

FEED THE FUTURE SUPPORTING SEED SYSTEMS FOR DEVELOPMENT ACTIVITY

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ACRONYMS

ABC	Alliance of Bioversity International and CIAT
AOR	Agreement Officer's Representative
CCIR	Cross-cutting Intermediate Result
CIAT	International Center for Tropical Agriculture
CRS	Catholic Relief Services
DEC	Development Experience Clearinghouse
DiNER	Diversity and Nutrition for Enhanced Resilience
DSD	Direct Seed Distribution
ECR	Emergency, Chronic stress and Resilience
EGS	Early Generation Seed
gFSC	Global Food Security Cluster
ICT	Information and Communication Technology
IFDC	International Fertilizer Development Center
IPTT	Indicator Performance Tracking Table
IR	Intermediate Result
ISSD	Integrated Seed Sector Development
KePHIS	Kenya Plant Health Inspectorate Services
LOA	Life of Activity
M&E	Monitoring and Evaluation
MEAL	Monitoring and Evaluation, Accountability and Learning
NARS	National Agricultural Research Systems
NML	New Markets Lab
OAF	One Acre Fund
OFDA	Office of U.S. Foreign Disaster Assistance
OI	Opportunity International
PABRA	Pan-Africa Bean Research Alliance
PoS	Point of Sales
QDS	Quality Declared Seed
RFS	Bureau for Resilience and Food Security
S34D	Feed the Future Global Supporting Seed Systems for Development activity
SCCI	Seed Control and Certification Institute (Zambia)
SOW	Scope of Work
SSSA	Seed System Security Assessment
STAK	Seed Trade Association of Kenya
TOSCI	Tanzania Official Seed Certification Institute
USAID	United States Agency for International Development
USTA	Uganda Seed Trade Association

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I. Executive Summary

Introduction

The Feed the Future Global Supporting Seed Systems for Development activity (S34D) is a five-year Leader with Associates Award, funded by Feed the Future initiative through the Bureau for Resilience and Food Security (RFS) and by USAID through the Office of U.S. Foreign Disaster Assistance (OFDA). Catholic Relief Services (CRS) is leading this consortium with support from partners that include: Agri Experience (AE), Alliance of Bioversity International and CIAT (ABC), Pan-African Bean Research Alliance (PABRA), International Fertilizer Development Center (IFDC), Opportunity International (OI) and Purdue University. S34D's Life of Activity (LOA) runs from August 2018 through August 2023.

The overarching goal of S34D is to improve the functioning of national seed sectors in focus countries in an *inclusive* manner: this 'inclusive' approach aims to support all farmers, including women farmers and youth. S34D aims to meet the activity goals by increasing the capacity of the formal and informal seed systems and humanitarian and relief programming to sustainably offer quality, affordable seeds of a range of crops (**Objective 1**) and increasing collaboration and coordination among all seed systems actors and actions (**Objective 2**).

This activity is unique in that the overall strategy proposes to generate a broader view and integration of the seed systems to promote resilience in two ways. **Objective 1** works across formal, informal and emergency seed sectors to enhance the resilience of people and livelihoods through increasing farmers' access to improved seeds for a range of crops, including climate-resilient varieties. **Objective 2** builds the resilience of seed systems through interactions and synergies among formal, informal and emergency seed sectors. This integrated approach is further strengthened by cross-cutting IRs that seek to improve policies and practices that support pluralistic, resilient seed systems, rather than focusing on individual parts of each system. An important aspect of the activity is to gain a better understanding about how seed systems interact and where there may be positive or negative market interactions. In the case of detrimental actions, S34D intends to develop interventions to address market distortions.

Under **IR 1.1 Constraints in formal seed systems Identified and mitigated**, the following was achieved:

- In Kenya, Kuza deployed a first cohort of last mile input supply agents and linked them into their digital platform. Fifteen digitally supported last mile agents were screened, farmer client profiles developed and the agents were linked to local input supply markets, and 10 out of 15 input supply hubs/kiosks were established. The digital platform was configured and the on and offline mentorship process was put into motion, while local input and output partners were onboarded.
- In Kenya and Uganda, IFDC conducted an initial assessment to determine agro-dealers needs for the development of capacity strengthening coaching models of last mile actors.
- In Uganda, AE worked with the Uganda Seed Trade Association (USTA) to identify seed companies for firm level needs assessment which will help with the (potential virtual) training S34D is designing with USTA.
- In Zambia, AE and the Seed Control and Certification Institute (SCCI) worked with seed companies to develop a (virtual platform for) non-maize inspector training and testing platform for 20 non-maize inspectors representing six companies.
- In Niger, OI completed an inventory of financial services to expand financing for seed sales from seed companies.

Under **IR 1.2, Strengthened capacity of informal seed systems to offer a broader range of affordable, improved quality seeds**, the following was achieved:

- In Uganda, ABC-PABRA (formerly CIAT-PABRA) completed fieldwork for profiling of off-takers and began profiling of local seed businesses as part of developing strategies to support local seed business in production and marketing linked to grain market demands and seed commercialization.
- In Kenya, CRS and ABC-PABRA collected farmers' feedback after harvest of Nyota bean seed in January and February. The data for one agriculture season, planting in September 2019 and harvest in January 2020, showed that farmers seek out new improved varieties at local retail shops and that farmers liked Nyota attributes, but would prefer smaller seed packs and more information from extension services. Geospatial network analysis revealed that farmers do not always buy farm inputs from the nearest agrodealers. This has implications on how development partners should support last mile strategies and prototypes to extend market frontiers. Seed companies did not manage to produce enough seeds to take to the market due to heavy rains; all seeds were sold to One Acre Fund (OAF).

Under **IR 1.3, Strengthened capacity of emergency and humanitarian aid programs to respond effectively to acute and chronic stresses**, the following was achieved:

- The cash transfers for seed security in humanitarian settings report (Keane, et. al., 2019) was approved by USAID and shared through the Development Experience Clearinghouse (DEC), SeedSystem.org, ABC-PABRA library and CG Space. This report shows that cash transfers offer an alternative to vouchers as part of market-led interventions to support farmers' access to seed in emergency contexts.
- Building on lessons from various studies of Diversify Nutrition to Enhance Resilience (DiNER) fairs, nine specific actions to support sustainable market linkages between vendors and farmers were tested in the context of market fairs implemented by CRS in Eastern Uganda in March 2020.
- S34D worked with other gFSC members to design and implement a survey of over two hundred gFSC and in-country FSC members about the interest in setting up a working group on technical agricultural issues. The survey responses were analyzed and presented at gFSC Strategic Advisory Group meeting, with a recommendation to establish a gFSC agricultural task force to provide technical guidance to FSC members.

Objective 2, Increased coordination and collaboration among all seed system actors and actions

- S34D finalized a scope of work and started the initial literature review for a scoping study to assess the fodder/forage crop seed value chain in Ethiopia. CRS led the design of the study in close collaboration with ABC-PABRA. Execution of the study is currently ongoing.
- The DiNERS study for Southern Africa, and voucher studies in Nicaragua and Guatemala are in complete draft form.

Under the **CCIR-1 Improved effective policy implementation and regulatory formulation for pluralistic seed systems** and **CCIR-2 Established enhanced quality information flows for seed systems**, the following was achieved:

- CRS and New Markets Lab (NML) completed the global policy review. The authors' findings indicate that flexible regulatory approaches can respond to markets and farmers' preferences, and that national and local governments' support in adapting regulations to local agro-ecologies can increase biodiversity and build public-private partnerships. The study presents a comprehensive assessment of flexible regulatory design approaches, even though evidence on implementation remains sparse and anecdotal. CRS and NML disseminated these results through a webinar on March 31, 2020.

- In Kenya, AE and Kenya Plant Health Inspectorate Services (KEPHIS) continued to work on developing the standard certified seed protocols.
- In February, the first set of data (genotypes) from DNA fingerprinting was received for analysis of yellow bean grades and defined the protocol for the physical purity analysis in Tanzania. The second set of data from Tanzania is expected in April.
- In Tanzania, AE and Tanzania Official Seed Certification Institute (TOSCI) set up the Stop Bad Seed SMS query system. The short code was tested, and promotional campaign service provider identified and contracted. The actual campaign message was developed and recorded.
- In Western Kenya, a Point of Sales (PoS) application was used to collect customer feedback after the harvest period in February 2020 to assess varietal preferences and adoption patterns. The data was analyzed, and results were written in a report, which was shared with PABRA for inclusion into the larger niche market business model report. The findings were shared through a stakeholder dissemination workshop in Eldoret, Kenya.

2. Accomplishments vs targets

The activities for FY20 were changed significantly due to changes in expected funding levels. Coupled with the fact many on-the-ground activities could not proceed due to COVID, and most of the activities were planned as in Q3 and Q4 per the DIP, there are some targets that S34D did not meet this period. However, we are currently adapting to the new mode of “normal” trying to do as much as possible remotely. For example, we are working with national and regional partners to develop and conduct remote training and testing in Zambia as well as Uganda.

Compared to FY19, where S34D conducted studies, we have focused FY20 on dissemination of findings that we have generated thus far. S34D organized a webinar to disseminate the global seed policy study findings and a stakeholder workshop to disseminate the niche market pilot results. A stakeholder workshop to disseminate yellow bean study results was postponed due to COVID travel restrictions. There are webinars planned for Q3 to disseminate a few more studies.

Many new activities were designed following Mission engagement in Ethiopia, and although S34D does not have immediate results, literature review and activity implementation preparation are underway. S34D made progress in the designs of the studies and activities with national partners.

Based on the activities in the DIP and considering the new normal, S34D achieved the following in the first half of FY20.

S34D Indicator	Indicator Name	Target FY20	Revised Target FY20	Achieved FY20 Q1-2	% Target Achieved	Reason for deviation
OUT-1	Number of seed actors trained	234	58	0	0%	Preparatory work in producing training modules; consultations with partners on the ground has taken place. But actual training could not be initiated due to COVID. Discussions are ongoing to develop approaches where remote training could be done.
OUT-2	Number of individuals participating in S34D [IM-level], (Output) FtF EG.3.2	270,100	4,000	2,858	72%	On track to achieve the target by the end of FY20
OUT-4	Number of models Implement	4	3	1	33%	Preparatory work for last-mile prototype and scaling niche is ongoing. The Kuza agriprenuer model in Kenya was piloted.
OUT-5	Number of studies that have fulfilled all criteria	14	12	3	25%	Many studies are done, some completed, but because they were not disseminated and they could not be counted towards this indicator yet. On track to disseminate. Once disseminated we will count them as fulfilling all criteria as set forth in the indicator.
OUT-6	Number of tool-kits developed	10	6	1	16%	Developed the guidance on COVID with gFSC;
OUT-7	Number of stakeholders linked	121	42	0	0%	Preparatory and planning work is done. Implementation to link actors has not happened yet.
OUT-11	Number of inclusive seed policy specific dialogues facilitated	6	4	0	0%	Facilitation is ongoing for standard seed protocol; RIMI (stop bad seed) in Tanzania, but both are completed.
OUT-12	Number of evidence-based seed policy briefings developed.	8	4	1	25%	Global seed policy briefing was developed and disseminated through a global webinar with 12 organizations.
OUT-14	Number of tools and technologies generated and/or augmented on seed supply and quality.	3	3	0	0%	DNA reference library; RIMI in Tanzania; and PoS all are ongoing at different stages.
OUT-15	Number of feeds received and /or forwarded	100	100	91	91%	Feedback on Nyota (HIB) variety was collected through a survey in Feb 2020.

3. Summary of accomplishments by IR

Due to reduced funding and changes in priorities, S34D revised activities and cancelled some FY20 core activities and moved those to Mission-funded activities. Details about changes of activities can be found in **Annex A**. In the following section, achievements and learning, where applicable, per IR and per country are listed. All learning can be found in the M&E Learning chapter.

The country profile template to provide an overview of the operations and levels of integration between the formal, informal and emergency seed sector was designed by AE with input from all consortium partners. The target countries for this new type of analytical framework were Kenya and Uganda. In February, S34D Consortium Partners met in Nairobi and discussed the types and sources of information to be used in the template and to discuss how the data would be collected and how to address challenges in gathering data where there were gaps. The formal sections of the profiles for each country were completed, which provides a more holistic view of each nation's formal seed sector – we believe for the first time – by knitting together the most current information from multiple, unique sources (33 for Kenya and 28 for Uganda) into a cohesive overview (activity 0.1). The informal and ECR sections of the profile are in draft form as the data collection process is still ongoing. Once the data has been collected or gaps agreed, the next stage in this work will be to analyze and provide an overall interpretation of the results and the inferences and recommendations for future investments across the seed systems to improve overall access to quality seed for farmers.

IR 1.1 Constraints in formal seed systems identified and mitigated

The activities under IR 1.1 focus on last mile solutions and ensuring quality standards of certification systems within the formal seed sector. Since the production of seed within the formal seed sector tends to focus mainly on maize, activities are also enhancing the capacity of certification systems to encompass a broader diversity of non-maize crops, including climate resilient crops and varieties. Access to improved, quality seeds of nutritional crops will lead to greater productivity, increased incomes and improved nutrition, leading to more resilient livelihoods.

Achievements:

In Uganda, Agri Experience (AE) commenced working with the Uganda Seed Trade Association (USTA) to identify seed companies to document firm level needs assessment and consequently training, as well as assessing local trainers for different training topics derived from the need assessment (Activity 1.1.1.1, 1.1.1.3). The list of seed companies can be found in **Annex B**.

