



KIT Royal
Tropical
Institute



Mid-term review 2018

Integrated Seed Sector Development Plus

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Summary report
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Acronyms

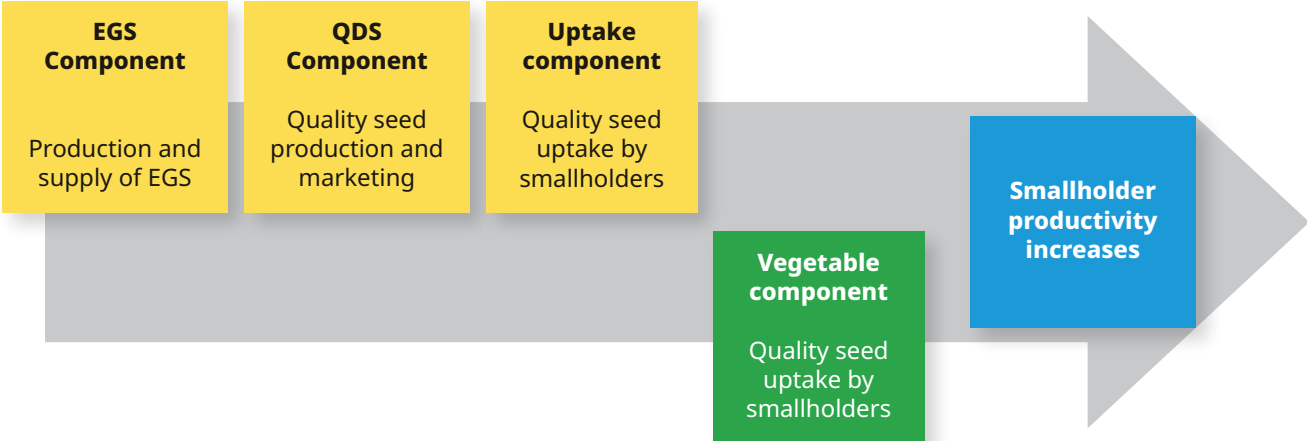
CBT	Community-based Trainers
DAO	District Agricultural Officer
EGS	Early Generation Seed
EKN	Embassy of the Kingdom of the Netherlands
FSE	Foundation Seed Enterprise
GALS	Gender Action Learning Systems
HIHO	High Input High Output
ISSD	Integrated Seed Sector Development
KIT	Royal Tropical Institute
LSB	Local Seed Business
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MTR	Mid-term Review
MoU	Memorandum of Understanding
NACRRI	National Agricultural Crop Resources Research Institute
NARO	National Agricultural Research Organisation
NASARRI	National Semi-Arid Resources Research Institute
NGO	Non-Governmental Organisation
NSCS	Nation Seed Certification Service, under MAAIF Services
OSP	Out scaling Partner
OPV	Open Pollinated Variety
RCT	Randomized Controlled Trial
ToC	Theory of Change
ToT	Training of Trainers
USTA	Uganda Seed Trade Association
QDS	Quality Declared Seed
ZARDI	Zonal Agricultural Research and Development Institute

Introduction

The ISSD Plus project runs from 2016 to 2020 and builds on the previous ISSD 1 project which ran from 2012 to 2016. The goal of the ISSD Plus project is to contribute to increased incomes of smallholder farmer households and improved household food and nutrition security. Moreover, the project aims to strengthen the seed sector institutions and environment. The project goals will be realized through increased productivity of field and vegetable crops and project outcomes and outputs are organized in four components.

The project has several components along the seed value chain (Figure 1). The early generation seed (EGS) component aims to address bottlenecks in early generation seed. The Quality Declared Seed (QDS) works to increase supply of quality seed in Uganda through local seed businesses. The uptake component aims to stimulate awareness and demand for quality seed among smallholder farmers. These three components complement each other, working on both the demand and supply side. The components also address the overall enabling environment. The project also has a specific vegetable seed component, working on vegetable sector development.

Figure 1 ISSD components along the seed value chain



The mid-term review (MTR) of the ISSD Plus project was conducted by the Royal Tropical Institute (KIT) in the period of August 2018 – October 2018. The MTR is an opportunity for the project to take stock of progress and contribute to internal learning for strengthening future programming. The MTR had three main objectives:

- 1** Document the expected and unexpected, positive and negative outcomes of the ISSD Plus project in the period October 2016 – August 2018;
- 2** Identify the key challenges and distil the main lessons learned
- 3** Provide recommendations so that strategic decisions can be made in adjusting the project to achieve maximum results by its completion

The following summary report provides readers with all major high-level findings and recommendations.

Methodology

The MTR design was theory-based, using the project's Theory of Change (ToC) and logframe (Annex 1) to draw conclusions about whether or not project activities have led to expected outputs, outcomes and impacts.

The primary data sources for the MTR were project reports and data, key informant interviews, and focus group discussions. The evaluators did not conduct quantitative surveys.

KIT began with a systematic review of existing project documents. ISSD Plus has also provided certain quantitative data collected from LSBs and other partners through the course of the project to date.

The most important data source was the semi-structured interviews carried out with all major stakeholders involved in the project (Box 1). The interviews were conducted upon appointment, and the interviews were recorded (if permission was given) and transcribed. The interviews were in-depth – several ISSD Plus staff were interviewed on more than one occasion to capture detailed perspectives on each project component. In all, 42 interviews were conducted, totalling more than 1000 pages of transcripts.

KIT also engaged LSBs (executive, marketing, production and quality control staff) in focus group discussions to elicit their views in a participatory manner. Fieldwork was carried out in the Northern, Eastern, and South Western regions where the project is active.

During analysis, data sources were triangulated to ensure conclusions and recommendations are as robust as possible.

The MTR was implemented in line with the Terms of Reference, MTR project proposal and Inception Report. The evaluators would like to thank the ISSD Plus team for their professional support during the fieldwork period.

