

## FEED THE FUTURE SUPPORTING SEED SYSTEMS FOR DEVELOPMENT ACTIVITY

FY22 SEMI-ANNUAL REPORT  
OCT 1, 2021 – MARCH 30, 2022



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### **DISCLAIMER**

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## ACRONYMS

ADA	Agriculture Development Agent
AOR	Agreement Officer's Representative
BHA	Bureau for Humanitarian Assistance
C4SS	Cash Transfers for Seed Security
CCIR	Cross-cutting Intermediate Result
CIAT	International Center for Tropical Agriculture
CRS	Catholic Relief Services
DiNER	Diversity and Nutrition for Enhanced Resilience
DIP	Detailed Implementation Plan
EGS	Early Generation Seed
gFSC	Global Food Security Cluster
IR	Intermediate Result
LOA	Life of Activity
MEAL	Monitoring and Evaluation, Accountability and Learning
OI	Opportunity International
PABRA	Pan-Africa Bean Research Alliance
QDS	Quality Declared Seed
RBoA	Regional Bureau of Agriculture, Ethiopia
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
RSSSA	Rapid Seed System Security Assessment
The Alliance	Alliance of Bioversity International and CIAT
USAID	United States Agency for International Development
WCDI	Wageningen Center for Development Innovation

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## I. 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 Bureau for Humanitarian Assistance (BHA). Catholic Relief Services (CRS) is leading this consortium with support from partners that include: Agri Experience (AE), Alliance of Bioversity International and CIAT (the Alliance), Pan-African Bean Research Alliance (PABRA), and Opportunity International (OI). 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 for 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 Intermediate Results (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 of 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.

## 2. Executive Summary

In December, S34D collaborated with Agrilinks and organized the **Seed Systems Month**<sup>1</sup>. During this month S34D's partner, the Alliance, presented their Yellow Bean work in Tanzania during a global webinar called 'Grain Market: A Pull for Seed Businesses across Bean Corridors in Tanzania'<sup>2</sup>. This webinar was moderated by USAID/RFS Chief Scientist Dr. Bertram. Although 622 people registered to attend the webinar, 194 people from 80 countries attended. Most of the attendees joined from Tanzania and the USA. During seed systems month, S34D and its Consortium Partners published 9 blogs. These blogs were viewed over 8,000 times. Other Implementing Partners published 6 blogs. All blogs from the Seed Systems month can be read on the S34D Agrilinks' site<sup>3</sup>. A related 44 posts were published on social media (Twitter and Facebook) with 23,106 impressions, and after Seed Systems Month, 326 people requested to be added to the Agrilinks' mailing list.

As part of S34D's work, study findings were validated with stakeholders and then disseminated to a global audience through **webinars**. On January 25, S34D (CRS and New Markets Lab) presented the findings from the work that looked at the development and comparison of seed regulatory systems maps in Ethiopia<sup>4</sup>. This work was completed with a published report and a peer review paper. On February 17, S34D (CRS and Oxfam Novib) presented the findings of a global study about smallholder farmer groups seed production<sup>5</sup>. And on February 23, S34D (CRS and the Ethiopian Institute for Agricultural Research) presented the findings about the forage seed system performance in Ethiopia<sup>6</sup>. The work of the last two webinars was written in papers that have been submitted to journals for peer review.

Over the last two quarters, S34D published 13 assessment, survey and study **reports**. Here they are:

1. Uganda Seed Sector Profile<sup>7</sup>,
2. Seed demand forecasting in Ethiopia, assessment and recommendations for a technical roadmap<sup>8</sup>
3. Seed storage survey in Northern Tanzania<sup>9</sup>,
4. Seed and post-harvest technology provider financial bottleneck analysis the financing potential of the seed sector in Sub-Saharan Africa<sup>10</sup>,
5. Analysis of the Yellow Bean Corridor in Tanzania<sup>11</sup>,
6. Transforming last mile seed delivery: case of High Iron Beans (HIBS) niche market business model in Western Kenya study report<sup>12</sup>.
7. An analysis of opportunities and constraints in regulated finance for the emergency and humanitarian aid seed sector in Uganda<sup>13</sup>,
8. Rapid Seed System Security Assessment (R-SSSA) pilot evaluation report<sup>14</sup>,

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<sup>1</sup> <https://www.agrilinks.org/post/december-seed-systems-month>