In February, OI, PABRA and IFDC held meetings to discuss firm level needs in Uganda. OI initiated an internal resource review on existing financial access materials for agribusiness training content, documenting seed firm specific gaps, and obtained confirmation from Opportunity Bank Uganda Limited to utilize its credit staff for IFDC's seed firm training as a contribution to S34D. In Kenya and Uganda, IFDC conducted an initial assessment to determine needs of agro dealers for upgrading their business operations and held consultations with seed firms, agro dealers, input suppliers, ministry officials, regulatory agencies, crop life and other development partners to prepare an operational plan towards the capacity building of agro-dealers (Activity 1.1.3.1, 1.1.3.2). In Kenya, IFDC met with OI and ABC-PABRA to discuss operational plans and to finalize specific areas of coverage of S34D on the ground. During the meeting, partners reviewed their plans and activities that build on the strengths of the consortium; assigned responsibilities on inputs and outputs as required by each partner on each other's activities; and established an inter-partnership working team for implementation, communication and information sharing purposes. Additionally, preliminary activities towards technical modules were completed - including the training methodology and modules, number of topics and training, locations of training and resource person for training module preparation and delivery of ToT.

In Western Kenya, IFDC prepared operational plans towards the implementation of developing a prototype of last mile seed delivery model for legume seeds, visited Bubayi (agribusiness), held discussions on possible business plans on how to improve last mile supply needs, and developed linkages with ABC-PABRA and OI for activity implementation in Kenya and Uganda (Activity 1.1.4.1).

In Kenya, following the FY19 preparation work for the rural agents' digital platform, Kuza screened 15 agents, developed farmer client profiles, linked agents to local input supply markets, linked agents to the Kuza digital platform, set up 10 out of 15 hubs/kiosks, completed the digital platform, deployed on and offline mentorship, and onboarded local input and output partners (Activity 1.1.4.4).

In Zambia, AE and the Seed Control and Certification and Institute (SCCI) held a joint meeting with five seed producing companies and agreed on a training approach for inspector training on non-maize crops. This training was initially based on the premise that formal classroom training would combine non-maize principles with the existing content for maize (more expertise will be brought in for specific crop groups, e.g. legumes) while field training would focus on selected crops, accompanied by appropriate visual aids and manuals. This premise has changed because of COVID-19 restrictions on meetings, hence SCCI has proposed that the non-maize inspector training be conducted as a stand-alone course and that the formal classroom sessions be conducted virtually. The teams developed a matrix of six eligible non-maize seed producing companies, together with type of crop seed produced, and requested and collected seed company proposals for candidates for training as in-company non-maize field inspectors and samplers. In total, 20 non-maize inspectors were proposed for training, representing six companies. S34D originally planned to support full training costs for six inspectors and samplers. As a result of higher than anticipated interest, SCCI and seed companies will financially contribute to the S34D training and train a higher number of candidates. At the request of SCCI, this will include one inspector from SCCI to serve as a specialist inspector in non-maize crops. The modalities of the financial contributions are yet to be agreed on, but they will change if the classroom training is ultimately delivered virtually versus in-person (Activity 1.1.1.6). The focus on non-maize crops will create a new area of specialization for companies that wish to pay greater attention to the seed quality of these crops, hence expanding the scope of seed inspection expertise in Zambia, which can be adapted to other countries in the region. SCCI will also be able to reuse the training materials for subsequent training cycles, eliminating the need to prepare fresh materials, and the expense associated with course material development. This is an example of exhibiting strong partnership among different stakeholders that is sustainable over time, because SCCI has been and will charge a fee for this training in Zambia and will also continue to provide this training to other seed control and certification institutions in the region.

In Niger, OI completed a desktop review to develop an inventory of financial services to expand financing for seed sales from seed companies in Niger. A field visit and deep dive interviews were conducted in Niger in February 2020. The draft review report is completed (Activity 1.1.1.9)

In Senegal, based on seed consultations in February, S34D added a new activity (Activity 1.1.1.11) to map seed companies and other agribusinesses in the seed value chains and provide referrals for potential impact, capital or equity investment in Senegal. The scope for this work was completed and a university intern has been identified to support this work.

IR 1.2 Strengthened capacity of informal seed systems to offer a broader range of affordable, improved quality seeds

Informal seed systems are effective in enabling farmers to access seed, though not always quality seed. The activities under IR 1.2 focus on enhancing the quality of seed and diversity of varieties available through informal seed traders to help build the resilience of farmers through increased productivity. These activities also contribute to building the resilience of seed systems (IR 2.2.) by linking informal seed traders with formal sector seed sources and by maintaining a diversity of crops and supply channels.

Achievements:

In Tanzania, ABC-PABRA prepared the yellow bean validation workshop with stakeholders for April 1. This workshop was postponed until further notice due to COVID-19. ABC-PABRA is exploring ways to hold a virtual validation workshop (Activity 1.2.1.1).

In Uganda, ABC-PABRA completed fieldwork for profiling of off-takers and began profiling of local seed businesses as part of developing strategies to support local seed business in production and marketing linked to grain market demands and seed commercialization (Activity 1.2.3.1).

In Kenya, CRS and ABC-PABRA supported the collection of farmer feedback after harvest of Nyota seed in January and February and drafted the report on the findings from the PoS pilot in Western Kenya for the first season (August – December 2019). In February, a dissemination and validation of the findings workshop was conducted with stakeholders in Eldoret. A refined version of the motorbike riders survey tool was developed, in preparation for a survey on last mile delivery of high-iron bean seeds to farmers by motorbike riders (boda boda) (Activity 1.2.4.1).

Learnings:

Data from planting (September 2019) and harvest (January 2020) periods for one agricultural season showed that farmers seek out new improved varieties at local retail shops. Further, farmers liked Nyota attributes, but would prefer smaller seed packs and more information from extension services. However, network analysis using geospatial techniques revealed that farmers do not always buy farm inputs from the nearest agrodealers. This has implications on how development partners would build last mile strategies and prototypes to extend market frontiers.

IR 1.3 Strengthened capacity of emergency and humanitarian aid programs to respond effectively to acute and chronic stresses

There is increasing awareness of the need to incorporate resilience-building interventions and approaches into humanitarian aid programming, particularly in chronic crises, but there is relatively little experience as to how this can be achieved in practice in the agricultural sector. The activities below have identified and piloted resilience-building emergency interventions and are working towards the establishment of institutional structures for technical capacity-building among humanitarian agencies working in the agricultural sector. Ongoing dissemination activities are also aimed at increasing the capacity of emergency and humanitarian aid actors.

Achievements:

S34D had ongoing discussions with the lead authors of the cash and markets reports regarding dissemination plans. The cash transfers and seed security study (Keane et. al., 2019) was shared internally within S34D partners and externally through SeedSystem.org, ABC-PABRA library and CG Space (Activity 1.3.1.1).

Learning:

From the demand side, the report (Keane et. al., 2019) reveals that cash transfers offer an alternative to vouchers as part of market-led interventions to support farmers' access to seed in emergency contexts. More information can be found in the learning section.

Achievements:

In Malawi, Kenya and Uganda, ABC-PABRA developed a research protocol and interviewed 20 out of 30 possible interviewees working in the nexus of research and emergency. The research protocol can be found in **Annex C**. (Activity 1.3.1.3)

Activity 1.3.3.2 was revised to focus on the stakeholder consultation undertaken in collaboration with the Global Food Security Cluster (gFSC). S34D attended the gFSC meeting in Rome in November 2019 and worked with other gFSC members to design and implement a survey of over two hundred gFSC and in-country FSC members about the interest in setting up a working group on technical agricultural issues. The survey responses were analyzed and presented at gFSC Strategic Advisory Group meeting. See **Annex D** for the survey and **Annex E** for the results.

Data on emergency seed provisioning was compiled for Uganda and Kenya. This data contributes to the country profile under activity 0.1. ABC-PABRA and CRS participated in a Nairobi workshop on Country Seed Sector Profiles (activity 1.3.3.3).

IR 2.1 Strengthened interface and collaboration between formal and informal seed systems

At the systemic level, seed system resilience can be strengthened by improved linkages between formal and informal seed systems. Such linkages are being promoted through many of the activities described under IR 1.2, e.g. by engaging with traders who can help bridge systems and by supporting a diversity of crops and supply channels. Activities under IR 2.2 are further working towards more resilient seed systems by better understanding regional trade networks to ensure the availability of quality seed in local markets.

Achievements:

Activity (2.1.1.2) was added to the AWP after seed consultation in Ethiopia in January-February 2020. For scoping study to assess the fodder/forage crop seed value chain in Ethiopia, CRS finalized a scope of work and started the initial literature review.

In Uganda, ABC-PABRA identified and profiled new seed producers, seed suppliers and grain off-takers and initiated planning for information dissemination to farmers in the networks. Issues affecting yellow bean grain production, seed supplies and grain trade were documented (Activity 2.1.2.1).

In Western Kenya, ABC-PABRA and CRS finalized a report on the findings from the PoS pilot and organized the dissemination/validation of the findings at a stakeholder workshop in Eldoret. Workshop proceedings were drafted. Collaborative meetings with IFDC and OI were held to discuss implementation strategy for jointly implemented activities planned in Q4 (Activity 2.1.3.1).

IR 2.2 Strengthened interface and collaboration between development and relief to resilient and market-based seed systems

In contexts that are subject to recurrent shocks and chronic stressors, seed-related interventions for building resilience must bridge the divide between humanitarian and development assistance. Activities undertaken under IR 2.2. have highlighted opportunities within DiNER fair modalities to incorporate last mile solutions into emergency programming, and to promote market linkages between farmers and seed providers.

Achievements:

Collaboration discussions were held between S34D and SCALE, especially on information dissemination through network. This activity has been revised to include the completion of the DiNERS study for Southern Africa (ongoing, draft to be completed in April) and two voucher/fair studies in Nicaragua and Guatemala, both funded by CRS' private funds. The Guatemala and Nicaragua study reports are in complete draft form (Activity 2.2.2.3).

Learning:

The Nicaragua study identified the benefits and drawbacks of a voucher mechanism used in seed fairs conducted in 2019 in response to severe drought. An unexpected finding was the effect of the fairs on expanding markets, particularly for smaller, local vendors. This potentially offers a promising means of developing more sustainable last mile delivery of quality seed (see also Activity 1.3.1.4 in this regard).

The Guatemala report compares voucher and cash modalities that were used in DiNER fairs implemented in 2019 in response to prolonged drought. In general, cash was preferred to vouchers, both in terms of project management and beneficiary satisfaction. In general, a major concern for cash programs directed at specific sectoral objectives is that the cash will be used for other purposes. Various actions were successfully taken to minimize "leakage" during the fairs; an estimated 16% of cash distributed in the fair was used outside the fairs, mainly for poultry feed, tools, food, and transport.

CCIR-1 Improved effective policy implementation and regulatory formulation for pluralistic seed systems

Seed system resilience is achieved when informal and formal seed systems not only co-exist, but actively work to complement and strengthen each other. As such, the policies and regulations for pluralistic seed systems must allow for informal sector 'solutions' to address existing gaps or weaknesses within the formal seed sector and vice-versa. In this regard, the policy activities undertaken to date have focused on the documentation of flexible regulatory design approaches that allow for informal sector 'solutions' and the introduction of the standard seed certification class in Kenya.

Achievements:

CRS and New Markets Lab completed the global policy review and findings were disseminated through a webinar. The report and webinar proceedings have been completed (Activity CCIR 1.1.1).

Learning:

The authors' findings indicate that flexible regulatory approaches can respond to markets and farmers' preferences and that national and local governments' support in adapting regulations to local agroecologies can increase biodiversity and build public-private partnerships. The study presents a comprehensive assessment of flexible regulatory design approaches, even though evidence on implementation remains sparse and anecdotal.

Achievements:

In Tanzania CRS completed a scope of work for yellow bean policy work (Activity CCIR 1.2.2).

In Kenya, AE held follow-up meetings with KEPHIS key senior management to discuss how to fast track development of protocols for the new class of standard certified seed. KEPHIS managers reported that their Board is keen to see this activity move forward. Background PowerPoint for protocol drafting was developed covering topics such as definition of Standard Seed certification and why it is important, labeling, crops, and training content for inspectors.

AE engaged with STAK to garner their support on upcoming activities and collected information on current certification costs, as well as potential certification costs under Standard Seed certification. Further, AE gathered feedback from seed companies on a proposed road map for protocol development, including interviewing six interested seed companies. Responses to the interview questions, including seed company willingness to participate in a pilot, were documented. However, protocols were not drafted as KEPHIS was unable to meet due to COVID-19 meeting and travel restrictions. As a result, the stakeholder input meeting for the draft protocols is postponed and options for virtual protocol writing are being explored. While KEPHIS has strong internet connectivity and functionality from the KEPHIS office, there appears to be challenges related to home connectivity for many of the KEPHIS staff. Possible solutions are being explored (Activity CCIR 1.2.3).

In Zambia, CRS started the literature review and drafted scope of work for the learning study about private sector seed certification processes, approaches and counterfeiting measures (Activity CCIR 1.3.1).

In Ethiopia, after seed sector consultations in January-February 2020, CRS added Activity CCIR 1.3.2 to the AWP. CRS has begun initial consultations and drafted a scope of work for the learning study on national seed reserve systems in Ethiopia.

CCIR-2 Established enhanced quality information flows for seed systems

Achievements:

In February, the first set of data (genotypes) from DNA fingerprinting was received for analysis of yellow bean grades and defined the protocol for the physical purity analysis in Tanzania. The second set of data from Tanzania is expected in April (Activity CCIR 2.2.1).

In Tanzania, AE set up the SMS query system with extensively reviewed questions and tested the proposed script with farmers, collected their input and revised the script based on the farmers' and TOSCI recommendations. AE successfully linked with four telephone companies (Airtel, Tigo, Halotel and Vodacom),

versus the initial proposal of three, at the same cost. The short code was tested and promotional campaign service provider identified and contracted. The actual campaign message was developed and recorded. AE collaboratively drafted pre-campaign talking points for TOSCI to use on both radio and television. The television time on two stations had been provided for free. After the meeting with farmers, it was clear that the talking points should be targeted toward farmer behavior change, i.e. adoption of certified seed as opposed to recycling. A waiver was obtained for only having the TOSCI logo on the developed banner. This activity could not proceed because all donor activities with government entities now require new levels of government approval, which is still pending. This means that the current season is lost, and future campaigns may happen in the short rainy season (Oct-Nov 2020) if government approval is obtained (Activity CCIR 2.3.2).