Box 1 MTR Interviewee profiles

ISSD staff	Most Kampala-based ISSD staff, for all components.
ISSD Zonal experts	ISSD Seed expert and agribusiness expert from the three selected zones
Institutions	All core institutional stakeholders, including MAAIF, DAOs, NARO, ZARDIs, USTA.
Out scaling partners	OSPs from the three selected zones
Local seed businesses	Focus group discussions with the executive, quality control, production and marketing persons of the LSB. Purposive sampling to cover new and existing LSBs at all levels of capacity.
Vegetable companies	Representatives of all four vegetable companies.

Main findings

Overall, ISSD Plus has made good strides working on a rather complex and multifaceted project. ISSD Plus has achieved (or nearly achieved) most targets at the mid-point of the project, and is thus on track.

That said, the MTR has identified a number of challenges. Some challenges might be considered a threat to the full achievement of end-of-project results and the sustainability of these results well beyond the life of the project. This section first offers conclusions for each of the four components. The conclusions summarise the main results captured in the MTR as well as key challenges and lessons learned. This is followed by a section on recommendations that would likely enhance the project's prospects of success.

The evaluators advise that simplifying many of the project components would bring better focus, and results. For each component, we advise intensifying work in areas that are yielding results and stepping back from those which are not core to the success of the project. The evaluators would support a project application to reallocate resources to activities that can strengthen the EGS and QDS systems. We particularly support a simplification of the vegetable component, which essentially functions as a separate project, and draws attention away from the core ISSD objectives.

EGS component

Improving access to quality foundation seed – partially achieved

The EGS component is important for ensuring LSBs and seed companies have good access to quality foundation seed, which is a known bottleneck in the Ugandan seed system. This is captured by Output 2.2 'increased availability of quality assured Early Generation Seed (EGS)'.

As a first step to boosting foundation seed production, ISSD Plus trained members of four advanced LSBs, Makerere University staff, farm managers and directors of seven ZARDIs, and staff of NARO Holding Limited in seed business management and business plan development. All trained institutions developed business plans to guide the development of their respective foundation seed business activities.

Following training, ISSD Plus successfully piloted LSB production of foundation seed for beans and groundnuts in the South Western and Northern regions. As a result, four well trained LSBs have produced 20.5 acres beans and 20 acres of groundnuts in 2018A (2.2.3). ISSD Plus facilitated engagement between the NARO breeders and LSBs to ensure quality practices were implemented. The groups were linked to NSCS for field inspection, seed sampling and laboratory testing. ISSD has also worked with Makerere University to produce 70 acres of quality soybean foundation seed. ISSD Plus still plans to initiate a pilot with selected ZARDIs as part of a strategy to boost zonal initiatives which can improve LSB access to foundation seed in their respective zones.

ISSD Plus has taken time to thoroughly investigate the viability of a Foundation Seed Enterprise (FSE) under NARO Holdings Ltd for beans and groundnuts (2.2.3). This is an important option for increasing availability of foundation seed on a sustainable basis and at scale. Various institutional challenges have slowed down progress on the FSE, such as developing a realistic foundation seed business plan, ascertaining the legal status of the FSE in a public institution, and ensuring there would be transparency in the use of revenues from seed sales. During the course of the MTR, the options for a FSE have become clearer, and now the project should, with EKN, make a decision on proceeding or reallocating resources.

Overall, these EGS activities exceed the 2018 target of two pilot initiatives (2.2.3). Data has not yet been reported on metric tonnes of seed produced, however the evaluators expect the project to meet its mid-term target for foundation seed production of 30 MT (2.2).

Coordinating institutional stakeholders for quality foundation seed availability – partially achieved

ISSD Plus has worked to establish an EGS working group, which is chaired by NARO and coordinated by ISSD Plus. This working group was also tasked with following up on actions identified during national seed sector stakeholder workshops. ISSD Plus has invested considerable effort in establishing a good working relationship with both MAAIF and NARO and in advocating for quality assurance for foundation seed (2.2.1). From 2018 B, inspected foundation seed will be packaged and labelled with an official MAAIF label before it is marketed to quality seed producers (certified and QDS). ISSD Plus has also begun sensitising stakeholders on the need for a track and trace system for EGS. Detailed work on this activity is expected in the second half of the project. Consultations have yielded ideas on a procedure, with a pilot set to be carried out

following the 2018 B season. This system is key in guaranteeing seed quality along the value chain and curbing counterfeit seed.

Through the EGS working group and frequent bilateral engagements, ISSD Plus has created awareness among stakeholders on the importance of forecasting, planning and coordinating EGS demand (2.2.2). ISSD Plus has begun supporting NARO to design a pre-order and advance system concept. More work is required in second half of the project to finalise the concept and initiate a series of pilots. Modifications should then be made before rolling out a functional (online) system. The evaluators agree such a system is a key investment in unlocking LSB and seed company access to foundation seed multipliers, and de-risking foundation seed production investments.

Key challenges: The key challenge in this component has been facilitating interests of all institutional actors involved in the seed value chain. There are inherent political interests at each level of the chain and in each institution. For instance, seed companies advocate for favourable foundation seed access and policies that promote certified seed, breeders have an interest in receiving investments in the varieties they developed, and different actors have different interpretations of the role and purpose of the foundation seed enterprise (before understanding prospects for foundation seed profitability were low). Institutional actors are busy people and so advocacy, lobbying and facilitating linkages requires considerable time investment to actively follow up with all stakeholders. ISSD Plus efforts should be recognised even though the desired results may not always follow or be easily captured by project indicators.

Key lessons: The key lesson in this component is that frequent contact and engagement in different forums is key to building trust and moving forward step by step, even if institutional change can seem a frustratingly slow process. The evaluators strongly support these efforts, which should be intensified as far as possible. The successful implementation of the EGS component is particularly dependent on the willingness of partners like MAAIF and NARO to engage constructively with the project. ISSD Plus is conscious that EGS remains a key challenge and much more work is collectively required to solve 'wicked problems' that no other project or actor has been able to solve till now, and that really needs collaborative actions from a range of stakeholders.

QDS Component

The QDS component is the largest of all project components in terms of resources and staff committed.

Training and capacity building of LSBs – achieved

To date, ISSD Plus has successfully supported and trained, via out-scaling partners (OSPs), an additional 154 LSBs to produce and market QDS (1.2.1). This is in line with the 2018 target of 150 additional LSBs.