<sup>2</sup> <https://www.agrilinks.org/events/grain-market-pull-seed-businesses-across-bean-corridors-tanzania>

<sup>3</sup> <https://www.agrilinks.org/activities/feed-future-global-supporting-seed-systems-development>

<sup>4</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00Z5R7.pdf](https://pdf.usaid.gov/pdf_docs/PA00Z5R7.pdf)

<sup>5</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00Z6VJ.pdf](https://pdf.usaid.gov/pdf_docs/PA00Z6VJ.pdf)

<sup>6</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00Z74H.pdf](https://pdf.usaid.gov/pdf_docs/PA00Z74H.pdf)

<sup>7</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00Z8M6.pdf](https://pdf.usaid.gov/pdf_docs/PA00Z8M6.pdf)

<sup>8</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00Z52V.pdf](https://pdf.usaid.gov/pdf_docs/PA00Z52V.pdf)

<sup>9</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00Z53Z.pdf](https://pdf.usaid.gov/pdf_docs/PA00Z53Z.pdf)

<sup>10</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00Z4TF.pdf](https://pdf.usaid.gov/pdf_docs/PA00Z4TF.pdf)

<sup>11</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00XS8V.pdf](https://pdf.usaid.gov/pdf_docs/PA00XS8V.pdf)

<sup>12</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00XV64.pdf](https://pdf.usaid.gov/pdf_docs/PA00XV64.pdf)

<sup>13</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00Z53S.pdf](https://pdf.usaid.gov/pdf_docs/PA00Z53S.pdf)

<sup>14</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00Z53C.pdf](https://pdf.usaid.gov/pdf_docs/PA00Z53C.pdf)

9. Diversity for Nutrition and Enhanced Resilience (DiNER) fairs and voucher programming: evaluation and learning in the Southern Africa Region<sup>15</sup>,
10. Assessment of voucher modality in CRS Nicaragua seed fairs<sup>16</sup>,
11. A comparison of voucher and cash transfer modalities for Diversification in Nutrition and Enhanced Resilience (DiNER) fairs in Guatemala<sup>17</sup>,
12. Designing and implementing seed fairs to support on-going seed market linkages. An experience from Eastern Uganda<sup>18</sup>, and,
13. Using regulatory flexibility to address market informality in seed systems: a global study<sup>19</sup>.

Two **papers** were published. One in MDPI/Agronomy titled: Using Regulatory Flexibility to Address Market Informality in Seed Systems: A Global Study<sup>20</sup> and the other in CABI Reviews titled: Realizing economic and environmental gains from cultivated forages and feed reserves in Ethiopia<sup>21</sup>.

Two other papers were submitted to peer review journals. One is written in collaboration with Oxfam Novib about high-quality seed production by smallholder farmer groups and the other is written in collaboration with the Ethiopia Institute for Agriculture Research (EIAR) and is about forage seed system performance of Ethiopia.

For the March **Gender Theme Month**<sup>22</sup> on Agrilinks, S34D contributed the blog ‘Gender and Youth-Inclusion in Financing of the Seed Sector in Sub-Saharan Africa<sup>23</sup>’.

S34D continued engaging with several Missions to plan for activities, to revise activities based on changing context and to keep USAID informed about S34D’s progress. To this end, S34D set up meetings and held discussions with USAID/Washington, Zambia, the DRC, Ethiopia, Sudan, South Sudan, Guatemala, Timor-Leste and Cambodia.

During this period, S34D continued to implement and wrap up a number of the previous fiscal years activities and implemented six FY22 activities under the Emergency, Humanitarian Aid and Resilience (EHAR) portfolio, three activities in Zambia and eight activities in Ethiopia.

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<sup>15</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00Z5NB.pdf](https://pdf.usaid.gov/pdf_docs/PA00Z5NB.pdf)

<sup>16</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00XS9H.pdf](https://pdf.usaid.gov/pdf_docs/PA00XS9H.pdf)

<sup>17</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00XVQD.pdf](https://pdf.usaid.gov/pdf_docs/PA00XVQD.pdf)

<sup>18</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00XS93.pdf](https://pdf.usaid.gov/pdf_docs/PA00XS93.pdf)

<sup>19</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00XVC1.pdf](https://pdf.usaid.gov/pdf_docs/PA00XVC1.pdf)

<sup>20</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00XVC6.pdf](https://pdf.usaid.gov/pdf_docs/PA00XVC6.pdf)

<sup>21</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00ZBD8.pdf](https://pdf.usaid.gov/pdf_docs/PA00ZBD8.pdf)

<sup>22</sup> <https://www.agrilinks.org/theme-month-collections/gender-theme-month-2022>

<sup>23</sup> <https://www.agrilinks.org/post/gender-and-youth-inclusion-financing-seed-sector-sub-saharan-africa>

### 3. Accomplishments vs Targets

Based on the activities in the approved FY22 work plan and the DIP, S34D achieved the following in the first half of FY22.