In Ethiopia, after seed sector consultations in January-February 2020 with USAID Missions and seed actors, CRS added Activity CCIR 2.2.2 to the AWP. CRS started the literature review, finalized a scope of work, and a potential pool of consultants were identified; preparation for procurement is currently underway.

In Kenya, a survey instrument for collecting customer feedback of new high-iron bean variety Nyota was designed. CRS conducted the survey over phone in February 2020 after the harvest period. The objective was to learn about varietal performance. The data was analyzed and results were documented in a report. The report was shared with PABRA for inclusion into the larger report niche market business model report. In addition, the findings were disseminated at the stakeholder workshop in Eldoret, Kenya (Activity CCIR 2.3.1).

Learnings:

Nyota variety performed very well. Most respondents (92%) said the variety performed very well with respect to quality, and 72% of the respondents remarked about Nyota's trait as having early maturity. 79% of the respondents said they would purchase Nyota again. However, the majority of the farmers used the harvest either as food or saved the seeds for next season. Very few farmers said they would sell their harvest at the market as grains.

4. Monitoring, Evaluation and Learning

The purpose of this section is to depict key learnings and provide some anecdotal stories.

Building transformative capacity through partnerships – Example from Zambia

Zambia's maize seed industry has made tremendous progress as evident from more than 65% maize seed exports from Zambia to east and southern Africa regions. However, the quality of non-maize seed is not as good, and farmers are not able to clearly tell the difference between certified and non-certified seed of the non-maize crops.

The Seed Control and Certification Institute (SCCI) of Zambia requested support to develop a specialized field inspection training for non-maize crops. SCCI's request was to shift the focus from maize to other equally important crops, especially about nutrition, soil health and food security. A prime example is legume crops such as beans, cowpeas, soybeans and groundnuts. Approval was provided to support full costs of training of six inspectors for non-maize crops from private sector companies and a modest amount to support meetings and other SCCI coordination activities.

There was an overwhelming interest and support from both SCCI and seed companies leading to cost-share trainings and capacity building for seed inspection of non-maize crops. This model exemplifies public-private partnership facilitated through S34D partners and shows the roles that international development agencies could play to build transformative capacity on the ground.

Seed companies were quick to commit (at least verbally) to sending up to 20 staff for the training. They all acknowledged that the quality for non-maize seed was wanting and saw the need to increase their capacity in the field certification process. SCCI also acknowledged that their own inspectors do need to specialize in non-maize crops, so that they could give better oversight to the private sector inspectors. Both SCCI and the seed companies agreed to share in the training costs, a move which will allow for the training of twelve inspectors – eleven from the companies, and one from SCCI, through a cost-share model supported by S34D.

Figure A. Zombe Sikazwe of SCCI shows participants an example of a variety manual



Photo credit: M. Maina, Agri Experience

Market-led interventions and cash transfers to increase seed security in emergency settings¹

Markets are pivotal in helping farmers to access seed, both in normal times and in emergency and chronic stress contexts. The two studies conducted by S34D present lessons of market-led emergency seed interventions, looking at supply and demand sides.

The review of supply-side interventions (Walsh and Sperling, 2019, draft) found that these interventions focus on formal sector market support to ensure seed availability, particularly for improved or modern varieties; it was not possible to document a single in-depth case of supply-side interventions oriented towards the informal seed sector. For the interventions reviewed, seed is typically produced through contract multiplication and then bought back by the implementing partner for free distribution to farmers, often over 2-3 consecutive years. Other interventions involve giving credit to agro-dealers who themselves procure and sell seed directly to farmers which is subsidized using vouchers. The direct interface between suppliers (agro-input dealers) and farmers has elements of sustainably linking relief and development.

From the demand side, the report by Keane et. al. (2019) shows that cash transfers offer an alternative to vouchers as part of market-led interventions to support farmers' access to seed in emergency contexts. A CRS-funded study in Guatemala comparing voucher and cash modalities in DiNER fairs found that cash was preferred to vouchers, both in terms of project management and beneficiary satisfaction (Walters, 2020, in draft). Keane et. al. found that the use of cash transfers for emergency seed security interventions is limited but growing in prevalence. Available evidence suggests that cash offers promise for seed security interventions, particularly when combined with complementary programming such as technical or business training. Mixed modalities (cash and vouchers or cash and direct seed distribution) can broaden crop choices. Cash can prepare the way for farmers to continue true market engagement post-relief, spur business development in subsequent seasons, and offer opportunities for financial inclusion.

Market-led interventions are expected to play an important role in the emergency seed response to the on-going COVID-19 crisis. Lessons from these two studies have been incorporated into the guidance being drafted by the global Food Security Cluster (forthcoming: <https://sites.google.com/view/fsc-covid19/home>). These studies also highlight critical areas for the focus of further learning as market-led emergency seed interventions expand.

Looking ahead, the expansion of market-led seed security interventions requires a better understanding of formal and informal seed market functioning in stress periods. Tools exist to address this gap but are rarely used. Cash responses require a high-quality needs assessment, response analysis, and program design to ensure target products offered to farmers are aligned with top priorities of farmers so that provided cash is spent on the products. (If farmers choose to save the cash or spend it on alternative products, it is an indication that the project and farmers' values and perceived needs are not aligned.) Investment in preparedness provides an improved foundation to implement impactful cash for seed security response. Additional work is needed in testing and refining market-led approaches to seed security and in learning through program monitoring and evaluation.

¹ Stephen Walsh and Louise Sperling (2019, pending USAID approval). *Review of practice and possibilities for market-led interventions in Emergency Seed Security Response*.

Jules Keane, Dina Brick and Louise Sperling. 2019. *Study on cash transfers for seed security in humanitarian settings*

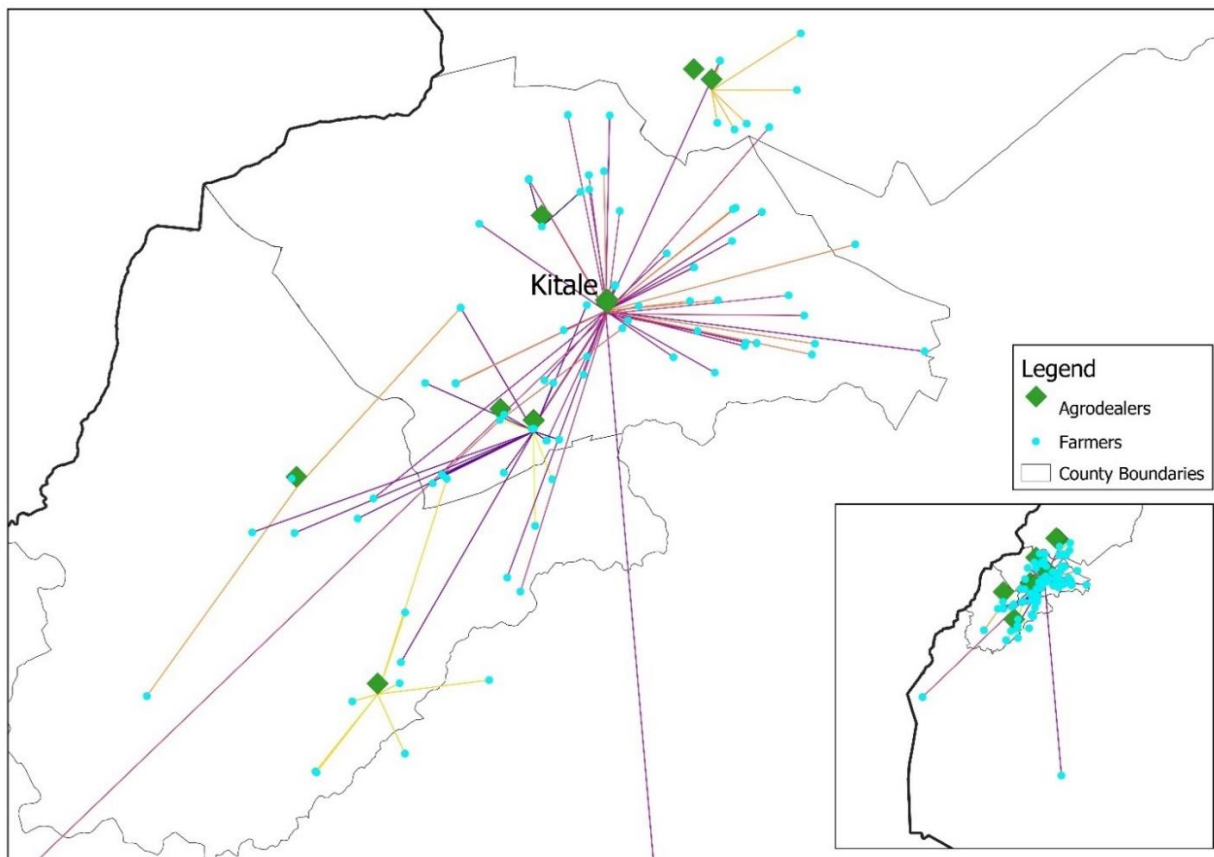
Using digital technology to assess new varietal dissemination and adoption in western Kenya

Adoption of climate-smart technologies, such as drought tolerant and short maturing varieties, and adoption of micronutrient rich (bean) varieties is a necessary step to build both climate change adaptation and improve nutrition among smallholder farmers. This ensures resilience among farmers during adverse weather conditions like delayed rains and when they have little time to produce sufficient nutritious food for household livelihood. Under S34D, ABC-PABRA implemented a “niche” variety business model in close collaboration with KEPHIS, KALRO, seed companies, and farmer-based associations. The niche variety – of beans (*Nyota*), biofortified with iron and zinc, high yielding, and with short duration maturity– was deployed in western Kenya for the first time in September 2019. CRS developed and deployed a Point-of-Sale digital application for the

Data from planting and harvest periods for one agricultural season showed that farmers seek out new improved varieties at local retail shops. Further, farmers liked *Nyota* attributes but would prefer smaller seed packs and more information from extension services. However, network analysis using geospatial techniques revealed that farmers do not always buy farm inputs from the nearest agrodealers. This has implications on how development partners would build last mile strategies and prototypes to extend market frontiers.

niche business model to assess varietal dissemination and adoption patterns. **Figure B** shows the agrodealer locations and the network where the farmers made their purchases. As displayed, there is strong traffic to the nearest town, Kitale. Farmers did not necessarily make their purchases from their nearest agrodealer. Perhaps when farmers seek new varieties they go to their preferred and trusted retail outlets; or perhaps, in addition to trust and brand loyalty, farmers also seek out additional commodities, for which trips to the nearest town are needed. Whatever it is, when development partners seek to increase agrodealer density to penetrate last mile markets, there is a need to create awareness and build trust of these dealerships.

Figure B. Agrodealer locations and actual locations from which farmers purchased *Nyota* bean seeds



Global policy study reveals practical examples of flexible regulatory approaches and practices that foster inclusive seed systems²

In the agricultural sector, seed laws, regulations, and policies play a central role in food security and directly impact farmers' access to quality seed of a range of crops. Seed rules and regulations determine who can produce and sell seeds, which varieties will be available in the market, the quality of seeds for sale, and where seed can be bought and sold. Although seed law and regulation are often targeted at the formal sector, in many countries most seed are bought and sold informally. Kuhlman and Dey (2020) addresses a gap in current literature regarding the role of law and regulation in linking informal and formal seed sectors, creating more inclusive and better governed seed systems in the process.