The component is positively contributing to the objective of improving LSB productivity and income. In 2018, these additional LSBs have supported approximately 3850 members to increase their productivity and income (1.2). ISSD Plus has also worked to upgrade 35 LSBs from ISSD 1, to ensure that they are sustainable in terms of profitability and organisation, which is in line with the 2018 target. When including upgraded LSBs from ISSD 1, the project has supported approximately 6350 LSB members in becoming seed entrepreneurs. This again meets the 2018 target of 6500 members (1.2).

The activities of ISSD Plus have resulted in the production of food using quality seed on an estimated 37,636 acres, which is slightly lower than the 2017 target of 50,000 acres (Goal level). 2018 acreage figures are yet to be obtained. Changes in productivity (and resulting income) have not been assessed because they require quantitative survey data, which is beyond the scope of this MTR.

Key challenges: To be successful, LSBs must be technically well-equipped to produce quality seed; strategically linked to input suppliers, services and markets; professionally organized; and market oriented (the four pillars). These requirements illustrate that LSBs need to develop much greater capacities than typical farmer groups in most agricultural projects.

The evaluators have some concerns that new LSBs report difficulties making basic investments in quality seed production, such as buying foundation seed or paying costs related to QDS inspection. Seasonal profits tend to be shared out to members at the end of each cycle, resulting in LSBs cash flow problems at the start of each new season. Likewise, LSB management and marketing is more technically challenging and requires

greater group coordination than conventional grain production and marketing. Training and capacity development – including repeated seasonal experiences – remains vital to the successful growth new LSBs. It should be remembered that LSB leaders and staff are essentially unpaid volunteers.

In particular, access to the required varieties of foundation seed is challenging because new LSBs do not have strong independent linkages with suppliers in addition to challenges described under the EGS component. LSBs also argue that signalling their demand one or more seasons in advance to foundation seed producers is difficult because demand from their own buyers for different seed varieties also changes seasonally. A good example, is the difficulty some LSBs faced selling their QDS NARO-Bean 1 variety last year because of difficulties predicting which varieties farmers are going to buy and which varieties are procured by institutional buyers.

Access to quality storage came out as the number one ranked challenge by LSBs interviewed in the MTR. Most LSBs do not have their own storage, and a lack of quality storage can risk seed quality. Many LSB members frequently store their seed in home stores. This slows down the quality assurance process (described below), because seed from each store needs to be sampled. It also makes group marketing more difficult. We have heard several cases of LSB members side selling seed as grain and taking a loss. This happens when households are under pressure and need cash a month or two before farmers buy seed for the next season.

Key lessons: The key lesson is that LSB development requires more intensive support than typical agricultural projects, and perhaps more than ISSD Plus projected. The evaluators have some concerns that in an effort to be financially efficient, new LSBs do not yet have sufficient support to be self-sustaining businesses by the end of the project (see OSP approach below).

Another lesson is that farmer groups need to have a good level of existing capacity prior to being selected for the ISSD Plus project and developing them into LSBs. Low capacity smallholders are not well suited to the technical requirements of seed production. Likewise, groups with low existing cohesion and capacity will struggle to mobilise resources to invest in seed production and marketing. This component asks that groups become viable, sustainable seed businesses, and it should be recognised that not all smallholder groups are well suited to operate as a seed business.

While foundation seed access is addressed in the ESG component, quality storage was often expressed as core infrastructure for LSBs. Seed is susceptible to damage when not stored properly and stores are important for consolidating group marketing and reducing side selling. Quality storage also gives LSBs presence in the community, an adjoining office space to work from, and a location to market from.

Performance of the out-scaling partner approach – partially achieved

The performance of OSPs (or another model¹) to support LSBs is critical. ISSD Plus currently works with 19 OSPs and has supported 15 with a one year 50% matching grant to support project efforts in equipping LSBs with skills and seed production and marketing. The other 4 OSPs are self-financed. In the first year of co-funded support, OSPs are generally reported to have done a satisfactory job. However, interviewees did question the motivation or internal capacity of many OSPs to deliver services of the quality that ISSD provided in ISSD 1. Most OSPs tried to make the 50% matching grant cover as much of the project costs as possible and very few were able to access funding resources from another party.

The evaluators foresee that the project target of supporting 200 new LSBs in ISSD Plus, in addition to 100 LSBs supported from ISSD 1 is not realistic (total 300 LSBs). Should the project attempt to pursue such a high number of LSBs, it will undoubtedly be compromising on the quality of support provided, and a considerable number of these LSBs will not develop into sustainable businesses by the project end.

Key challenges: ISSD 1's work with pilot LSBs demonstrated that the LSB model can be a success in Uganda. In particular, ISSD 1 'pilot' LSBs have shown the way to impact and sustainability. These pilot LSBs had substantial support from the ISSD 1 project team and have excellent potential to develop further through upgrading activities. However, scaling in ISSD Plus to achieve targets primarily depends on several factors and assumptions.

For the coming years, OSPs are expected to continue with LSB capacity building and source additional funding from elsewhere or integrate the LSB support within existing projects or activities. This was stipulated in their MoUs with ISSD Plus. However, for the remaining years, OSPs interviewed only expect to be able to perform the most

¹ See the Community Based Trainers (CBT) approach below

basic activities without project funding. This is a major risk to the performance of the component. The evaluators caution that this level of support will not be sufficient for most LSBs to become strong, self-sustainable businesses. Most interviewees believe that LSBs will require around three years of quality support to build internal capacity, consolidate linkages with suppliers, partners and buyers, and repeatedly apply their training in practice. The assumption that other funders will step in and fund another project's activities is too optimistic and risky. Local NGOs typically struggle for financing generally, so there is a perverse incentive for them to sign any contract (as they did with ISSD Plus) giving too little thought as to how they can deliver results.

Key lessons: A key lesson, therefore, is that implementing partners (OSPs) need to have sufficient capacity and resources to perform their expected roles. While MoUs are important for clarifying roles, a realistic assessment still needs to be made as to whether OSPs can implement project activities with little project funding and source additional funding from other sources. In the view of the evaluators, this was not a realistic assumption, and presents a key risk to LSB performance and sustainability. Furthermore, the basis for success in ISSD 1 was quality, intensive support with LSBs over a period of several seasons.

