identifying linkages to national policy processes

Global Policies National realities theme	At what stage are these polices	Which stakeholders?	What are the gaps	What needs to be done?
Issues raised in the discussions	Issues at National level			
Key Policies for realization of integrated seed systems are climate change policies, seed policies, ABS regulations and PGRFA policies	All the above- mentioned policies have been reviewed recently and pending cabinet approval	NEMA, NARO, PGRC, MAAIF, CCU, Cabinet, local NGOs, ISSD Uganda, Farmer organizations, USTA, research organizations (national and international)	1. Many regulations are in draft form and need to be pushed through the process so that they can be implemented fully	<ul style="list-style-type: none"> Lobbying at higher levels for policies, regulations and guidelines to be endorsed at cabinet level, concluded and passed into laws. Engagement with the Committee on Agriculture, create awareness on the importance of policies so that they can push the process forward
Issue for ISSD Africa				
There is need to integrate climate change issues with ABS issues and	National policy should reflect climate change issues at ABS and	NEMA, NARO, PGRC, MAAIF, CCU, Cabinet, local NGOs, ISSD Uganda, Farmer	2. Climate change is not well articulated in planning for future ABS or future crop	<ul style="list-style-type: none"> Integration of Climate change issues into these policies by engaging stakeholders from climate

seed systems issues in terms of planning for present and future adaptation	seed policy level	organizations, USTA, research organizations (national and international)	improvement, these need to be invariably linked into the national planning processes	change eg NEMA, CCU and researchers
Access to varieties in the public domain theme	At what stage are these policies	Which stakeholders?	What are the gaps	What needs to be done?
Harmonization of policies with regional level initiatives eg COMESA Seed Trade Harmonization, EAC seed regulations Harmonization,	The country is currently in the process of harmonizing these policies and regulations with those at the country level	NEMA, NARO, PGRC, MAAIF, Seed inspection and certification units, CCU, Cabinet, local NGOs, ISSD Uganda, Farmer organizations, USTA, research organizations (national and international), EAC, COMESA, private sector, regional leaders and regional institutions eg ASARECA	Lack of harmonized regulation QDS Harmonization of seed laws in the region to facilitate access to varieties in the public domain ie varieties released in Rwanda for example can be listed in Uganda's catalogues and does not need to undergo additional and costly variety release system in the country	<ul style="list-style-type: none"> • Need to develop regulations around QDS in harmony at the regional level, guidelines on QDS production for various crops at least for key food security crops in the region and how these can be exchanged or made accessible trans-boundary • Need to work on issues of registration and release/listing of varieties from other countries into catalogue to improve accessibility
Seed demand articulation that is linked to climate change through	Seed demand articulation is still a major problem in the	NARs in the region, local district agricultural and planning offices, private sector, climate change	Lack of information on seed demand, availability and access hindering regional exchange of	Seed demand articulation should be a key issue to be addressed at a higher level in-terms of planning, but also in mobilizing

efficient information management systems	country and region	experts in the region, media CGIAR centres, research, meteorological departments, MAAIF	seed and information especially in view of prevailing climate challenges	resources, institutional, human and technical capacity to integrate climate information with demand for varieties and availability of those varieties either nationally or in other member countries in the region.
Policies around quality assurance of seed in the country and region	At national level, the seed regulations are still in draft form and these include quality assurance regulations	NARS, Seed Inspection and certification unit, private sector, enforcement	Enforcement is very weak, the fines are also very low, these need to be revised and harmonized with regional level laws on fake seed	Seed regulations need to be strengthened to include stringent and punitive fines for fake seed producers. Operationalizing provisions for private seed inspection ie inspectors accredited by the national seed inspection and certification unit

Discussion Session 2: Identifying concrete entry points for change

Global Policies National realities theme	What are the issues and gaps	What is the change agenda	Who are the change agents(stakeholders)	What are the capacity issues and gaps?
Issues raised in the discussions	Issues at National level			
Lobbying for conclusion of policies, enactment of laws and regulations	Policies, laws and regulations under review and awaiting cabinet approval, a process which can take years	To have laws, regulations and policies in place in order to ensure smooth running of the seed sector	MAAIF, NARs, policy experts, USTA	Lack of awareness among high level policy makers on the urgency of these issues.
Issue for ISSD Africa				
Integration of regional ABS laws and policies with climate change and seed policies to enhance access to genetic resources for climate change adaptation within Africa	Climate change is a key issue for the access of materials for present and future use, for breeding and hence should be integrated into ABS and seed systems issues	Enhancing the exchange and access to genetic resources required for climate change adaptation which can be developed into a research and development agenda	CGAIR centres (research) NARs, Seed experts, information management systems, climate change experts, policy makers (ABS, climate change and seed policies)	Lack technical, human and financial capacity to carry out the analysis required for these interventions. Information management systems that are linked specifically to climate are also lacking
Development of regional ABS	ABS legislation in different countries	Harmonization of ABS laws in the region to	COMESA, EAC, National	Lack of technical and human resource capacity