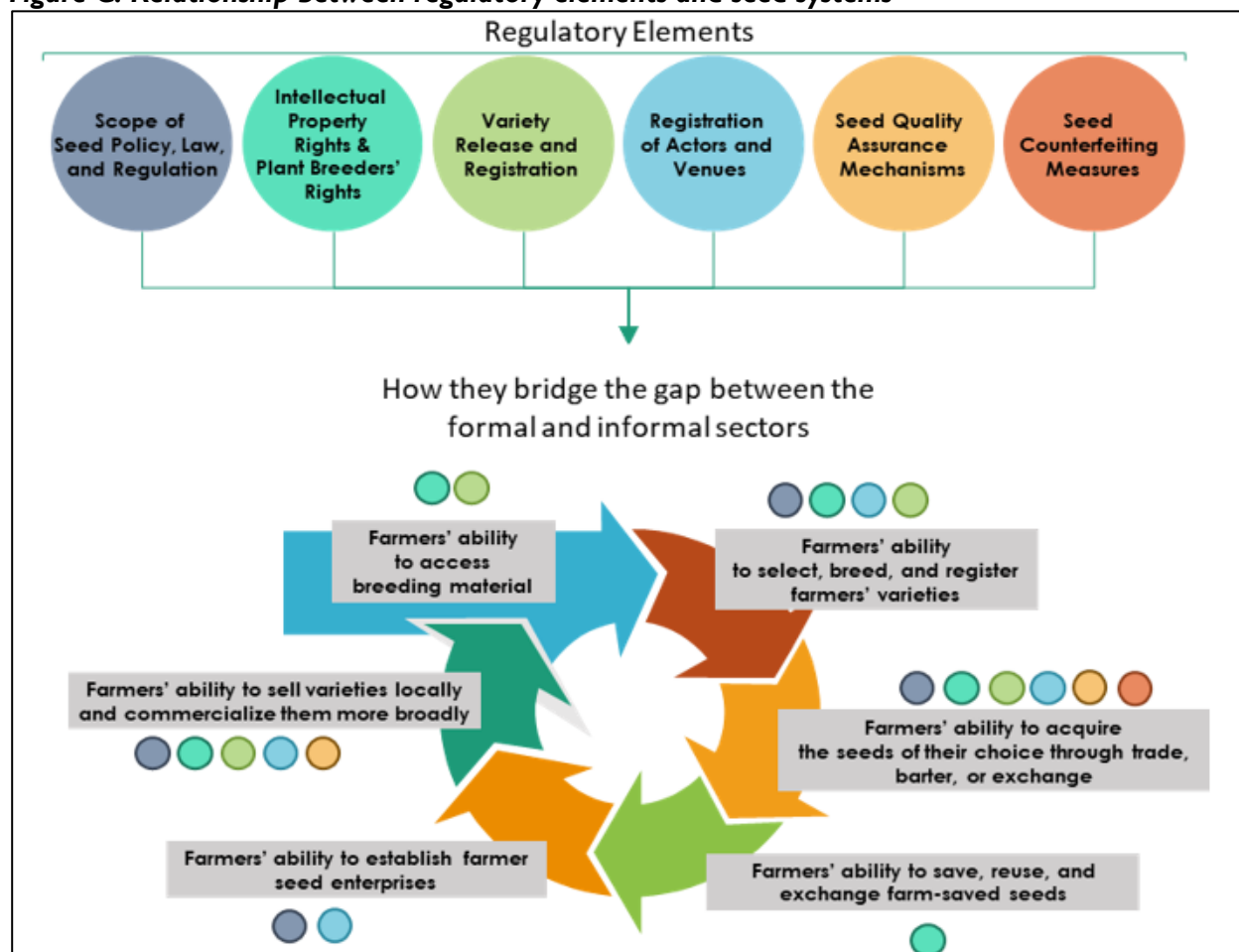
Drawing upon insights from literature, global case studies, and expert consultations, the authors present a framework that depicts how various regulatory constraints come into play in seed value chains and how flexibility can be built into more formal structured seed systems and regulatory approaches. The study assesses the regulatory connections between formal and informal seed systems across three key domains: extending market frontiers, liberalizing seed quality control mechanisms, and improving seed counterfeiting approaches. The authors' findings indicate that flexible regulatory approaches can respond to markets and farmers' preferences, and that national and local governments' support in adapting regulations to local agroecologies can increase biodiversity and build public-private partnerships. The study presents a comprehensive assessment of flexible regulatory design approaches, even though evidence on implementation remains sparse and anecdotal.

A helpful methodology and illustrated framework (**Figure C**) depict how various regulatory constraints come into play and affect farmers along seed value chains. This is useful for policymakers and practitioners alike to design interventions in the regulatory and seed policy space.

- The case studies covered in the study show how flexibility can be built into regulatory approaches and more formal structured seed systems. This creates space to expand the market frontier of a wider range of crop-variety combinations and bridges gaps between formal and informal seed systems.
- Discussions with stakeholders (as well as through case studies) confirm that market pull mechanisms for the variety is a necessary condition for adoption and scaling; when market pull exists, policy and regulatory approaches can be leveraged.
- Continued learning from South-South examples is necessary to build flexible approaches and advocate dialogues with policy and decision-makers through implementation of activities on the ground.

² Kuhlman, Katrin and Dey, Bhramar. 2020. (Pending USAID approval). *Can Regulatory Flexibility be Used to Respond to Market Informality? A Global Study on Building Inclusive Seed Systems*.

Figure C. Relationship between regulatory elements and seed systems



Applying lessons from DiNER Fairs to develop market linkages between farmers and agro-dealers – Example from Eastern Uganda

S34D's review of DiNER fairs in southern Africa (forthcoming) shows that actively designing the supply side is at least as important as focusing on the beneficiary side when planning inputs fairs when considering sustainability and resilience issues. An unexpected finding from a CRS-funded study of seed fairs implemented in response to drought in Nicaragua was the effect of the fairs on expanding markets, particularly for smaller, local vendors. Using a participatory action research approach, nine explicit actions to support sustainable market linkages between vendors and farmers were tested in the context of market fairs implemented by CRS in Eastern Uganda in March 2020. Some of the actions were not feasible due to operational procedures and the one-off, emergency nature of the fairs, but would be better suited to fairs implemented as part of a longer-term resilience or developmental intervention (e.g. in response to drought or chronic crisis). Other actions proved to be more feasible, but again depend on the specific aims of the fair, which — in an acute emergency context — tend to target the most vulnerable (who are not the main client base of private agro-dealers) and prioritize meeting the immediate needs of farmers over the longer-term benefits of sustainable market supply. Despite these constraints, the tested actions allowed vendors to establish closer relationships with farmers and other key stakeholders in the project areas and to better understand farmers' priority seed needs while providing a forum for farmers to know the agro-dealers directly and to learn about new technologies.

Figure D. Seed fair vendor, Eastern Uganda



Photo by Geoffrey Nyamota for CRS East Africa Regional Office

Lessons from experience to date suggest that local suppliers and vendors (versus vendors brought long distances just for the unique fair event) are more likely to have an interest in continuing to serve the community and should be actively recruited to take part in fairs. It appears that there is more potential for developing market linkages as part of seed fairs that are implemented in response to chronic stress (e.g. drought) than in those implemented in response to acute stress (e.g. flood). A clearly articulated seed fair objective is helpful in guiding decision-making during the planning process and to help determine whether standard operational procedures may need to be relaxed or revised.

5. Problems and Solutions

0.1. Availability of formal seed data for the Uganda country profile has been a challenge. Where data is completely absent, S34D indicated the data gap, as this demonstrates the problems faced by those who need such data for different purposes, e.g. decision makers and investors. In some cases, the starting point could be reliable data collection.

IR 1.1.1.6. As noted above, non-maize inspector training for SCCI in Zambia is impacted due to the challenges with classroom training. However, this challenge may present an opportunity to develop a remote training, content delivery, and testing platform for inspector and sampler training that could have functionality and scalability far beyond both the COVID-19 timeframe and Zambia as a single country.

CCIR 1.2.3. Due to uncertainty about when restrictions on meetings will be lifted in Kenya due to the COVID-19 pandemic, S34D is exploring how drafting Standard Seed protocols can be done virtually. However, it is necessary to understand the needs of the drafters in terms of internet access and what needs to be done to facilitate bringing them together in a virtual room. Some of them may be in very remote areas, which could pose a further challenge.

CCIR 2.3.1. The new, and challenging, approval levels put in place in Tanzania for donor efforts have caused TOSCI to delay implementation until all approvals are received. The key approval appears to be sign-off by the Ministry of Finance/Treasury to the Ministry of Agriculture. Managers of key government institutions are reluctant to move forward on activities until all approvals are received and documented. S34D engaged the Mission to attempt to resolve these issues, perhaps as part of a larger umbrella approval for USAID-sponsored activities.

6. Planned activities for Q3-Q4

The following activities are planned under the different IRs.

Under IR 1.1:

- Complete the Kenya and Uganda country profiles, share final draft with USAID/Washington and Missions for feedback. After USAID's feedback, S34D will share with broader group of stakeholders for their input and finalize both profiles.
- Assess the key topics for seed company training needs and develop a fee-based training model with USTA.
- Assess the feasibility of a remote online training and testing course for seed inspectors. Work with SCCI in Zambia to train 20 seed inspectors.
- Strengthen capacities of last mile actors, enabling them to supply legume seeds in Uganda.
- Prototype two last mile delivery models to reach last mile users with quality seeds in Kenya.
- Complete 5 remaining kiosks and continue to aggregate demand and aggregate supply and complete report on rural agents' performance and plan to scale up the digital platform.

Under IR 1.2:

- Complete report for yellow bean characterization study in Tanzania.
- Conduct the next phase (2nd round) of the PoS application pilot and complete final report.

Under IR 1.3:

- Organize webinars for the dissemination of the Cash and Markets studies.
- Finalize 10 remaining interviews of 30 private and research sector actors on their role in emergencies and complete report.
- Complete actionable plan for promoting sustainable market linkages through DiNER fairs.
- Literature review and conceptual framework for resilient seed systems and response options.
- Continue data compilation and analysis for Uganda and Kenya seed system profiles.
- Develop and disseminate seed provisioning guidance through a gFSC Task Force (Working Group).
- Develop a 1-2 page white paper on possibilities for financing of different farmer segments.

Under IR 2.1:

- Conduct a scoping study to assess the fodder/forage crop seed value chain in Ethiopia.

Under IR 2.2:

- Write a 2-4 page briefing paper to summarize lessons from DiNER fairs and private sector seed provisioning with underlying sustainability focus.

Under CCIR 1:

- Organize a virtual global (policy) seed forum.
- Organize a southern Africa seed stakeholder meeting with Innovation Lab, USAID, host governments, IPs, and others.
- Complete report regarding policy implications of the niche market business model in Kenya and the policy implications of the yellow bean field study in Tanzania, Kenya, and Uganda.
- Standard seed protocol implementation in Kenya—because a physical meeting for protocol drafting might not be possible, S34D will explore if a virtual convening can be done to draft the protocol.
- Conduct the study on national seed reserve systems and disseminate findings with relevant ETH national stakeholders.

Under CCIR 2:

- Finalize the second batch of DNA fingerprinting for yellow bean for Tanzania.

- develop a technical road map (framework) for demand estimation / forecasting in Ethiopia; socialize and disseminate the same with ETH national stakeholders.
- Continue monitoring feedback for the new biofortified bean varieties disseminated for the niche market business model using ICT in Kenya.
- For the RIMI activity in Tanzania (Stop Bad Seeds), TOSCI will give notices of the campaign to seed companies and agrodealers and upon government approval of the activity, and TOSCI will schedule the campaign for the appropriate planting season.

7. Annexes

Annex A. Activity table

Black font activities are Core-funded activities (core) and red font activities are potential Mission-funded activities (Mission).

Sub IR number	S34D Activities Descriptions	Geography	S34D Partners	April 30 Revision comment
G	Goal: Improved functioning of the high-impact integrated seed systems			
O	Objective 1: Increased capacity of seed systems to sustainably offer quality affordable seeds			
IR	IR 1.1 Constraints in formal seed systems identified and mitigated			
Sub IR	Sub IR 1.1.1 Operational efficiency of seed companies increased			
0.1	Develop country profiles and framework for engagement in Kenya and Uganda, Malawi, Zambia, Tanzania, Niger, Senegal.	KE, UG, MW, ZM, TZ, NG, SE	CRS, AE, IFDC, CIAT	Niger, Senegal, Malawi, Zambia, Tanzania and Ethiopia removed for FY20; could be implemented with Mission funding if available.
1.1.1.1	Document firm level needs assessment in Uganda (core).	UG	AE	
1.1.1.2	Gather, select and develop seed systems materials for coaching from partner organizations that meet client needs (technical, managerial and territorial marketing strategies) through engagement with internal and external partners in Uganda (core).	UG	OI	
1.1.1.3	Develop a fee-based training model for deployment by Seed Trade Associations or similar stakeholder organizations in Uganda (core).	UG	AE	
1.1.1.4	Develop a fee-based training model for deployment by Seed Trade Association of Kenya (STAK) (Mission).	KE	AE	
1.1.1.5	Work with three seed companies to solve systemic bean seed marketing challenges in Ethiopia (core).	ET	CIAT	Activity deleted after consultation Ethiopia
1.1.1.6	Improve certification efficiency of non-maize seed to promote sales volumes of non-maize certified seed, particularly for legumes in Zambia (core).	ZM	AE	Exploring virtual platform for this training
1.1.1.7	Create farmer awareness about the importance of periodically replacing non-maize seed, especially for legumes; and, training seed growers in certified seed production process in Zambia (Mission).	ZM	AE	
1.1.1.8	Facilitate shift to a more private sector led, inspection process in the national seed certification strategies, with emphasis on digital management tools to share compliance information [country tbd] (Mission)	tbd	CRS	
1.1.1.9	Develop an inventory of financial services to expand financing for seed sales from seed companies in Niger (core).	NG	OI, CRS	
1.1.1.10	Develop an inventory of financial services to expand financing for seed sales from seed companies in Senegal, Zambia, and Ethiopia (Mission).	SE, ZM, ET	OI	
1.1.1.11	Map seed companies and other agribusinesses in the seed value chains and provide referrals for potential Impact, capital or equity Investment in Senegal (core).	SE	CRS	Based on seed consultations in Senegal, this is a new activity
Sub IR	Sub IR 1.1.2 Seed availability of climate – smart crops increased, through enhancing EGS capacities of firms and producers			
1.1.2.1	Identify and document bottlenecks faced by national seed and post-harvest providers' in accessing financial services and list recommendations for detailed action in Kenya and Tanzania (Mission).	KE, TZ	OI	
1.1.2.2	Diversify sources of legume seed and increase the production of EGS of non-hybrid crops in Uganda (Mission).	UG	AE, CIAT	
Sub IR	Sub IR 1.1.3 Capacities of local seed actors strengthened			
1.1.3.1	Strengthen capacities of last mile actors, enabling them to supply legume seeds in Western Kenya (Mission).	KE	IFDC, OI	Moved from core to Mission
1.1.3.2	Strengthen capacities of last mile actors, enabling them to supply legume and rice seeds in eastern and south eastern Uganda (core).	UG	IFDC, OI	
1.1.3.3	Strengthen capacities of local seed actors to extend customer base and support last mile in Malawi, Zambia, Ethiopia, Senegal and Niger (Mission).	MW, ZM, ET, SE, NG	IFDC, CRS	