S34D Indicator	Indicator Name	Target FY22	Achieved FY22 Q1 -Q2	% Target Reached	Reason for Deviation and Explanation
OUT-1	Number of seed actors trained	130	27	21	Under 1.1.3.1, 27 of the 60 seed inspectors were trained using Zoom as the e-learning platform is being finalized.
OUT-2	Number of individuals participating in S34D activities	2130	27	3	27 out of 60 seed inspectors from activity 1.1.3.1. 0 out of 30 stakeholders from activity 2.1.2.2, because it will start in Q3. 0 out of 2040, 40 ADAs and 2000 farmers, from activity 2.1.3.2 will be engage with in Q3 and 4.
OUT-5	Number of studies that have fulfilled all the criteria	11	13	118	These are reports from FY21 that were completed in FY22. The FY22 studies are not completed yet. E.g. the PAR and PIA reports, and Zambia business model report have not been completed yet. Of the 4 reports from 2.2.2.2 one has been submitted to USAID for review (Haiti) the DRC and South Sudan reports are not completed yet. The guidance from 2.2.2.4 is being drafted.
OUT-6	Number of tool-kits developed	10	0	0	1.3.2.2 a lit review this year and the toolkit will be developed next year; 1.3.3.1 framework will be drafted later this year; 1.3.3.5 RSSSA toolkit is being tested in Q3 and refined in Q4; 2.1.2.2. 2.1.2.3 start in Q3. CCIR 1.2.8 has been cancelled
OUT-10	Number of seed policy roadmaps developed	6	6	100	Under CCIR 1.1.1 6 regulatory systems maps were developed, validated and disseminated.
OUT-11	Number of inclusive seed policy specific dialogues facilitated with S34D assistance	2	0	0	CCIR 1.3.5 starts in Q3 and CCIR 1.3.7 is a new activity and also starts in Q3.
OUT-12	Number of evidence-based seed policy briefings developed	3	2	67	FY21 CCIR 1.2.1 one policy was developed focusing on Vietnam Seed Clubs, QDS Producers, and Niger Federation of Millet Growers – A Comparative Analysis. CCIR 1.3.3. report. CCIR 1.3.7 is new and starts in Q3 and 2.1.3.2 policy brief is planned for later this year.
OUT-13	Number of information sets digitized and shared in public domain	1	1	100	CCIR 2.2.1 the forage informatic dashboard was validated and disseminated
OUT-14	Number of tools and technologies generated and/or augmented on seed supply and quality	2	0	0	CCIR 2.2.2 and CCIR 2.2.5 were put on hold, due to the pending post-conflict assessment in Ethiopia.

## 4. Summary of accomplishments by IR

### IR 1.1 Constraints in formal seed systems identified and mitigated

#### Sub IR 1.1.1 Operational efficiency of seed companies increased

No activities planned under this Sub IR.

#### Sub IR 1.1.2 Seed availability of climate – smart crops increased, through enhancing EGS capacities of firms and producers

No activities planned under this Sub IR.

#### Sub IR 1.1.3 Capacities of local seed actors strengthened

##### Continue from FY21 - Activity 1.1.3.1 (FY20 1.1.1.6) Digital training of seed inspectors and samplers in Zambia (core).