legislation	makes it difficult to access and share genetic resources as most countries have not yet developed their ABS legislation	enhance access and exchange of genetic resources for breeding and use	governments, NARs, CGIAR centres private sector, farmer organizations	Political goodwill
Development of information systems integrated at the regional level for available gene bank materials, CGIAR center materials and materials exchanged and developed by breeders and private sector	Lack of information system on the available material in the regional gene banks and their MLS status	Improvement of information sharing mechanisms to enhance exchange and access of Genetic resources especially in times of climate challenges and pests and diseases	COMESA, EAC, National governments, NARs, CGIAR centres private sector, farmer organizations	Technical, human and financial capacity to develop a regional information platform
Access to varieties in the public domain theme	What are the issues and gaps	What is the change agenda	Who are the change agents(stakeholders)	What are the capacity issues and gaps?
<ul style="list-style-type: none"> Issue at national level 				
Development of intermediate seed systems	Guidelines for QDS production still missing for many	Enhance access to good quality cheap seed for farmers	NARS, private sector, farmer organizations, CGIAR centres, ISSD	Lack of proper guidelines on QDS production due to laws and regulations which are still in draft

	crops and these need to be harmonized at regional levels.		Uganda	
Issues for ISSD Africa				
Harmonization of regional seed laws including issues of variety release and quality assurance and IPRs	Seed laws in some countries are stringent and don't allow for proper access and exchange trans-boundary within the region	Laws and regulations in the region enhance access and exchange of seed and breeder material and seed trade	COMESA, EAC, National governments, NARs, CGIAR centres private sector, farmer organizations and breeders	Countries are at different levels with the development of seed laws and harmonization with regional initiatives
Seed demand articulation that takes into account climate and weather related challenges	Lack of information sharing platforms	Enhance information sharing mechanism that helps to model and forecast seed demand based on climate and weather information	COMESA, EAC, National governments, NARs, CGIAR centres private sector, farmer organizations and breeders, research organizations	Technical, financial and human resource capacity
Accessing varieties in the public domain	Lack of intermediaries that enhance smallholder access to varieties in the public domain	Intermediaries and institutions can improve access to varieties in the public domain especially through public private partnerships	Private sector, governments, NARs, CGIAR centres farmer organizations and breeders	Technical, financial and human resources

Annex 7: Seminar Evaluation

Gloria Otieno	Bioversity	Good	Excellent	Very Relevant	Very Relevant	Very likely	Very likely	Access to relevant Information, Sharing of experiences, Opportunities for collaboration, advice on ISSD related issues.	Yes	Yes-ABS & Climate Change	Yes	Yes
Divine Nakedde	MAAIF	Good	Good	Very Relevant	Very Relevant	Very likely	Likely to a limited extent	Sharing of experience	Yes	No	Yes	Yes
Sarah Mayanja	CIP	Excellent	Good	Very Relevant	Very Relevant	Likely to a limited extent	Very likely	Sharing of experiences, Opportunities for collaboration.	Yes	Yes-Harmonizing QDS for propagated crops; more research in informal cross borders seed systems in a bid to scaling them to intermediate systems	Yes	Yes
Joyce Adokorach	NARO-PGRC	Good	Excellent	Very Relevant	Very Relevant	Very likely	Very likely	Access to relevant Information, Sharing of experiences, Opportunities for collaboration	Yes	Yes-Awareness creation methodology at grass root level	Yes-Sharing of information in research activities	Yes-NARO being responsible for agriculture respective in the Country
Masereka Nelson	USTA	Excellent	Good	Very Relevant	Very Relevant	Very likely	Very likely	Opportunities for collaboration.	Yes		Yes	Yes
Brenda Joyce	Senior Agricultural Inspector	Good	Excellent	Very Relevant	Very Relevant	Very likely	Very likely	Access to relevant Information, Sharing of experiences, Opportunities for collaboration, and advice on ISSD related issues.	Yes	Yes-More experience sharing	Yes	This is for the PS to decide
Brian Isabirye	ASARECA	Excellent	Good	Very Relevant	Very Relevant	Very likely	Very likely	Sharing of experiences,	Yes	No	Yes	Yes

					t			Opportunities for collaboration, advice on ISSD related issues.				
John Wasswa Mulumba	NARO	Good	Good	Very Relevant	Very Relevant	Very likely	Very likely	Opportunities for collaboration.	Yes	Yes-Information platforms; technology transfer platforms	Yes	Yes
Kiwuka Catherine	NARO-PGRC	Good	Good	Very Relevant	Very Relevant	Very likely	Very likely	Access to relevant Information, Sharing of experiences, Opportunities for collaboration, advice on ISSD related issues.	Yes	Yes-Streamlined technology transfer and information portal to support planned & on-going activities	Yes	Yes
Joshua Okanya	CIP	Good	Good	Somewhat relevant	Very Relevant	Very likely	Very likely	Opportunities for collaboration.	Yes	Yes	Yes	Yes
Okot Choo Tomson	Farm Concern International	Good	Excellent	Very Relevant	Very Relevant	Very likely	Very likely	Opportunities for collaboration.		Yes-How to develop seed entrepreneurs at Grass roots and link them to private sector and NARO	Yes	Yes
Namugga Prossy	NARO	Good	Good	Very Relevant	Very Relevant	Very likely	Likely to a limited extent	Sharing of experiences, Opportunities for collaboration,	Yes		Yes	
Tindimbona Stephen	UNSPPA	Excellent	Good	Very Relevant	Very Relevant	Very likely	Very likely	Sharing of experiences, Opportunities for collaboration,	Yes	Yes-Harmonized policy on MTA	Yes	Yes
Biryomumaisho Benia	UNSPPA	Excellent	Excellent	Very Relevant	Very Relevant	Very likely	Very likely	Opportunities for collaboration.	Yes	Yes-Climate Change and its Challenges to the seed sector	Yes	Yes