Sample of LSBs are upgraded – achieved

ISSD Plus has successfully begun upgrading 35 selected LSBs, which is in line with the 2018 target (1.2). ISSD Plus is supporting these established LSBs to further improve both member productivity through yield enhancing GAPs; and improve business management practices related to planning and marketing. ISSD has also begun linking upgraded LSBs to financial institutions who can support members with affordable credit.

Key challenges: Upgrading activities did not take off immediately because other activities were prioritized (e.g. OSP support to new LSBs). The necessary preparations to begin upgrading activities were also more elaborate than initially planned. In particular, ISSD needed to identify how best to increase yields of different seed types and varieties through the adoption of good agricultural practices.

ISSD Plus also experienced challenges encouraging members of upgrading LSB members to closely apply recommendations on fertilizer application and crop protection because they have difficulty affording higher investments. This has resulted in slower improvements in productivity than anticipated.

Key lessons: Upgrading activities need to differ slightly per crop, region and local circumstances. For example, in the Northern region where land is generally available LSBs tend to increase seed production by increasing acreage. In the South West, there is limited land availability so here there is a stronger focus on boosting yields.

Establishment of LSB Associations – achieved

ISSD Plus has begun supporting three LSB Associations: in the North, West Nile, and West, in accordance with the project target (1.2.2). As the LSB Associations have only been established for a few months, they are not yet fully operational. It is expected that LSB Associations may be able to perform the critical functions of coordinating and planning of foundation seed purchases as well as external quality assurance services (seed sampling, testing and labels). There is also hope they can provide capacity building to LSBs (training and monitoring), coordinate collective marketing activities, engage in lobbying and advocacy at a zonal and national level and perform data collection and analysis for production and sales.

Key challenges: While there are high expectations amongst almost all stakeholders about the potential functions of the LSB associations, these associations will need a business model that generates working capital well beyond that generated from membership fees. It is not sufficiently clear how they will generate the revenue needed to provide the services identified.

Key lessons: Between the first and second project, the project realised that the LSB Associations needed staff to the coordination role and this is currently handled through a small grant. During the project period the associations will need to develop their business model.

Supporting the enabling environment for the QDS system – partially achieved

In this component, ISSD Plus closely partners with NARO and MAAIF. The project has made good progress addressing seed sector challenges in QDS (2.3). ISSD Plus has trained district and local government staff in QDS assurance and has demonstrated its added value in linking and coordinating actors in a new market system. NARO hosts the zonal teams of ISSD, which ensures close collaboration and support throughout. MAAIF plays a major role in the certification of QDS. ISSD Plus is also engaged in lobbying activities with MAAIF in the hope that favourable policies and regulations are

implemented. This is a time consuming and slow process, requiring series of meetings and consultations before a decision is made on approval or non-approval. These efforts are not easily visible as project results, though they take considerable time and effort from the ISSD team, and should be acknowledged as core activities of the project.

One of the project targets is to have the seed policy and QDS regulations approved by MAAIF. Currently, the QDS regulation has been submitted and is pending for approval by MAAIF. In addition, the national seed policy is currently also pending for approval, in which there is reference to QDS as additional seed class. Expectations are that MAAIF will first await approval of the national seed policy by Cabinet and then review the QDS regulations, but it is unclear how long this will take. Nevertheless, the QDS system can still be operational in the meantime, and delays are unlikely to disable the project.

Key challenges: However, much more work is needed for the quality assurance system to work consistently in practice. The system needs to be properly embedded, with each actor performing their role fairly efficiently. For instance, LSBs and DAO field inspectors need to promptly organise and carry out field inspections, and LSBs remain reluctant to pay for this service. Sampling and testing of quality seed by MAAIF is not as efficient as necessary to complete within the available time period. As the central lab is in Kampala, delays are almost inevitable. QDS labels and certificates are consistently received by LSBs between four and six weeks too late for the moment that farmers buy their seed for the next season. LSBs thus sell their quality seed without labels. This weakens buyer trust in the quality of the seeds, which most interviewees agree has a negative effect on seed prices.

Key lessons: In the view of the evaluators, the challenges of implementing a quality assurance system for QDS shows that more resources probably need to be invested in this activity (see recommendations). The evaluators are open to reviewing LSB targets in favour of more work on system strengthening, with the idea of achieving a better balance. We note that system strengthening is key to sustainability of QDS and the overall project goals.

Uptake component

Smallholder farmers are the intended end users of quality seed produced by LSBs. Smallholders who purchase and use this seed are able to realise much higher productivity and incomes. The project correctly identified the need to promote QDS and sensitise smallholders as to the benefits of buying quality seed.

Approaches to promoting quality seed – achieved

ISSD Plus has tested a variety of approaches to promote quality seed including seed fairs, weekly village markets, radio campaign, and road shows. As a result, the project is expected to achieve its target of selling quality seed and certified seed at 250 outlets in 2018 (1.1.1). However, this is not yet able to be verified as outlet data is not yet available. In addition, ISSD Plus has produced ‘fact sheets’ to promote different varieties, and has engaged 50 community champions in 50 sub-counties to sensitise farmers on quality seed use. As some of the interventions are too costly to implement in all project areas, ISSD Plus is currently conducting a Randomised Control Trial (RCT) study to identify the most effective approaches to promoting seed, so it can better target its activities.

As a result of activities in the Uptake component (and also QDS component), the project estimates 37,072 farmers purchased quality seed from LSBs in 2017 (A and B seasons). This is close to the 2017 target of 50,000 farmers (1.1). Farmers who used this quality seed will have improved their productivity and income (outcome 1). Quality seed sales figures for 2018 are not yet available.

Key challenges: Many of the key challenges in the Uptake component are linked with the marketing activities of the QDS component. For instance, for more farmers to take up quality seed, LSBs need to be more efficient at both production and marketing activities (described above). In the experience of the evaluators, group marketing is one of the most challenging activities that a farmer group can perform because it requires a good degree of group cohesion, vision, management skills, and marketing skills. Well established LSBs are ready to perform group marketing activities with only light support. Most new LSBs in ISSD Plus are some way from being able to perform these activities efficiently and profitably without project support. Therefore, the project needs to be realistic about the possible pathway to developing a sustainable business.