1.1.3.4	Facilitate modernizing the seed industry with digital information management to support improved quality assurance / quality control (QA/QC) in Uganda (Mission).	UG	IFDC	
1.1.3.5	Improve knowledge and technology capacity of the Ag Seed Agency (seed unit under the Ministry of Agriculture) and target national (second tier) seed firms in production and genetic maintenance of EGS and foundation seed, focusing on cassava and legumes in Tanzania (Mission).	TZ	IFDC	
1.1.3.6	Build the capacity of agro-dealers and other last mile actors in Malawi, Tanzania, Kenya, Uganda, Ethiopia and Niger (Mission).	MW, TZ, KE, UG, ET, NG	IFDC	
Sub IR	Sub IR 1.1.4 Sustainable models with private sector players to supply quality EGS and QDS to a range of suppliers piloted and scaled using innovative financing			
1.1.4.1	Prototype two last mile delivery models to reach last mile users with quality seeds in Kenya (core).	KE	IFDC	
1.1.4.1	Prototype two last mile delivery models to reach last mile users with quality seeds in Uganda (Mission).	UG	IFDC	
1.1.4.2	Review current village-based agent method; test and strengthen alternative methods on improving last mile distribution of seed, including access to credit and financial education for agro-dealers and VBAs in Tanzania (Mission).	TZ	IFDC, OI	
1.1.4.3	Prototype last mile models with quality seeds of legumes and cereals in Malawi, Senegal and Niger (Mission).	MW, SE, NG	IFDC, OI	
1.1.4.4	Scale out last mile delivery through digitally enabled rural seed and enterprise agent systems in Kenya (cost share).	KE	CRS (Kusa)	
1.1.4.5	Professionalize the processes and scaling production of QDS at community/farmer level through Public-Private Partnerships where the QDS producers have access to quality seeds (from private sectors or from NARS) in Tanzania (Mission).	TZ	IFDC, CRS	
1.1.4.6	Scale out last mile services with local seed conservation models for non-hybrid crops in Kenya (Mission).	KE	IFDC, CRS	
1.1.4.7	Utilize digital last mile seed rural agent systems in Uganda (Mission)	UG	IFDC, CRS	
IR	IR 1.2 Strengthened capacity of informal seed systems to offer a broader range of affordable, improved quality seed			
Sub IR	Sub IR 1.2.1 Informal trader capacity and local seed networks assessed			
1.2.1.1	Complete report writing for yellow bean characterization study in Tanzania and conduct a yellow bean characterization study in Uganda (core).	TZ, UG	CIAT	Uganda YB study activity has been moved to Mission-funding.
1.2.1.2	Seed and grain market characterization and identification of areas of interventions in Senegal (Mission).	SE	CIAT	Ethiopia deleted and Senegal moved from core to Mission
1.2.1.3	Conduct diagnostics of seed storage—assess legume storage and post-harvest management constraints and capacities in Niger (Mission).	NG	Purdue	
Sub IR	Sub IR 1.2.2 Capacity of local seed entrepreneurs and non-traditional seed actors strengthened			
1.2.2.1	Scope existing and identify new seed and post-harvest suppliers and vendors to expand reach of these technologies in Tanzania (Mission).	TZ	Purdue, CRS	Moved from core to Mission
1.2.2.2	Train and link the seed and post-harvest supplier and vendors to distribute and market these technologies Tanzania (Mission).	TZ	Purdue	Moved from core to Mission
Sub IR	Sub IR 1.2.3 Business models to leverage integrated operations validated			
1.2.3.1	Test and catalyze push-pull model to harness demand and improve access to quality declared legume seed (QDS) in Uganda (Mission).	UG	CIAT	Moved from core to Mission
1.2.3.2	Test bundled legumes & fodder seed and Post Harvesting Technologies (PHT) marketing model in Kenya (Mission).	KE	CIAT	
1.2.3.3	Test and catalyze push-pull models to harness demand and improved access to quality legume seed in Uganda (Mission).	UG	OI	
1.2.3.4	Facilitate digital information sharing platforms for seed actors and analytics to enhance seed business and link to farmer demand in Uganda (Mission).	UG	OI	
Sub IR	Sub IR 1.2.4 Last mile delivery solutions through non-traditional partners and ICT strengthened			
1.2.4.1	Niche Market business model: explore non-seed distribution and sale niches with seed varieties (linked to PoS ICT application with seed companies) and monitor sales/adoption in Kenya (core).	KE	CIAT, CRS	
1.2.4.2	Catalytic financial models for seed companies and large traders to scale out micronutrient rich legumes in Kenya (Mission).	KE	OI	
IR	IR 1.3 Strengthened capacity of emergency and humanitarian aid programs to respond effectively to acute and chronic stresses			

Sub IR	Sub IR 1.3.1 Select emergency and humanitarian past actions assessed: focus on farmer evaluation, new varieties, and markets (local and formal)			
1.3.1.1	Disseminate results from FY19 studies on cash and markets using mixed modes of delivery (core).	Global	CIAT, CRS	Deleted the word DiNERS in activity name
1.3.1.2	Develop template that systematically gathers information on delivery and use of modern varieties in emergency response (core).	Global	CIAT, CRS	Activity deleted
1.3.1.3	Interview private and research sector actors on their role in emergency and humanitarian seed programming in Kenya, Uganda and Malawi (core).	KE, UG, MW	CIAT, CRS	
1.3.1.4	Develop actionable plan based on lessons emerging from the cash transfer and market studies completed to date, and the (on-going) FY19/20. (DiNER-evaluations in Southern African region (Malawi, Zimbabwe and Madagascar) (core).	Global	CIAT, CRS	Activity language changed
Sub IR	Sub IR 1.3.2 Emergency and humanitarian responses that promote climate resilience, including food, income, cover and fodder crops are catalyzed			
1.3.2.1	Support upgrades in functionality, socialization and promotion for SeedSystem.org website (core).	Global	CIAT, CRS	
Sub IR	Sub IR 1.3.3 Tools and information systems to frame Shock Responsive Models developed			
1.3.3.1	Framework and response options for resilient seed systems (core).	Global	CRS	Activity language changed
1.3.3.2	Inputs to a stakeholder consultation with the broader humanitarian community to determine and address the need for additional guidance for agricultural interventions (core).	Global	CIAT, CRS	Activity language changed
1.3.3.3	Collect, compile, and analyze information on emergency and humanitarian seed interventions in relation to formal and informal seed sector development interventions (core).	Global	CIAT, CRS	Activity language changed
1.3.3.4	Develop country-level inputs to seed database (1.3.3.3) with real-time snapshots pre- and post-disasters in Malawi, Mozambique, Uganda, or Niger (Mission).	MW, MZ, UG, NG	CIAT, CRS	
Sub IR	Sub IR 1.3.4 Last mile delivery solutions especially for chronic stress areas (small packs, boutiques, WhatsApp seller linkages) developed			
1.3.4.1	Identify promising practices from last mile PASP model to provide access to improved seed in chronic stress contexts (Mission).	SE	CIAT, CRS	
1.3.4.2	Scope and prototype PASP model for groundnut seed in Senegal (Mission).	SE	CRS	
1.3.4.3	Study existing “mom & pop shops” as opportunities to make improved seed available in rural areas (small packs, etc.) in Niger (Mission).	NG	CRS	
1.3.4.4	Develop a 1-2 page white paper on possibilities for financing of different farmer segments (core).	Global	OI, CRS, CIAT	
IR	IR 2.1 Strengthened interface and collaboration between formal and informal seed systems			
Sub IR	Sub IR 2.1.1. Local seed network strategies (to interface, collaborate, and leverage) and local capacities are assessed.			
2.1.1.1	Implement cross seed system studies using an adapted Seed Systems Strengthening Assessment SSSA+ methodology in Uganda (Mission).	UG	CRS	
2.1.1.2	Conduct a scoping study to assess the fodder/forage crop seed value chain in Ethiopia (core).	ET	CRS	New activity
Sub IR	Sub IR 2.1.2. Crop and seed platforms that link formal and informal seed systems are catalyzed and supported.			
2.1.2.1	Facilitate linkages of existing and new identified seed producers and suppliers grain off-takers trading in the yellow bean growth corridor in Tanzania (Mission).	TZ	CIAT	Moved from core to Mission
Sub IR	Sub IR 2.1.3 Formal sector suppliers and NARs/breeders leveraged and linked			
2.1.3.1	Explore complementarity of conventional and non-seed distribution channels for nutritious bean varieties in Kenya (linked to IR 1.2.3) (core).	KE	CIAT	
Sub IR	Sub IR 2.1.4 Effects of market-based interventions on seed market operations and last mile delivery systems are assessed.			
	no activities			
IR	IR 2.2 Strengthened interface and collaboration between development and relief to resilient and market-based seed systems			
Sub IR	Sub IR 2.2.1 Seed System Security Assessments in Feed the Future Crisis Hotspot areas (focus on formal, semi-formal and informal seed systems) are adapted and scaled.			
2.2.1.1	Lead or backstop SSSA acute assessments, inputs to locust and/or Coronavirus response planning, according to demand (core).	Global	CIAT, CRS	Activity language changed
2.2.1.2	Backstop real-time data components of SSSA exercise in the field and pretest digital data collection tool (Mission).	Global	CIAT, CRS	Moved to Mission funded
2.2.1.3	Expand and pre-test mobile data collection tool for SSSAs into trader analysis including mapping (Mission).	UG	CIAT	

2.2.1.4	Develop SSSA Macro Assessment Tool for cyclone (or other disaster) affected areas (Mission).	MW	CIAT	
Sub IR	Sub IR 2.2.2 Emergency and humanitarian responses that link relief to development, especially links to private sector and formal and biodiverse suppliers are developed and promoted.			
2.2.2.1	Expand informal yellow bean seed and grain analysis to better understand informal traders as backbone of seed security and grain in emergency and chronic stress areas in Uganda and Kenya (Mission).	KE, UG	CIAT	Moved to Mission funded
2.2.2.2	Develop actionable plan appropriate for seed fairs in transitional / developmental context based on lessons from DiNER studies in Southern Africa and Latin America. (core).	Global	CIAT, CRS	Activity language changed
2.2.2.3	Completion of DiNER studies in Southern Africa and Latin America (core).	KE, UG	CIAT, CRS	
Sub IR	Sub IR 2.2.3 Emergency and development seed programs to capture market opportunities are leveraged.			
2.2.3.1	Review DiNER fairs and their sustainable link to private sector (core).	Global	CIAT, CRS	
2.2.3.2	Facilitated consultation process with stakeholders in developing best practices for seed distribution interventions in emergency response (core).	Global	CIAT, CRS	
Sub IR	Sub IR 2.2.4 Shock-responsive and resilience-based models--by crisis type, crop profile, and broad agro-ecological system are developed and tested			
2.2.4.1	Develop and test tool to assess resilience of seed systems, building on PCMA (Mission).	Global	CIAT	
IR	CCIR-1 Improved effective policy implementation and regulatory formulation for pluralistic seed systems			
Sub IR	CCIR 1.1 Country specific seed policy road maps developed			
CCIR 1.1.1	Finalize the global seed policy review (core).	Global	CRS	
CCIR 1.1.2	Develop country specific policy and regulatory systems maps for seed sector in Uganda, Malawi, Niger and Senegal (Mission).	UG, MW, NG, SE	CRS	
Sub IR	CCIR 1.2 Practices to expand and liberalize seed quality possibilities developed and implemented; market outlets and venues expanded; counterfeit seed issues addressed; free seed distribution restricted			
CCIR 1.2.1	Assess policy implications of the niche market business model in Kenya (core).	KE	CRS	
CCIR 1.2.2	Assess policy implications of the yellow bean field study in Tanzania, Kenya, and Uganda (core).	TZ, KE, UG	CRS	
CCIR 1.2.3	Facilitate implementation of standard seed in Kenya (core).	KE	AE, CRS	
CCIR 1.2.4	Market development and deployment for non-hybrid seed systems using a "Standard seed" strategy in Kenya (Mission).	KE	CRS	
CCIR 1.2.5	Increased use of Quality Declared seed in Uganda (Mission).	UG	CRS	
Sub IR	CCIR 1.3 Linkages and coordination of seed development efforts through consolidation of data and evidence are strengthened			
CCIR 1.3.1	Conduct a learning study in Zambia about private sector seed certification processes, approaches and counterfeiting measures (Mission).	ZM	CRS	Moved from core to Mission
CCIR 1.3.2	Conduct a learning study (with case studies) on national seed reserve systems with examples from other countries with implications for Ethiopia (core).	ET	CRS	New Activity
IR	CCIR-2 Established enhanced quality information flows for seed systems			
Sub IR	CCIR 2.1 Institutional and public policy information is better digitized			
CCIR 2.1.1	Complement the digital seed catalogue and develop a reference library for crop varieties in Malawi (Mission).	MW	CRS	
CCIR 2.1.2	Digitize the regulatory seed road maps in Uganda, Malawi, Niger, and Senegal (Mission)	UG	CIAT, CRS	
CCIR 2.1.3	Facilitate the modernizing of the seed industry with digital information management to support improved quality assurance / quality control (QA/ QC) in Kenya (Mission).	KE	CRS	
Sub IR	CCIR 2.2 Tools and technologies to capture quality information about seed supply in a geo-referenced manner are developed.			
CCIR 2.2.1	Assess the nature and genetic quality of seed (different grades) and grain of yellow beans produced and traded using DNA fingerprinting in Tanzania and Uganda (Linked to activity 1.2.1.1) (core).	TZ	CIAT, CRS	Uganda deleted
CCIR 2.2.2	Work with national and regional stakeholders to develop a technical road map (framework) for demand estimation / forecasting in Ethiopia (core).	ET	CRS	New activity
Sub IR	information flow			

CCIR 2.3.1	Continue monitoring feedback for the new biofortified bean varieties disseminated for the niche market business model using ICT in Kenya (core).	KE	CRS	
CCIR 2.3.2	Pilot SMS-based farmer feedback loop on seed quality ("Stop Bad Seed") in Tanzania (core).	TZ	AE	
CCIR 2.3.3	Stop bad seed in Uganda (Mission).	UG	AE	