**Achievements:** The content of the e-learning platform, or Learning Management System (LMS), has been completed. The content contains 8 units and 32 sub-units. Each sub-unit has knowledge checks throughout and quizzes at the end of each unit. The first units go over general seed content, such as 'seed industry in Zambia', 'plant breeding', and 'seed certification'. The other units are teaching more specifically about the seed certification processes and seed multiplication as well as details for a dozen crops under legumes, cereals, cotton, roots and tubers, oil crops, pasture legumes, and grasses. The Zambia Seed Control and Certification Institute (SCCI) subject matter experts recorded the voice-over for all the content, and the platform developer is working on making the platform Section508 compliant. The developer is also ensuring the platform's security. The platform is built using Moodle. Moodle has security built into software design<sup>24</sup>. MoodleCloud sites are hosted on an Amazon web server<sup>25</sup>. Standard General Data Protection Regulations (GDPR)<sup>26</sup> and Moodle privacy policy apply. Automated backup for all courses will be set up every week or every day, depending on platform traffic. Full site backup from the Moodle cloud account can be taken manually by SCCI's administrator. Search engines will not have site access. Account lockout threshold is set to 5 failed attempts with a lockout window of 30 minutes. After the second lockout, the administrator will be notified. Specific password requirements are enabled. Captcha is enabled for self-registration, though not for login. Users can request their data to be removed from their profile page.

While the seed inspector training e-learning platform was being developed, SCCI continued to train seed inspectors, using Zoom and in-person practical courses. The table below shows the participants' November and March refresher and initial training details.

Country	Type of training	Total trained	Public sector	Private sector	Male	Female	Number examined	Number passed exams	Dates training conducted
Zambia	Refresher training	17 (3 women)	0	17 (3 women)	14	3	17 (3 women)	16 (3 women)	Nov 10-18, 2021
Zambia	Initial training	10 (4 women)	9 (4 women)	1	6	4	10 (4 women)	7 (3 women)	Mar 14-18, 2022
<b>Totals</b>		<b>27 (7 women)</b>	<b>9 (4 women)</b>	<b>18 (3 women)</b>	<b>20</b>	<b>7</b>	<b>27 (7 women)</b>	<b>23 (6 women)</b>	

<sup>24</sup> <https://docs.moodle.org/dev/Security> and <https://moodle.com/security-privacy/>

<sup>25</sup> <https://aws.amazon.com/security/>

<sup>26</sup> <https://gdpr-info.eu/>

**Learning:** The work of developing the LMS has been exciting and demanding at the same time for SCCI. Much of the workload was not anticipated and combining the workload with SCCI's routine activities has been a challenge. Support from S34D in holding workshops has been timely and very helpful in attending to the workload for the development of the LMS.

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

There were no activities under this IR during the reporting period.

## **IR 1.3 Strengthened capacity of emergency and humanitarian aid programs to respond effectively to acute and chronic stress**

The aim of this IR is to strengthen the capacity of emergency and humanitarian aid programs by: (i) generating an evidence base on the impact of emergency seed interventions (Activity 1.3.1.1); (ii) generating learning and best practices for different types of emergency seed interventions (with particular focus on cash-based modalities); and (iii) developing conceptual and practical tools for use by humanitarian actors. Learning is being promoted through participatory approaches, particularly the use of participatory action research or 'learning by doing,' in which new approaches are being piloted and adapted by implementing partners in Ethiopia and Guatemala (Activity 1.3.2.3). S34D continues to work with the Agriculture Working Group of the Global Food Security Cluster (gFSC) on Activities 1.3.1.1 and 1.3.3.5.

Work undertaken since the start of FY22 clearly illustrates the need for enhanced capacity of humanitarian actors, not only to understand seed systems and seed security, but also to be able to translate this understanding into appropriate interventions through response analysis. Feedback from gFSC partners involved in the Rapid Seed System Security Assessment (Activity 1.3.3.5) clearly identified that remote technical assistance was critical for data interpretation and response analysis. This suggests that the three types of outputs being generated through Sub-IR 1.3 (as listed above) should be augmented by the provision of remote technical assistance.

### **Sub IR 1.3.1 Select emergency and humanitarian past actions assessed: focus on farmer evaluation, new varieties, and markets (local and formal)**

***Continue from FY21 – Activity 1.3.1.1 (CCIR 2.3.1) Participatory Impact Assessment (PIA) of Emergency Seed Interventions (BHA).***