Key lessons: Key lessons on the most efficient and cost-effective way to promote the uptake of quality seed are expected to be gained from the ISSD RCT study. The evaluators support all of the varied approaches piloted by ISSD Plus at present, whilst acknowledging that some are too expensive for LSBs to implement themselves after the project. For instance, radio is reportedly effective for communicating fairs, markets and road shows, but is expensive. Community champions were said to be influential on a local level.

Vegetable component

Imparting knowledge through the vegetable trainer of trainers (ToT) program - achieved

The ISSD Plus vegetable component has successfully trained 72 sector professionals in its 'trainer of trainers' (ToT) programme (1.3.1), which exceeds the 2018 target of 50 trained professionals. Professionals have gained knowledge on new hybrid vegetable varieties, and gained knowledge on technical and facilitation skills. The evaluators received positive feedback on the ToT training, particularly the focus on imparting practical skills rather than theoretical training. Initially the plan was to do one round training sector experts, but after a successful first round ISSD decided to rotate the training in different zones every six months.

The expectation is that these trained professionals provide quality extension services to vegetable farmers thereafter. Most ToT participants have not started to train others as yet, since they have only recently received the ToT training. Therefore, it is too early to draw conclusions on the indirect benefits of the ToT training on the wider vegetable sector.

In-depth farmer training on vegetable production - partially achieved

In-depth farmer training is a pre-competitive activity whereby seed companies train farmers on improved agronomic practices, such as nursery systems, crop protection, fertilization and water conservation techniques. At each training site, a group of 25 farmers receive training sessions scheduled throughout the crop stage. In the 2018A season, 80 training sites were set up: 50 by East West Seed, 15 by House of Seeds and 15 by Cycas. The target for the full year is 300 training sites. The project still expects to meet its targets for this activity thanks to East West Seed conducting more trainings than planned, with support from its Foundation.

Key challenges: Company interviewees noted the importance of working with vegetable farmers that are sufficiently commercially orientated, rather than those farming at subsistence level. This 'middle segment' of smallholder presents companies with a good opportunity for commercial expansion. A project assumption was that the same participants would attend all, or most, of the training sessions. In practice, farmers frequently dropped out, making it every difficult for trainers to effectively build on each session.

Companies explained that in-depth trainings require a proportionally bigger investment than the demonstration plots activity, and do not directly generate revenue for the seed company through the sale of quality seed. Therefore, in-depth trainings are a less attractive investment than demonstration plots. As a result, ISSD Plus has seen most companies opt to only engage in the demonstration plots activity, even though the in-depth trainings are 75% subsidized by the project. Nevertheless, the project target for the in-depth training will likely be met thanks to East West Seed.

Key lessons: In implementing this activity, ISSD Plus has been mindful not to introduce a 'hidden subsidy' to companies. Nevertheless, even with generous project support, most companies are reluctant to co-invest in activities that they perceive are unlikely to generate revenue, even just to break even. From the project perspective, this is in line with the precompetitive nature of this activity.

Commercial demonstration fields on hybrid varieties – achieved

All four seed companies engage in commercial demonstration fields activity. Companies showcase their own improved varieties during field days. This sensitises farmers to the potential of investing in quality seed, and if they make a purchase this also brings revenue to the vegetable seed company. In 2017, nine sites were set up with an average of 35 persons attending. In 2018, 80 demonstrations have been set up, with more fields to be established in the B season. The 2018 target is 120 demonstration plots, which is expected to be achieved (1.3.2).

The average attendance registered so far is 45 farmers per site, totally approximately 3600 farmers thus far in 2018. The target for vegetable farmer attendance in 2018 is 4800, which is expected to be achieved with the establishment of additional plots in season B of 2018 (1.3.2).

Key challenges: Demonstration plots are largely managed by lead farmers with the support of the company. Companies discussed the importance of carefully selecting lead farmers to minimise risk of plot failure, which all have experienced to some extent.

An initial challenge was sensitising farmers to the fact that the demonstration plots are a commercial initiative and that they will not receive payment for managing them. Lead farmers are accustomed to payment from NGO initiatives, as well as transportation money and lunches. Similarly, community leaders invited to field days also expected to be paid. However, this is not how the companies and the project want to position themselves.

Key lessons: Companies learned that lead farmers should have good existing experience with vegetable farming, willingness to commit to the concept, proximity to a water source, and an accessible location that will be easily visible to potentially interested smallholders.

A lesson for the project was that companies are willing to co-invest when they are likely to generate a small return on the investment, or at least break even. This is achievable in the demonstration plot activity since companies are permitted to promote, demonstrate and sell their seed varieties. For this reason, the demonstration field activity is more commercially interesting than the in-depth training activity.

Innovation grants to stimulate the enabling environment – not achieved

Innovation grants are part of the objective to create an enabling environment for the vegetable sector. Unfortunately, up to now only one innovation grant was accepted out of nine applications. This is below the target of five vegetable innovation projects (2.3.1).

Key challenges: In the view of ISSD Plus, most proposals were not sufficiently innovative and were instead interpreted as an application for a hidden subsidy to the business. Among the few company interviewees who had submitted a proposal, there seemed to be some confusion about what exactly constitutes an ‘innovation’ and what does not. ISSD Plus interviewees tended to interpret ‘innovation’ as something quite new, whereas others tended to interpret innovation as including scaling and improving delivery mechanisms of existing technologies.

Key lessons: Improving the enabling environment for vegetable production is outside the scope of the ISSD Plus work. ISSD Plus supports the seed sector and vegetable seed

is part of the seed sector. However, it does not support the vegetable sector. As a result, the component/project lacks a clear framework within which such innovation grants could contribute to its objectives.

Vegetable growers increased productivity and income using high input-high output production systems – unconfirmed

Overall, it is difficult to assess the extent to which Vegetable growers increased productivity and income as a result of the project (1.3) hence it is not possible to assess level of achievement of the 2018 target (11,900 farmers). The logframe has one indicator on seed sales, however, seed companies are reluctant to provide information on seed sales during field days. In addition, it will not be possible to attribute sales from distribution points to the demonstration fields and radio messages. During the first round of demo's not all companies were able to provide all participant lists as some got lost. Therefore, the direct effect on uptake of quality vegetable seed sales will be hard to measure at the end of the project.