Annex B. Uganda seed companies

	NAME OF DIRECTOR	COMPANY	OFFICE LINE, WEBSITE AND EMAIL	POSTAL ADDRESS	PHYSICAL LOCATION
1	H.C.V. Reddy General Manager (Group Operations)	East African Seed (U) Ltd.	info.ug@easeed.com , reddy@easeed.com www.easeed.com <u>+256 772 583783/+256 704223301</u>	P.O. Box 3678, Kampala	Plot No. 2981 & 888, Bombo Road, Kawempe
2	Nicolai Rodeyns	NASECO (1996) Ltd	nasecoseeds@yahoo.com , info@nasecoseeds.com , www.nasecoseeds.net <u>+256772-618001,+256754-618001</u> <u>+256465-442070/414-236365</u>	P.O. Box 24137, Kampala or P.O. Box 497, Hoima	Plot 21/23 Entebbe Road, Kampala
3	Narcis Tumushabe (C.E.O.)	FICA Seeds Ltd	ficaganda@gmail.com , www.ficaseeds.co.ug <u>+256414566631/700566631/+256772 980233</u>	P.O. Box 34095, Kampala	Plot 40 Bombo Road, Kawempe
4	Mutwafu Kisuule Emmanuel	Mirembe Seeds Co. (MISEC-O)	misecoseedscompany@gmail.com <u>+256782944672/754944672</u>	P.O. Box 4615, Buikwe Plot 19/20/21	Serutti Close, Buikwe Central, Buikwe Town Council or Kangulumira opposite County Headquarters
5	Sylvia N. Kyeyune (General Manager)	Simlaw Seeds Company (U) Ltd	simlaw@simlawseeds.com www.simlawseeds.com <u>+256417130151/417130150</u> <u>+256782323334/757323334</u>	P.O. Box 21303, Kampala	Plot 78-84, 6 th Street Industrial Area
6	Peter Otimodoch (Director)	Otis Garden Seeds	otisgard@yahoo.com <u>+256414269520/772442962</u>	P.O. Box 21943, Kampala	Plot 28/30 Station Road Industrial Park, Lira or P.O. Box 430, Lira
7	Josephine Okot (Managing Director)	Victoria Seeds Ltd	victoriaseeds@infocom.co.ug , jo-seeds@infocom.co.ug info@victoriaseeds.com , www.victoriaseeds.com <u>+256414346763/414230759/+256772 467365</u>	P.O. Box 11913, Kampala	Plot 2878, Namanve Industrial Park
8	Tom Baligeya	Simba Seeds Ltd	simbaseeds@gmail.com <u>+256772417150</u>	P.O. Box 183, Jinja	Njeru
9	a) Emmanuel Ngabirano b) Grace Namer	Grow More Seeds and Chemicals Limited	growmoreseeds@gmail.com , admin@growmoreseeds.com ceo@growmoreseeds.com , www.growmoreseeds.com <u>+256778036491/</u> <u>+256772577086/+256752222522</u>	P.O. Box 5213, Kampala	Plot No. 21, Luthuli Avenue, Bugolobi
10	Mpabaisi Joseph	Kazinga Channel Seed Company Ltd	ngcu@utlonline.co.ug <u>+256-48344370/772486575</u>	P.O. Box 32, Kasese	Plot 9/15 Fort Portal Road
11	Matovu Bruno B.	Kinoni Seeds Ltd	kinoni@ymail.com , www.kinoniseed.com <u>+256-772463114/392-003233</u> <u>+256772094975/701290860</u>	P.O. Box 30909, Kampala	Block 230, Plot 85 Kakooze Town Council, Nakasongola, 88 km Kampala-Gulu Road or Nalukolongo, Kampala
12	Kasaija Patrick Banage (Country)	Seed Co (U)Ltd	Kasaija@seedcogroup.com , www.seedcogroup.com <u>+250728153333/733222557</u>	P.O. Box 37468, Kampala	Farmers' Service, Container Village

	Representative – Great Lakes)				
13	Simon Mayanja (Managing Director)	CAII (Centre for Agricultural Inputs International)	simonbbale.caiiseeds@gmail.com +256787491602/701843000	P.O. Box 25510, Kampala	Farmers' Mall Shop No.6
14	Richard Masagazi (Managing Director)	Pearl Seeds Ltd	pearlseedltd1@gmail.com www.pearlseeds.com +256-393110404/772451871 +256772486384	P.O. Box 36240, Kampala	Plot 830, Kasambya- Busuukuma, Gayaza- Ziobwe Road or Plot 22/24 Shree Ganesh Plaza, Entebbe Road, L4, Shop 21
15	Paul Kagimu (General Manager)	Supa Seeds Africa Ltd	supa.seed@yahoo.com , www.supaseed.co.ug +256 772602357/754510901/+256 772744890	P.O. Box 31638, Kampala	Plot 29, Nakivubo Palace
16	Luzige Eugene (General Manager)	Masindi Seed Company Ltd (MASCO)	masindiseed@gmail.com , leugine@yahoo.co.uk +256465442297/772349032	P.O. Box 301, Masindi	Plot 140, Masindi Port Road
17	Okello Tonny (Managing Director)	Equator Seeds Ltd	+256-392568937/782620830/+256- 754620830 equatorseeds@yahoo.com www.equatorseeds.com	P.O. Box 1375, Gulu or P.O. Box 36692, Kampala	Koro Abili – Omoro District, Gulu – Kampala Highway
18	Dr. Zia Rahmam (General Manager)	BRAC Social Business Enterprises (U) Ltd	ziaur.rah@brac.net , www.brac.net +256758768213	P.O. Box 31817, Kampala	Nakeseke Seed Farm, Nakaseke
19	Moses Mugabirwe	Savana Seeds Ltd	savanaseeds1@gmail.com , www.savanaseeds.org , +256782476607/778000288	P.O. Box 258, Masindi	Persi Street, Masindi Town Council
20	Wankya Emmanuel (Director)	Crown Seeds	+256703606834/772047830 blessedtreeplanters@gmail.com	P.O. Box 274, Mukono	Mukono – Mpoma, Kayunga
21	G. S. Patil (General Manager)	Rhino Seeds Africa Ltd	+256702363165 info@rhinoseeds.net , www.rhinoseeds.net	P.O. Box 73271,	Plot No 177, Kyandonda Block 254 Kansanga- Kampala
22	Oyeng Christopher	Sahara Seeds limited	+256 775 904131 christopheroyeng9@gmail.com		Loro Odike Oyam
23	Mau Geoffrey	Select seeds limited	selectseedsltd@gmail.com , +256 772 53985 /+256 704600944	P.O. Box 16550, K'la	Bombo Rd, Plot 14/18 G/B Complex Plaza
24	Okello Herbert	United Seeds (U) limited	unitedseeds.ug@gmail.com +256 392 908190/+256 782711322	P.O. Box 70622 K'la	Buganda Rd, Mukwano Courts - Kampala
25	Keeya Yasin Salongo	Sarwa Agro Based Seeds Co. Ltd	sarwaagrobasedseeds@gmail.com 0788408922/0750438277/0393228740	P.O. Box 21834 Kampala- Kawempe	Kawempe, Opposite New Bubajwe Village, Bwaise I parish

Annex C. Private and Research Sector Roles in Emergencies – research protocol.

Background:

Understanding the roles that both private and research sectors play in emergencies is crucial in better focusing of intervention areas. ABC proposes to have an in-depth analysis of what is considered as pre-existing roles and this was based on literature reviews. The next phase was to undertake field interviews with practitioners in these sectors to get a sense of what their roles are and how they would better interface to enhance effectiveness in the integrated seed systems. These interviews will focus on emergency seed provisioning as well as national social protection or safety net programs and/or input subsidy programs that involve seed distribution in stress zones.

With the guides, organizations' general reflections on seed relief and their range of roles in the emergency seed market will be explored. How these roles have changed over time will be assessed. Specific experiences that these organizations have had, as they were involved in emergencies i.e. chronic stress situations as well as development contexts will be documented/evaluated including if there exists differences. In addition, specific reflections on the various interventions initiated will be reviewed. We will also explore how best the humanitarian community should be doing things to make the private and research sector interface more effectively.

Purpose:

To collect, review, collate and document roles of private and research sector in emergency seed provisioning and highlight missed opportunities in the sectors' interface with the humanitarian community.

Sample:

Thirty respondents drawn from the private and research sectors as well as humanitarian practitioners involved in emergency seed provisioning will be interviewed. These respondents will be included in the sample upon acceptance to be interviewed and with full disclosure of their participation in emergency seed provisioning. Exclusion criteria will include non-participation in humanitarian seed interventions in the past, lack of consent to be interviewed and unavailability for physical and/or remote call interviews, among others.

Methodology:

Engagement and Inclusion/Exclusion Criteria

Interviewees will be engaged based on past documentation of their role in emergencies and upon consultation with respective seed trade associations in the country (as applicable). For interviewees unable to physically meet will be given the option of remote interviews through calls. Actual face-to-face and in-depth interviews will be pre-arranged with those who accept to participate in the study. The countries of focus will be Uganda and Malawi.

Measurement

This study will use a mixed qualitative methods research framework, as it will build on existing literature using outputs of field interviews. The selected respondents will be interviewed by a structured guide based on the type of their organization i.e. seed company, NGO or research institution. These guides will include a measure of four different aspects of emergency seed provisioning that relate to the private/research sector roles i.e. i) supply of seed itself ii) provision of services relating to seed provisioning iii) provision of information and iv) influence of roles practice, programming and policy. Information and key elements on known and perceived roles of private and research sectors in emergencies will be cross-referenced.

Results and Dissemination

The updated version of literature review by Rubyogo et al 2004 is a pre-contribution to the final report and complements field data collected and reviewed.

Annex CI: Private Sector Guide

1. Has your company been involved in any seed relief interventions in the **past 5 years**?
 - ☐ Yes
 - ☐ No
2. Have you ever been asked to participate in any of the deliberations by seed relief agencies or donors to discuss how to improve the seed relief practice?
 - ☐ Yes
 - ☐ No
3. If **yes**, which ones, and do you feel your input was considered and taken up?
4. What types of seed/crops form the biggest proportion when orders for emergency are placed?
5. Which crop profile mix do you find easy to deal with as an organization i.e. special attributes (short maturity, cooking times etc.), cereals/legumes/vegetables readily available, guaranteed quality, and/or etc.? Which ones are difficult? *Please explain*
6. Are there types of orders you will not take for an emergency seed need?
7. Does your organization explore packing seed in small quantities (e.g. for demos) when addressing procurements for stress zones?
8. Does your seed packaging for seed delivered to stress zones include detailed information e.g. on agronomy et al.?
9. Do you get feedback for seed supplied i.e. on quality, ease of information uptake?
 - ☐ Yes
 - ☐ No
10. If **yes**, has that helped streamline/improve your operations? *Please explain*
11. Are you concerned with window of seed delivery times given its narrowness? *Please explain*
 - ☐ Yes
 - ☐ No
12. Does timely payment for orders determine if you participate in a relief seed program? *Please explain*
 - ☐ Yes
 - ☐ No
13. If **no**, what are the top **three** determinants of your participation in a seed relief program? *Please list in order of importance*
14. Have you had times when you had to import/export seed for an organization involved in relief interventions? How was the experience? *Please explain*
 - ☐ Yes
 - ☐ No
15. Any suggestions on best practices that can be adopted by private and research sector to strengthen their roles?

Annex C2: Research Sector Guide

1. Has your institution been involved in any seed relief interventions in the **past 5 years**? *Use framework*
 - ☐ Yes
 - ☐ No
2. Have you ever been asked to participate in any of the deliberations by seed relief agencies or donors to discuss how to improve the seed relief practice?
 - ☐ Yes
 - ☐ No
3. If **yes**, which ones, and do you feel your input was considered and taken up?
4. Is your institution ever involved in evaluation of effective seed aid? *Please explain*
 - ☐ Yes
 - ☐ No
5. Do you directly support the capacities and strategies of partners, local communities and civil societies on seed issues during periods of emergency? *Please explain*
 - ☐ Yes
 - ☐ No
6. What defines an ideal case for accountable, timely, coordinated and effective seed response that meets the needs and priorities of disaster-affected populations?

Annex C3: Non-governmental Organization (NGO) Guide

1. Has your organization been involved in any seed relief interventions in the **past 5 years**? Use *framework*
 - ☐ Yes
 - ☐ No
2. If **yes**, what types of seed relief interventions were you involved in and where?
 - a. Seeds and Tools
 - b. Direct seed distribution (DSD)
 - c. Seed Vouchers and Fairs (SVFs)
 - d. Seed Vouchers
 - e. PPB/On farm trials
 - f. Community Seed Banking
 - g. Community-based seed multiplication
 - h. Other _____
3. What was the experience for each intervention utilized? Which ones do you feel went well or badly?
4. What roles did you play in each of the interventions listed? Are there others you would not venture in again/at all? *Please explain*
5. In your view/opinion, which of the approaches to seed distribution (cash for seeds, vouchers, seed fairs, and DSD) uses resources most efficiently, with the least apparent waste, to deliver seeds to beneficiaries? *Please explain*
6. What types of seed/crops form the biggest proportion when orders for emergency are placed?
7. Which crop profile mix do you find easy to deal with as an organization i.e. special attributes (short maturity, cooking times etc.), cereals/legumes/vegetables readily available, guaranteed quality, and/or etc.? Which ones are difficult? *Please explain*
8. Are there types of orders you will not take for an emergency seed need?
9. Does your organization explore packing seed in small quantities (e.g. for demos) when addressing procurements for stress zones?
10. Does your seed packaging for seed delivered to stress zones include detailed information e.g. on agronomy et al.?
11. Do you get feedback for seed supplied i.e. on quality, ease of information uptake?
 - ☐ Yes
 - ☐ No
12. If **yes**, has that helped streamline/improve your operations? *Please explain*
13. Are you concerned with window of seed delivery times given its narrowness? *Please explain*
 - ☐ Yes
 - ☐ No
14. Is your organization ever involved in evaluation of effective seed aid? *Please explain*
 - ☐ Yes
 - ☐ No
15. Do the various projects you are involved in take into account acute and immediate needs, as well as the long-term needs of beneficiaries and partners? *Please explain*
 - ☐ Yes
 - ☐ No
16. Have you had times when you had to import/export seed for an organization involved in relief interventions? How was the experience? *Please explain*
 - ☐ Yes

☐ No

17. Are you engaged in establishment of Standard Operating Procedures (SoPs) with partner agencies to facilitate the implementation of any joint seed response options, for activation in case of emergency?