**Achievements:** The activity is led by CRS and is being implemented in collaboration with World Vision International and the Global Food Security Cluster. Due to COVID-induced delays, new interventions were selected for assessment. Interventions initially selected were implemented two years ago, and it would be difficult for farmers to be able to recall their impact. An alternative country, the DRC, was selected to replace Mozambique. The focus of the assessment in the DRC will be a USAID Bureau for Humanitarian Assistance (BHA) funded Emergency Food Security Project called Ditekemena (hope in Tshiluba) in Kasai Central, where seed fairs with vouchers were implemented in March 2021 (3,000 beneficiaries) and August 2021 (7,500 beneficiaries). In Uganda, the assessment will focus on a direct seed distribution intervention for refugees and host communities in Adjumani (Northern Uganda) that was implemented by World Vision in May/June 2021, as part of a broader, ongoing COVID response. Fieldwork planning for both countries is currently ongoing. S34D continues to liaise with both SEADS (Standards for Supporting Agricultural Livelihoods in Emergencies) and the FAO Evaluation Unit on this activity, particularly in relation to the PIA methodology. FAO is

currently undertaking its own assessment of emergency seed interventions in South Sudan, and meetings were organized by the S34D-FAO Technical Oversight Team to discuss the methodology being used by the FAO consultant in South Sudan.

*Learning:* The PIA methodology that S34D intends to apply for this activity (as developed by Tufts University) was selected because it does not require baseline data. However, the methodology is highly specialized and requires considerable capacity to be able to implement it well. In South Sudan, FAO has the opportunity to draw on existing baseline data, so they will not apply the PIA methodology to the same degree that S34D is planning.

### **Sub IR 1.3.2 Emergency and humanitarian responses that promote climate resilience, including food income, cover, and fodder crops are catalyzed**

#### **Continue from FY20 – Activity 1.3.2.2 Generate recommendations for integrating vegetable seeds into humanitarian responses (BHA).**

*Achievements:* This activity will begin in May 2022 with a literature review that will guide the focus of this activity – exotic vegetables, indigenous vegetables, or vegetatively propagated crops. This literature review will guide the follow-on key informant interviews to be held in FY23 to help generate recommendations for integrating vegetable seeds into humanitarian responses.

#### **NEW – Activity 1.3.2.3 Participatory Action Research into cash-based seed security responses in Guatemala & East Africa (BHA).**

*Achievements:* This activity complements Activity 2.2.3.1 and offers an important opportunity both to learn about and to enhance cash-based seed security interventions through participatory action research. Two interventions have been identified to form the focus of this activity: (i) a cash transfer project involving agricultural inputs fairs to be implemented in Guatemala under the 27-month RAICES project; and (ii) a cash transfer for vegetable seed that will accompany a broader voucher-based seed security project in Ethiopia. Discussions with each of the country teams have identified new approaches and the learning questions for each PAR study. In Guatemala (where farmers appear to prefer the local *criollo* varieties), discussions between S34D and the Country Team led to some refinements in the plans for the intervention, and it has been proposed that seed of improved varieties should be made available in small “test” packs for farmers to trial. In Ethiopia, the Country Team will test a new post-distribution monitoring tool for traders, to determine the extent to which cash-based transfers promote market linkages between farmers and seed providers. Learning questions related to household decision-making and the use of cash transfers will be explored.

*Learning:* Two key lessons have emerged to date through the discussions with the Country Teams. In Guatemala, despite a good level of understanding about local seed systems on the part of project staff, this does not appear to have been applied to the design of the seed intervention. S34D staff had previously assumed that – in general – poorly-designed emergency seed interventions stem from a lack of prior assessment or understanding of the local seed systems. In this case, however, a tried-and-tested response (i.e., vouchers and fairs) has simply been adapted by changing vouchers for cash, regardless of the local seed system context, and without careful thought about the specific problems to be addressed or the corresponding aims of the intervention and how it should be designed. This lesson reinforces the importance of good response analysis for the design of interventions.

In Ethiopia, discussions with the Country Team revealed a slight difference in the understanding of seed markets and how seed market linkages might be impacted by cash transfers, particularly in terms of scale. By introducing and testing a post-distribution monitoring tool for seed vendors, it is hoped that

both the Country Team and S34D might usefully learn more about the scale at which cash transfers might (or might not) effect changes in market linkages.

### **Sub IR 1.3.3 Tools and information systems to frame shock responsive models developed**

*Continue from FY20 - Activity 1.3.3.1 Frameworks and response options for resilient seed systems (FY20 BHA).*

**Achievements:** this activity will start in Q3.

*New - Activity 1.3.3.5 Strengthen capacity for Rapid Seed Systems Security Assessments (BHA).*

**Achievements:** The Rapid Seed System Security Assessment Pilot report was finalized and posted to the DEC<sup>27</sup>. Based on recommendations in the report, a task force composed of USAID, CRS and FAO seed system experts in addition to select global Food Security Cluster member RSSSA participants was created to address issues raised in the pilot. These include:

- What is the difference between the RSSSA and the standard SSSAs?
- Is the RSSSA really rapid?
- How will the RSSSA be packaged and marketed?
- How do we improve the gender sensitivity of the methodology?
- Is support required from seed system experts?