Trainers are mostly yet to apply their new skills training farmers, and those who have begun are difficult to track. Many farmers have received in-depth training though not all have consistently attended all the various sessions conducted. For this reason, it appears as though more farmers than calculated have received some training, whilst fewer have received the 'full set' of intensive training. Companies also report that they have been giving trainings at their demonstration plot field days. These may be for half a day or just a few hours. Nevertheless it is a positive and unexpected outcome, and has again increased the number of farmers trained to an unknown extent. However, whether or not this has resulted in trained or sensitized farmers actually using advanced varieties is unknown by the evaluator. This is considered to be commercially sensitive information and it is therefore held back by the companies. The evaluator did however receive reports that seed sales are below company's own targets.

Gender

Gender is integrated as a cross-cutting theme – achieved

ISSD Plus project acknowledges that gender is a critical aspect for LSB development. This is because it affects a number of processes in LSB development including: planning for key production resources, decision making at different stages of the value chain and

generally how an LSBs operates while ensuring that women, men and youths are part of the LSB overall agenda and vision.

In 2017 a consultant was hired to conduct a training of trainers (TOT) for ISSD Plus staff and the out scaling partners in all zones. The three days training attracted a total of 121 participants (including ISSD 8 zonal experts) that were trained in the GALS methodology. Furthermore, a gender gap analysis tool was developed that the trainers use to assess the gender gaps and hence design gender strategies for LSBs. The training basically aimed at equipping the LSB trainers with skills to be able to integrate gender in LSBs planned trainings.

To date, the number of women in top leadership positions has increased and it currently stands at 746 across all zones. This is projected to increase as LSBs appreciate that balanced leadership and youth engagement has a positive impact on their seed business growth. These include women representatives on the executive committee and chairpersons of subcommittees (e.g. production committee, quality control, marketing committee). This exceeds the target of 225 female leaders (1.2).

Key lessons: In addition to TOTs, direct engagement by LSB trainers with LSBs will increase their skills and understanding of gender aspects and how it can contribute to improved seed business development. For this a consultant will be engaged to work with selected LSBs. The remaining LSBs will be trained in 2019 after a gender gap analysis has been done.

Recommendations

EGS Component

1 **Intensify work with institutional actors on the quality assurance system.**

There is general support for the proposed quality assurance system for foundation seed. However, there is relatively little time left in the project to pilot, iterate, fully implement and embed such a system. We support ISSD Plus to drive this process as other institutional actors, while engaged, are prone to a 'business as usual' approach.

2 **Give additional focus to the pre-booking system of foundation seed to ensure the system is fully operational before project end.**

Should the project require additional expertise, resources should be made available for this essential system. Presently the evaluators are not confident that most LSBs can effectively signal demand for foundation seed varieties without third party support. This is a critical risk to the sustainability of LSBs. The pre-booking system should include a deposit payment mechanism if it is to effectively signal demand.

3 **Continue to take a multi-pronged approach to promoting foundation seed production via upgrading LSBs, regional NARO offices, and if possible via a newly established Foundation Seed Enterprise (FSE).**

The FSE is probably the best option to realise the production and marketing of foundation seed on a large scale. A decision on financially supporting the FSE should be made imminently to ensure the project can support implementation and market linkages with LSBs. Should there be a decision not to invest in the FSE, resources should be reallocated as soon as possible to contribute to other core project activities.

QDS Component

4 **Pursue sustainability with existing LSBs, rather than adding new LSBs for the sake of trying to achieve project targets.**

At present we are concerned that project resources are spread over too thinly over too many LSBs. This risks providing insufficient support to existing LSBs for them to graduate to sustainable businesses.

We would further support a proposal to stop working with dozens of LSBs that have demonstrated a lack of basic capacity, motivation or potential. This would require lowering the targets of number of farmers reached (Outcome 1). These resources could then be reallocated to further strengthen those LSBs that are performing. LSBs must be able to provide quality seed to Ugandan farmers for many years after the project. It would be a great loss if a substantial number of LSBs collapse after the project ends.

- 5 Increase the number of co-financed stores with promising LSBs.** In the MTR, storage was consistently identified as critical infrastructure, and a catalyst for successful growth among capable LSBs. The mid-term is an opportune moment to reboot this activity. ISSD could perhaps also take interest in storage design features. For instance, stores should be designed in a way that is sufficient for LSB growth, includes space for input bulking and has office and marketing space. An intelligent plan could allow for future investments, such as drying and grading yards.
- 6 Review the OSP approach and level of OSP funding support.** Should the project choose to continue with the OSP approach, well performing OSPs should be provided with sufficient additional funding to ensure quality services continue to be provided to LSBs.
- 7 Use community based trainers as a possible alternative to working with weak OSPs.** Should the project opt not to continue working with most OSPs, ISSD Plus expressed an interest in using community based trainers (CBTs). CBTs would essentially be volunteers embedded in the LSB. They would receive training and support from the project and a bicycle. World Vision has used this model and the project believes that it can be successful. The evaluators support this option, provided the project closely monitors CBT performance and ensures they are sufficiently incentivized to provide 'professional' support to LSBs.
- 8 Put more emphasis on LSB upgrading activities for higher capacity LSBs.** The evaluators support scaling these activities with those LSBs from ISSD 1 (and some higher performers from ISSD Plus). These LSBs have the best possible chance to be sustainable businesses and to have a positive impact on the seed sector.
- 9 Further develop the business model and revenue streams for LSB Associations.** A financially sustainable model needs to be identified for sustainability beyond the life of the project.

10 Put more effort to decentralising seed testing to the regional laboratories.

The quality assurance system is currently too inefficient for LSBs to receive QDS labels in time to market their quality seed. Solutions are yet to be found to sufficiently speed up this process.