☐ Yes

☐ No

18. If **yes**, please explain giving examples of outputs

19. If **no**, what do you suggest as concrete procedures for the future in *emergency* and *recovery* responses?

Annex C4: Potential Organizations to Interview

Potential Interviewees in Uganda (15)

Table 1: Seed companies, contacts and crop focus

Organization	Interviewee	Contacts	Crop Focus	Date and Time (TBD)
Uganda Seed Trade Association	Nelson Masereka		ALL	2 Dec 08h30 – 09h30
NASECO - NALWEYO Seed Company	Rodeyns Nicolai		Upland rice, Sorghum, Maize and Sunflower	2 Dec 10h00 – 11h00
FICA - Farm Inputs Care Centre Ltd	Tumushabe Narcis		Maize, Dry beans and Cowpeas	2 Dec 11h30 – 12h30
Pearl Seed	Richard Masangazi	pearlseedtdl@gmail.com +256 772 486 384		2 Dec 14h00 – 15h00
Equator Seeds	Tony Okello	equatorseeds@yahoo.com +256 754 620 830	Maize, Beans, Sorghum, Sunflower and Millet	2 Dec 15h30 – 16h30
Victoria Seed	Josephine Okot	info@victoriaseeds.com +256 772 467 365		3 Dec 08h30 – 09h30
BRAC	Nuru	nokrach.c@brac.net +256 772 200 598 +256 759 214 311		3 Dec 10h00 – 11h00

Table 2: NGOs and Research Institutes, contacts and crop focus

Organization	Interviewee	Contacts	Date and Time (TBD)
World Food Program	Miyuki Yamashita	Miyuki.Yamashita@wfp.org	3 Dec 14h00 – 15h00
	Anders Petersson	Anders.Petersson@wfp.org	
Food and Agriculture Organization	Atingi Andrew	Andrew.Atingi@fao.org	4 Dec 08h30 – 09h30
Lutheran World Relief	Kenneth Barigye	KBarigye@lwr.org	4 Dec 10h00 – 11h00
ISSD Uganda	Oyee Patrick	dcop@issduganda.org	4 Dec 11h30 – 12h30
Catholic Relief Service			4 Dec 14h00 – 15h00
World Vision			4 Dec 15h30 – 16h30
Mercy Corps	Sean Granville-Ross		5 Dec 08h30 – 09h30
ICRC			5 Dec 10h00 – 11h00

Potential Interviewees in Malawi (16 +2?)

Table 3: Seed companies, contacts and crop focus

Organization	Interviewee	Contacts	Crop Focus	Date and Time (TBD)
Malawi Seed Trade Association	Supply Chisi		ALL	25 Nov 08h30 – 09h30
Peacock Seeds	Felix Jumbe	peacockmw@gmail.com +265 999 204-414	Beans, Cowpeas, Soya, Pigeon Peas, Groundnuts, Hybrid Maize	25 Nov 10h00 – 11h00
Funwe Farm	Steve Kamwendo		Beans, Cowpeas, Soya, Pigeon Peas, Groundnuts, Hybrid Maize	25 Nov 11h30 – 12h30
Demeter Agriculture	Prashant		Beans, Cowpeas, Soya, Pigeon Peas, Groundnuts, Hybrid Maize, OPV Maize	25 Nov 14h00 – 15h00
Panthochi	Wellington Tsokonombwe	panthochifarm@yahoo.com +265 999 746 794	Beans, Cowpeas, Soya, Pigeon Peas, Groundnuts, Hybrid Maize	25 Nov 15h30 – 16h30
Global Seeds	Shane Phiri	globalseedsmw@yahoo.com +265 996 376 838	Maize and Legumes	26 Nov 08h30 – 09h30
Museco	Madalitso Mijiga	mijiga@musecomw.com +265 999 953 596 +265 888 171 568	Beans, Soya, Groundnuts, Hybrid Maize	26 Nov 10h00 – 11h00
SeedCo	Boyd Luwe	bluwe@seedcomalawi.net +265 996 344 482	Beans, Soya, Groundnuts, Hybrid Maize	26 Nov 11h30 – 12h30

Table 4: NGOs, Research institutes, contacts and crop focus

Organization	Interviewee	Contacts	Date and Time (TBD)
Catholic Relief Service	Evan Callis	evan.callis@crs.org	26 Nov 14h00 – 15h00
Save the Children	Kamtimaleka Steve	Steve.Kamtimaleka@savethechildren.org	26 Nov 15h30 – 16h30
World Food Program	Millicent Odera	Millicent.Odera@wfp.org	27 Nov 08h30 – 09h30
Trocaire	Phillip Nyasulu	Phillip.Nyasulu@trocaire.org	27 Nov 10h00 – 11h00
Concern Worldwide	Kennedy Nyirenda	kennedy.nyirenda@concern.net	27 Nov 11h30 – 12h30
United Purpose	Esther Mweso	Esther.Mweso@united-purpose.org	27 Nov 14h00 – 15h00
Care International	Chiyambi Mataya	Chiyambi.Mataya@care.org	27 Nov 15h30 – 16h30
ICRISAT + DARS? IITA?	Felix Sichali	F.Sichali@cgiar.org	28 Nov 08h30 – 12h30

Annex C5: Characterization of Roles Framework

Table 5: Analysis Matrix for Perceived versus Actual Roles with Cross-reference

	Private Sector (PS)	Research Sector (RS)	Government (Govt)	NGO
Private Sector (PS)	How the PS views its own role	How the PS views the role of the RS	How the PS views the role of the Govt	How the PS views the role of NGOs
Research Sector (RS)	How the RS views the role of the PS	How the RS views its own role	How the RS views the role of the Govt	How the RS views the role of NGOs
Government (Govt)	How the Govt views the role of the PS	How the Govt views the role of the RS	How the Govt views its own role	How the Govt views the role of NGOs
NGO	How the NGOs views the role of the PS	How the NGOs views the role of the RS	How the NGOs views the role of the Govt	How the NGOs views its own role

Table 6: Assessment of Importance of Role at different stages of emergency response

Organization _____ Type _____ (PS, RS or NGO)	Level of Effort (1 = High, 2 = Medium, 3 = Low, 4 = N/A) a Role has on:		
Role	Preparedness	Implementation	Post
Seed Supply			
*** <u>Comment</u>			
Service Provision (related to seed)			
<u>Comment</u>			
Information Provision			
<u>Comment</u>			
Influence on Practice, Policy and Programming			
<u>Comment</u>			

****Comment on why they choose that rating on "Level of Effort"*

Importance of the role to the organization involved in emergencies	Answer → TO DISCUSS	Comment

Annex D. Global Food Security Cluster Survey for possible Global Agriculture ‘Task Force’

REVISED DRAFT FOR PILOT TESTING: 27 January 2020

[The following text should be included in the covering email to accompany the survey: The aim of the survey is to gather feedback from FSC in-country teams (FSC Coordinators and members) and gFSC members to: (i) determine whether there are any gaps in technical support for agricultural interventions in emergency, protracted and transitional contexts (including early action, emergency preparedness, emergency response, early recovery, and resilience interventions); (ii) determine whether there is a need for a new gFSC task force on agriculture to fill these gaps; and (iii) to identify potential outputs of such a task force. Please note that the term ‘agriculture’ is used to include crops, livestock, fisheries, and forestry sub-sectors.]

SECTION I: FOR ALL RESPONDENTS

Q1.1 How are you involved in the FSC?

- ☐ FSC member at national or local level [IF YES, go to: Q1.1a](#) Indicate country
- ☐ FSC coordinator at national or local level [IF YES, go to: Q1.1b](#) Indicate country
- ☐ gFSC member or observer at HQ or international level

Q1.2 What type of organization are you working for?

- ☐ International Organization/United Nations
- ☐ International NGO
- ☐ National NGO
- ☐ Government department or organization
- ☐ Donor
- ☐ Academia/University
- ☐ Other (Please Specify) _____

Q1.3 What best describes your current role(s) in supporting agricultural interventions in emergency, protracted and transitional contexts? Select all that apply.

- ☐ Project cycle: Design, planning, implementation, M&E
- ☐ Needs assessment and/or feasibility study
- ☐ Coordination
- ☐ Specialized technical support unit or department, including decision-making about intervention type
- ☐ Proposal-writing, fund-raising and/or fund allocation
- ☐ Other (Please Specify) _____

Q1.4 For which agricultural sub-sectors have you undertaken any of the roles indicated above in relation to interventions in emergency, protracted and/or transitional contexts (including early action, emergency preparedness, emergency response, early recovery, and/or resilience interventions)? Select all that apply.

- ☐ Crops / seeds [IF YES, respondent should complete Section 2]
- ☐ Livestock [IF YES, respondent should complete Section 3]
- ☐ Fisheries [IF YES, respondent should complete Section 4]
- ☐ Forestry [IF YES, respondent should complete Section 5]
- ☐ Other, e.g. apiculture, irrigation, soil and water conservation, etc. (Please Specify)

- ☐ Other (Please Specify) _____

[Any “other” categories listed here should also appear in the list of options to be ranked in Qu. 6.2]

Qu. 1.5 From which sources have you sought technical information relating to agricultural interventions to help you in undertaking your roles in relation to interventions in emergency, protracted and/or

transitional contexts? Tick all that apply and indicate whether or not you received adequate information from each source.

[For each source selected, go to: Qu 1.5a-j: Did you receive adequate technical information from this source? YES / NO / PARTLY]

- ☐ Colleagues within your organization or partner organization IF YES, go to Qu.1.5a (as above)
- ☐ Technical specialist(s) within government IF YES, go to Qu.1.5b (as above)
- ☐ Technical specialist(s) within academia or research organization IF YES, go to Qu.1.5c
- ☐ Food Security Cluster (either formally or informally) IF YES, go to Qu.1.5d
- ☐ Internet search / random website IF YES, go to Qu.1.5e
- ☐ Learning platform or resource centre IF YES, go to Qu.1.5f
- ☐ Producer(s) or producers' organization IF YES, go to Qu.1.5g
- ☐ Extension worker or community-based animal health worker IF YES, go to Qu.1.5h
- ☐ Private sector company or agro-input dealer IF YES, go to Qu.1.5i
- ☐ Other (Please Specify) _____ IF YES, go to Qu.1.5j

[After completing section I, the respondent should be directed to the sections of the survey that correspond to the answers selected for Qu.1.4].

SECTION 2: Seeds and crop-based agricultural interventions

Qu. 2.1 Please provide the reference details (title and author/agency) for any specific technical information resources (i.e. title of guidelines, training manual, website address, etc) that you refer to in undertaking your role(s) and/or have recommended to colleagues in relation to seed and/or crop-based

agricultural interventions in emergency, protracted and/or transitional contexts. Please specify one resource reference in each space provided. You may insert up to 5 different resource references.

Resource 1 _____

Resource 2 _____

Resource 3 _____

Resource 4 _____

Resource 5 _____

Qu. 2.2 Based on your own experience, have you been able to access adequate technical guidance for the various aspects of seed / crop-based agricultural interventions in emergency, protracted, and

transitional contexts? These aspects are presented below in relation to the project cycle and also in relation to more technical seed / crop-based agricultural issues.

	Information is adequate	Need for additional guidance	Not sure / Don't know
<u>PROJECT CYCLE</u>			
Needs assessment for seed / crop-based agricultural interventions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decision-making / feasibility regarding different types of interventions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sourcing and procurement of appropriate inputs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Implementation modalities for different intervention types	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Monitoring, including post-distribution assessments and post-harvest assessments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<u>TECHNICAL ISSUES</u>			
Identification of appropriate crops / seeds / tools and other inputs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identification of appropriate agronomic practices and/or technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Post-harvest processing and storage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marketing and market linkages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Qu. 2.3 Please provide any additional comments in relation to information gaps for specific intervention types within the crops / seeds sub-sector. Please be as specific as possible:

[this is an open-ended question – please allow about 8 lines for responses]

SECTION 3: Livestock and livestock-based agricultural interventions

Qu. 3.1 Please provide the reference details (title and author/agency) for any specific technical information resources (i.e. title of guidelines, training manual, website address, etc) that you refer to in undertaking your role(s) and/or have recommended to colleagues in relation to livestock and/or livestock-based agricultural interventions in emergency, protracted and/or transitional contexts. Please specify one resource reference in each space provided. You may insert up to 5 different resource references.

Resource 1 _____

Resource 2 _____

Resource 3 _____

Resource 4 _____

Resource 5 _____

Qu. 3.2 Based on your own experience, have you been able to access adequate technical guidance for the various aspects of livestock and/or livestock-based agricultural interventions in emergency,

protracted and/or transitional contexts? These aspects are presented below in relation to the project cycle and also in relation to more technical livestock-based agricultural issues.

	Information is adequate	Need for additional guidance	Not sure / Don't know
<u>PROJECT CYCLE</u>			
Needs assessment for livestock / livestock-based agricultural interventions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decision-making / feasibility regarding different types of interventions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sourcing and procurement of appropriate inputs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Implementation modalities for different intervention types	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Monitoring, including post-distribution assessments and	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<u>TECHNICAL ISSUES</u>			
Identification of appropriate animals / breeds / veterinary and other livestock-related inputs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identification of appropriate livestock-related practices and/or technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Production and processing of livestock products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marketing and market linkages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Qu. 3.3 Please provide any additional comments in relation to technical information gaps for specific intervention types within the livestock sub-sector. Please be as specific as possible:

SECTION 4: Fisheries interventions

Qu. 4.1 Please provide the reference details (title and author/agency) for any specific technical information resources (i.e. title of guidelines, training manual, website address, etc) that you refer to in undertaking your role(s) and/or have recommended to colleagues in relation to fisheries interventions in emergency, protracted and/or transitional contexts. Please specify one resource reference in each space provided. You may insert up to 5 different resource references.

Resource 1 _____

Resource 2 _____

Resource 3 _____

Resource 4 _____

Resource 5 _____

Qu. 4.2 Based on your own experience, have you been able to access adequate technical guidance for the various aspects of fisheries interventions in emergency, protracted and/or transitional contexts?

These aspects are presented below in relation to the project cycle and also in relation to more technical fisheries-based issues.

	Information is adequate	Need for additional guidance	Not sure / Don't know
<u>PROJECT CYCLE</u>			
Needs assessment for fisheries interventions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decision-making / feasibility regarding different types of interventions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sourcing and procurement of appropriate inputs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Implementation modalities for different intervention types	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Monitoring, including post-distribution assessments and post-harvest assessment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<u>TECHNICAL ISSUES</u>			
Identification of appropriate fishing equipment, fish breeds, feeds and other fisheries inputs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identification of appropriate fisheries-related practices and/or technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Production and processing of fish products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marketing and market linkages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Qu. 4.3 Please provide any additional comments in relation to technical information gaps for specific intervention types within the fisheries sub-sector:

SECTION 5: Forestry interventions

Qu. 5.1 Please provide the reference details (title and author/agency) for any specific technical information resources (i.e. title of guidelines, training manual, website address, etc) that you refer to in undertaking your role(s) and/or have recommended to colleagues in relation to forestry interventions in emergency, protracted and/or transitional contexts. Please specify one resource reference in each space provided. You may insert up to 5 different resource references.

Resource 1 _____

Resource 2 _____

Resource 3 _____

Resource 4 _____

Resource 5 _____

Qu. 5.2 Based on your own experience, have you been able to access adequate technical guidance for the various aspects of forestry interventions in emergency, protracted and/or transitional contexts?

These aspects are presented below in relation to the project cycle and also in relation to more technical forestry-related issues.

	Information is adequate	Need for additional guidance	Not sure / Don't know
<u>PROJECT CYCLE</u>			
Needs assessment for forestry interventions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Decision-making / feasibility regarding different types of interventions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sourcing and procurement of appropriate inputs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Implementation modalities for different intervention types	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Monitoring, including post-distribution assessments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<u>TECHNICAL ISSUES</u>			
Identification of appropriate tree species, tree seedlings and other forestry inputs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identification of appropriate forestry-related practices and/or technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Production and processing of timber and non-timber forest products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marketing and market linkages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Qu. 5.3 Please provide any additional comments in relation to technical information gaps for specific intervention types within the forestry sub-sector. Please be as specific as possible:

SECTION 6: FOR ALL RESPONDENTS

Qu. 6.1. Given the gaps that you have indicated above, please rank your top 5 preferred types of information support for the provision of additional information:

Ranking

- _____ Minimum technical standards, e.g. SPHERE, LEGS, etc
- _____ 'How to' implementation guidelines
- _____ Training manuals
- _____ Decision-making tools to determine appropriate intervention types
- _____ Case studies
- _____ Webinars
- _____ E-learning courses
- _____ Face-to-face presentation
- _____ Face-to-face training course

Qu. 6.2 Please rank the overall need for additional technical support in relation to the agricultural sub-sectors, where 1 refers to the highest priority need. If necessary, you can include additional sub-sectors in your prioritization.

Ranking

- _____ Crop / seed sub-sector
- _____ Livestock sub-sector
- _____ Fisheries sub-sector
- _____ Forestry sub-sector

[Any additional sub-sectors that were indicated in Qu. 1.4 should also appear here]

- _____ Other agricultural sub-sector (specify) _____
- _____ Other agricultural sub-sector (specify) _____

THE FOLLOWING QUESTIONS ARE FOR THE PILOT TEST PHASE ONLY AND WILL NEED TO BE REMOVED FOR THE ACTUAL SURVEY

Thank you for taking part in the pilot testing of this survey. The following three questions will help us to improve it.

P.1 Approximately how long did it take you to complete this survey?

- ☐ Less than 15 minutes
- ☐ 15-30 minutes
- ☐ 30 or more minutes

P.2 Was there any aspect of the survey that was not clear? YES / NO.

If YES: P.2a Which aspect(s) was / were not clear? Please download the survey and copy and paste any text that is not clear and state why it is not clear.

[I'm not sure how best we can capture the responses for this question – I am proposing that we provide a DOWNLOAD button so that people can then copy and paste the text from the survey. Any other ideas?]

P.3 Please provide any suggestions as to how we can improve the survey.

Annex E. Global Food Security Cluster Survey Results



global FOOD SECURITY CLUSTER

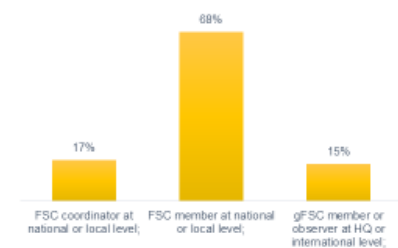
FSC Survey Results for possible Global Agriculture task force or working group

27 March 2020



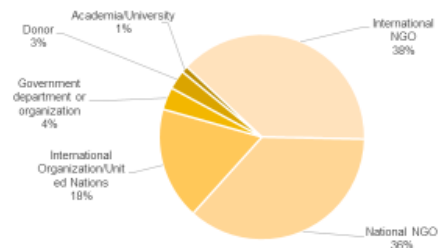
Responders

Responder involvement with FSC



201 responders

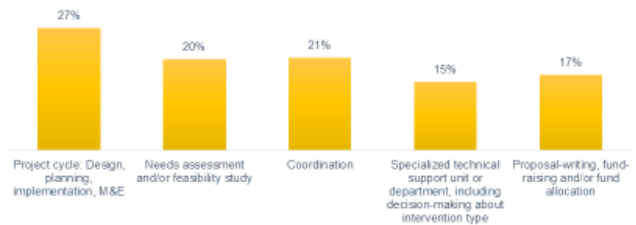
Organisations



Duty stations



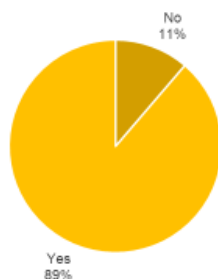
Current role





Technical information

Have you sought technical information relating to agricultural interventions to help you in undertaking your roles in relation to interventions in emergency, protracted and/or transitional contexts?



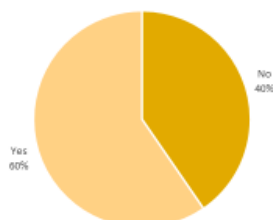
Was the information received adequate?

Yes No Partly Have not sought info from this source



Seeds and crop-based agricultural interventions

Have you played a supporting role in relation to Seeds and crop-based agricultural interventions in emergency, protracted and/or transitional contexts?



OVERALL:

- 54% reported a need for additional guidance
- 39% reported that information is adequate
- 8% don't know

Have you been able to access adequate technical guidance for the various aspects of seed / crop-based agricultural interventions ?

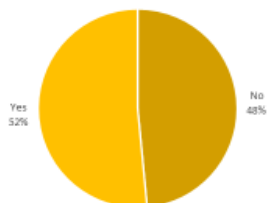
Information is adequate Need for additional guidance Not sure / Don't know





Livestock and livestock-based agricultural interventions

Have you played a supporting role in relation to livestock and livestock-based agricultural interventions in emergency, protracted and/or transitional contexts?



OVERALL:

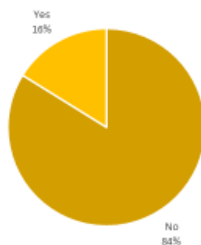
- 63% reported a need for additional guidance
- 27% reported that information is adequate
- 10% don't know

Have you been able to access adequate technical guidance for the various aspects of Livestock and livestock-based agricultural interventions ?

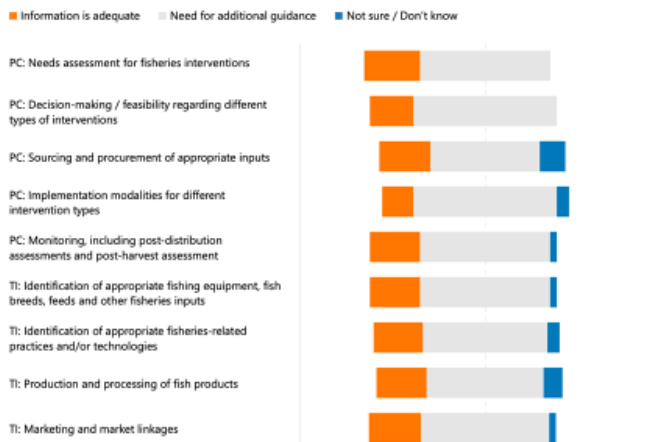


Fisheries interventions

Have you played a supporting role in relation to fisheries interventions in emergency, protracted and/or transitional contexts?



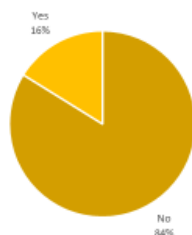
Have you been able to access adequate technical guidance for the various aspects of fisheries interventions ?





Forestry interventions

Have you played a supporting role in relation to forestry interventions in emergency, protracted and/or transitional contexts?



Have you been able to access adequate technical guidance for the various aspects of forestry interventions ?

Information is adequate Need for additional guidance Not sure / Don't know

PC: Needs assessment for forestry interventions

PC: Decision-making / feasibility regarding different types of interventions

PC: Sourcing and procurement of appropriate inputs

PC: Implementation modalities for different intervention types

PC: Monitoring, including post-distribution assessments

Ti: Identification of appropriate tree species, tree seedlings and other forestry inputs

Ti: Identification of appropriate forestry-related practices and/or technologies

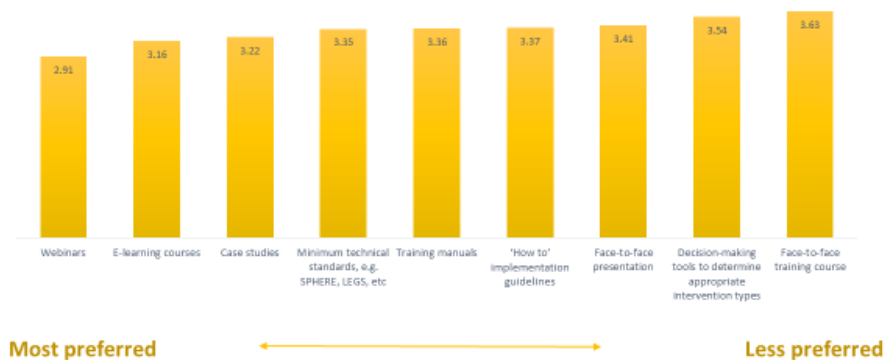
Ti: Production and processing of timber and non-timber forest products

Ti: Marketing and market linkages



FOR ALL RESPONDENTS

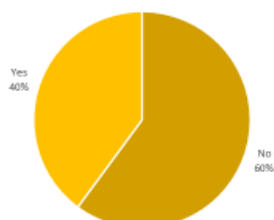
Rank your top preferred types of information support for the provision of additional information





FOR ALL RESPONDENTS

Are there other agricultural sub-sectors or technical agricultural issues for which you need additional technical support?



OTHER SUB-SECTORS PROPOSED:

1. Climate smart agriculture
2. Irrigation
- 3= Natural Resources Management
- 3= Extension methods & training
- 5= Pest control
- 5= Kitchen gardens
- 5= Agri-business / entrepreneurship



Main Findings

- Many respondents with good representation of different geographical areas and organizational background and also positions
- Most of the respondents are involved with Seeds/crops (60%) and Livestock (52%) sub-sectors but very few with fisheries (16%) and forestry (16%)
- Majority of respondents expressed the needs for more guidance:
 - 1) for seeds/crops, notably marketing, agronomic practices/technologies, and post-harvest management
 - 2) for livestock: Needs assessment, Implementation modalities for different intervention types, Sourcing and procurement of appropriate inputs
- Preferred formats for additional guidance showed very little difference among preferences; those most preferred were webinars, e-learning, case studies, minimum technical standards



Recommendations on the way forward

- ☐ Survey results highlight the **need to provide guidance on Seeds/crops & Livestock (SCL) agricultural interventions**. Options for how this can be done include:
 - ☐ Establishment of a Task Force within an existing Working Group
 - ☐ Expansion of an existing Working Group to include "SCL agriculture" (or similar) in its name
 - ☐ Creation of a new Working Group
- ☐ **Guidance on seeds/crops** should include:
 - ☐ technical guidance in market linkages, post harvest management and the identification of appropriate agronomic practices / technologies
 - ☐ This can also be linked with the other sub-sectors proposed, e.g. climate smart agriculture
- ☐ **Guidance on livestock** should include:
 - ☐ methodological guidance on the project cycle, notably needs assessment, implementation modalities and procurement
 - ☐ This can also be linked with other sub-sectors proposed, e.g. NRM
- ☐ If the SAG validates the creation of this WG/TF, the **next partners global meeting** could include a working session to define its Terms of Reference and Workplan.
- ☐ Additional analysis of the survey results can help to inform the development of the TOR and

---- end of FY20 SAR ----