Uptake component

11 Engage more with companies producing certified seed to stimulate demand for quality seed, both QDS and certified.

One company interviewed expressed a desire for more frequent and direct engagement with senior ISSD Plus staff on such issues. Engaging with companies in this way may also be a way to alleviate any perception of unfair competition between QDS and certified seed, or QDS being treated more favourably by institutional actors.

12 Abandon the uptake innovation grant activity and reallocate these resources elsewhere within the project.

This activity has had a low response rate and acceptance. Abandoning this activity would simplify the project, reduce the administrative burden, and add crucial resources to other core areas of the project.

Vegetable component

13 Consider the core ISSD seed sector approach when considering adding vegetable seed sector.

Since the seed companies take care of the seed value chain up to marketing, the added value for vegetable seed companies to participate in ISSD plus is in stimulating uptake of these varieties. To increase uptake and smallholder farmer productivity, training and awareness are the major bottlenecks. Therefore in any future project it is advisable to remain within this scope of seed sector development, or design a separate vegetable project incorporating other aspects of the vegetable seed value chain and its enabling environment.

14 Review the performance and quality of the vegetable ToT training materials based on seed company and trainee feedback.

While generally good, in some cases companies have further developed their own materials to fill out missing technical information. Handouts should be larger and in a larger font, available in local languages. The printed materials should preferably be water resistant

so they can be used over multiple seasons in a farming environment without much damage. Trainee feedback suggests that some improvement in design and content is necessary.

- 15 Consider supporting a basic platform for vegetable ToT participants to meet semi-annually to exchange ideas and lessons.** Vegetable ToT participants suggested this idea, which perhaps can be integrated with other vegetable initiatives.
- 16 Consider how the companies may be engaged more closely in planning and review of component activities.** Some companies would like the public-private partnership to involve more than co-funding of certain activities. However, the evaluators note that this could mean companies sometimes have a perspective or different priorities than ISSD or EKN on some issues. The evaluators are somewhat sympathetic to the company arguments for more decision making influence and recommend quarterly planning and review meeting to review the approved annual activities.
- 17 Abandon the vegetable innovation grant and reallocate these resources elsewhere within the project.** The low acceptance of grant applications combined with the administrative burden of managing the applications make this a good way to simplify the component. Resources could be reallocated to increasing the number of demonstration plots (say, by working with new companies), expanding the vegetable ToT activity, or improving training materials. Focus on training and demonstrations and not vegetable sector transformation. This means no new innovation projects, but more commercial Demos. Additional new demos with new (Dutch) companies can be recruited through Plantum, the Dutch seed association. In addition, more on training material and promotional activities for smallholder farmers can be prepared based on input from trainees and companies (see above). The money that would be unspent can be transferred to the QDS component and be partly used to institutionally embed the vegetable TOT and LSB TOT in existing training centres.
- 18 Monitor the effects of the trainer of trainers (ToT) activity.** It is important that ISSD Plus stays in touch with ToTs to understand how the training can lead to direct impacts on farmers and on the broader sector. ISSD may be called on to advise ToTs how they can have greater reach in their work.

Management and organizational setup

19 Review the project logframe to ensure that it is, in fact, logical. Having closely worked with the logframe in the MTR, the evaluators are of the view that it is unnecessarily confusing. The project logframe is structured around two outcomes – people and institutions. The evaluators would emphasize that logic models should rather show a pathway from activities through to outputs, outcomes and impact. Each result area should have an associated indicator (with a number), and associated targets. Presently, some of the levels seem confusing – we would have defined all of the listed outputs as immediate outcomes. This would have allowed each indicator to be matched with one output, rather than have multiple unnumbered indicators falling under one output. It is also confusing that there is a lower result level than an output (i.e. 1.1.1). If current outputs were redefined as immediate outcomes these could be defined as outputs. The main challenge with the project logframe is that it is not organised by project component, as we believe it should have been. The project team is organised by component, this is how the project team intuitively understand the project, and it is how the project is implemented in practice. The biggest issues in logframe use arise (from an evaluators perspective) when components are combined. This is a particular issue when vegetable component results are combined with result areas in other components. As it is virtually a separate project within ISSD Plus, the vegetable component's result areas should have been defined separately.

20 Keep the office in the North open. The evaluators support the position of interviewees that the office in Northern Uganda remains open. While a lot of progress has been seen, to strengthen the institutional set up of the QDS system, the LSB associations in Northern Uganda and West Nile region remain nascent. LSBs also need more support to upgrade their production, management and marketing and become sustainable businesses.

Annex 1

ISSD Plus logframe

Level	Key performance Indicators	Baseline	Target	2017	2018	2019	2020
Goal	Improved food & nutrition security, and agricultural economic development						
	Area Planted with quality seed (acres)	0	300000	50000	75000	100000	75000
	Additional agricultural production of grain equivalent as a result of using quality seed (MT)	0	87500	13000	35000	65500	87500
	Amount of High Iron Bean (HIB) varieties produced that prevents and treats iron deficiencies (MT)	200	1360	240	320	400	400
	Amount of Orange Fleshed Sweet Potato (OFSP) produced that prevents and treats vitamin A deficiencies (MT)	0	840	120	180	240	300
	Employment: LSB associations	0		0	6	6	6
	Employment: OSPs	0		20	20	20	20
	Employment: Vegetable seed company staff	0		10	10	10	10
	Employment: seed companies and vegetable innovation projects	0		0	5	5	10
1	300,000 households increase productivity, income and resilience						
	Households improve productivity (# households)	0	300000	50000	120000	225000	300000
	Income (net benefits): difference between cost of production and price (Billion UGX)	0	147	25	59	110	147
1.1	Smallholder farmers increased productivity from use of quality seed for crop production						
	# farmers using quality seed for crop production		300000	50000	120000	225000	300000
	Productivity difference between home saved and QDS (KG/hectare)						
	Productivity: Legume		500	500	500	500	500
	Productivity: Cereals		325	325	325	325	325
	Productivity: Oil seed		700	700	700	700	700
	Productivity: Roots and tubers		5000	5000	5000	5000	5000
1.1.1	Sale of QDS and certified seed at convenient and diversified outlets (seed fairs, weekly village markets, agro-dealers etc)						
	# and type of outlets QDS is sold ((seed fairs, weekly village markets, agro-dealers etc)	0	1000	25	250	500	1000
1.1.2	Create awareness on the benefits of farmers using quality seed (road shows, demos, radio, tv etc)						
	# awareness raising activities (road shows, demos, radio, tv etc)	0	6000	250	2000	2000	1750
1.1.3	Stimulate effective demand for quality seed among smallholder farmers (value chain integration, small packs, seed demand studies)						
	# demand pilots initiated	0	15	0	5	5	5
1.2	LSB members increased QDS productivity and income						
	Number LSB members producing and selling QDS	2163	7500	5000	6500	7500	7500
	Difference in LSB productivity from technical training, ISFM, irrigation, climate smart agricultural practices etc. (Kg/hectare)						
	Yield difference: legumes	463	863	500	575	688	863
	Yield difference: Cereals	813	1250	850	925	1050	1250
	Yield difference: Oil seeds	475	1000	525	600	750	1000
	Yield difference: Roots and tubers	6875	8750	7063	7438	8000	8750

	Net household income from QDS sales (UGX/ha)	1000000	1750000	1750000	1750000	1750000	1750000
	# upgraded LSBs that are sustainably profitable	0	75	0	35	55	75
	% female LSB members who indicate increased acceptance of seed business decision making at home						
	Number of women in LSBs top leadership positions (LSB chairman, committee chairman)	40	225	200	225	225	225
	Changes in attitudes towards women participating in LSBs						
1.2.1	Support and train additional LSBs to produce and market QDS						
	# LSBs supported by out scaling partners OSPs to produce and market QDS	0	200	150	200	200	200
1.2.2	Support LSBs to increase productivity and improve business management practices (training, innovation grants, LSB associations, infrastructure grants, linking to BDS, GALS methodology etc)						
	# participants in training (training, innovation grants, LSB associations, infrastructure grants, linking to BDS, GALS methodology etc)	0	945	0	525	280	140
	# LSB associations providing support to LSBs (50% per zone)	0	6	1	3	6	6
1.3	Vegetable growers increased productivity and income using high input-high output production systems						
	# Vegetable producers using advanced varieties and HIHO systems		32000	400	11900	24600	32000
	Difference in productivity of HIHO and LILO for vegetables (MT/Ha)						
	Yield difference: Tomatoes		12,5	0	5	10	12,5
	Yield difference: Onions		2,5		1,25	2	2,5
	Yield difference: Cabbages		12,5	0	5	10	12,5
	Yield difference: Eggplant		2,5	0	1,25	2	2,5
	Net Income per crop cycle (million UGX/household)		1,25	0	0,5	1	1,25
1.3.1	Skilling farmers on improved vegetable production practices (in- depth training, training of professionals)						
	# of vegetable producers trained		20000	1500	6000	7500	5000
	# sector professionals trained		100	25	50	50	25
	# training sites setup		800	0	300	300	200
1.3.2	Promote use of advanced vegetable varieties by private sector (variety demonstrations, field days, campaigns, radio shows etc)						
	# variety demonstration sites (promotion of advanced varieties)		320	10	120	130	60
	# vegetable producers attending field days (promotion of advanced varieties)		12800	400	4800	5200	2400
2	Strengthen seed sector institutions and environment						
	Efforts to stamp out fake seed		37	50			50
	EBA seed quality control index		3	5			5
2.1	Quality declared seed is institutionally embedded						
	% of seed samples complying with set minimum QDS quality standards		80%	60%	75%	80%	80%
	# District local governments (DLGs) integrating the QDS system (activities and budget) in their annual planning	0	28	6	9	8	5
	# LSBs inspected and issued labels by NSCS		300	30	180	250	300
2.1.1	Train, coach and coordinate DAOs in new zones on QDS regulation and quality assurance						
	# District Agricultural officers (DAOs) trained in new zones on QDS regulation and quality assurance		200	100	100		
2.1.2	Support development of decentralized seed testing capacities						
	Number of regional seed testing lab initiatives supported	0	4	1	1	2	4
2.2	Increased availability of quality assured EGS						
	Volume of foundation seed produced annually (MT)	0	80	20	30	50	80
	Proportion of foundation seed fields inspected		30%	10%	25%	25%	30%
	Proportion of foundation seed fields meeting minimum standards		75%	50%	60%	70%	75%
	% of LSB foundation seed demand met		75%	25%	35%	50%	75%
	# LSBs using the pre booking system		100	20	50	75	100
	# seed companies using the pre booking system		10	1	5	8	10

2.2.1	Rollout and operationalise quality assurance for foundation seed, including tracking & tracing system						
	System rolled-out and operational		System rolled out	Agreed procedure	2 pilots	4 pilots	Roll-out
2.2.2	Forecast, plan & coordinate EGS demand, production & marketing (LSB association, training companies and LSBs, NARO, pre-booking system etc)						
	# LSB associations that are effectively coordinating foundation seed demand with NARO		6	3	3	4	6
2.2.3	Pilot initiatives for foundation seed production (FSE, Individual member, LSB and ZARDI)						
	# Pilot initiatives tested for foundation seed		4	0	2	2	0
2.3	Seed sector challenges innovatively addressed and seed sector knowledge embedded						
	# and type of seed sector related policies/regulations influenced by ISSD		3				3
	Extent to which stakeholders are actively taking up roles to strengthen seed sector						
2.3.1	Innovation projects – novel solutions to sector bottlenecks (vegetable, QDS, uptake)						
	# innovation projects: Veg		9	4	5	0	0
	# innovation projects: Uptake		16	0	8	8	0
	# innovation projects: QDS		10	0	4	6	0
2.3.2	Lobby and advocate for cabinet approval of national seed policy, and support for QDS & EGS options and vegetables						
	# meetings/workshops on policy issues	0	23	1	5	8	9
	# and type of information materials disseminated	0	50	5	10	15	20
2.3.3	Organise regular zonal and national MSPs (including national seed stakeholder meetings)						
	# Multi stakeholder processes (MSPs) conducted annually		41	5	12	12	12
2.3.4	LSB-OSP and vegetable farmers skilling approach embedded within relevant existing institutions						
	# institutions approached for embedding	-	8	0	5	2	1