To address the issues, the task force subsequently established a workplan. The workplan includes the following tasks:

- Revision of tools,
- Testing of gender-sensitive household questionnaire with CRS/DRC and IRC/Somalia,
- Digitization of tools,
- Automating data analysis, and
- Developing an RSSSA Training curriculum.

IRC/Somalia will be conducting an RSSSA in June in which the revised tools will be tested.

**Learning:** During the task force meeting, participants focused on needed support to conduct not only the RSSSA, but any SSSA. A survey was conducted with participating organizations to understand their motivation for undertaking the RSSSA and identify preferred forms of support for assessments. Results of the survey showed that the main reason for undertaking an RSSSA rather than a normal SSSA was the support provided for the RSSSA. This was closely followed by the related lack of seed system expertise within the organizations. Equally, respondents considered that an SSSA would require too much time. In terms of priorities for support in conducting seed system assessments, respondents felt that remote technical assistance was most important in the data interpretation and response analysis phases. Digital tools were highlighted as a need for data collection and analysis. Training modules were considered most important for training the field teams while written documentation would help participants better understand seed systems.

### **Sub IR 1.3.4 Last mile delivery solutions especially for chronic stress areas (small packs, boutiques, WhatsApp seller linkages) developed**

No activities planned under this Sub IR.

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<sup>27</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00Z53C.pdf](https://pdf.usaid.gov/pdf_docs/PA00Z53C.pdf)

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

### **Sub IR 2.1.1 Local seed network strategies (to interface, collaborate, and leverage) and local capacities are assessed**

***NEW - Activity 2.1.1.4 Scoping business models to strengthen forage seed systems and production of cultivated forages in Zambia (RFS).***

*Achievements:* National and international consultants were identified for this activity. Survey instruments that will provide insight into the partnership landscape on forage and animal feed subsectors, and categories including forage seed system, forage crop cultivation, and livestock output markets (such as dairy and feedlots) were drafted, reviewed, and finalized.

*Learning:* Forage seed multiplication is happening in Zambia across both formal and informal seed systems. Livestock is important in national strategies and the livestock output pull is predominant in southern and western provinces of the country.

### **Sub IR 2.1.2 Crop and seed platforms that link formal and informal seed systems are catalyzed and supported**

***NEW - Activity 2.1.2.2 Strengthen capacity of forage (certified and quality declared assurance) seed production (Mission).***

*Achievements:* The scope of work for the national consultant has been drafted by the Alliance and recruitment is in the process. Discussions are ongoing about the choice of forage varieties for which training manuals will be developed. Partners are being scoped out with whom S34D will leverage to disseminate the training once the training content is finalized. Furthermore, the team discussed and decided that all media channels will be used to disseminate the learnings. These could be short videos that farmers and seed multipliers could look at to learn about forages cultivation management practices.

***NEW - Activity 2.1.2.3 Increase capacity of actors on animal feeding using cultivated forage in Ethiopia (Mission).***

*Achievements:* Consultancy with the international expert is established. Work is underway to develop training manuals. The content in these manuals will be further refined based on the learnings from the activity that examines post-conflict situation in Ethiopia.

### **Sub IR 2.1.3 Formal sector suppliers and NARs/breeders leveraged and linked**

***NEW - Activity 2.1.3.2 Promote access to locally grown legume seed through the use of agricultural development agents in Zambia (RFS).***

*Achievements:* Although the 'integrating gender into PASP<sup>28</sup> Services' manual was designed for a particular type of last mile agent, the review of the manual with the Zambia project team, reiterated that this manual would need limited adaptations to be used with other last mile agent models. Furthermore, as staff were already trained on this content virtually a year ago, but had not yet implemented the training, a refresher session was important, which required substantially less time than the initial training.

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<sup>28</sup> PASP stands for Private Agricultural Service Providers

**NEW - Activity 2.1.3.3 Strengthen the supply of forage early generation seed systems (FEGS) in Ethiopia (Mission).**

*Achievements:* After several rounds of discussions with the team members it was decided that EGS for forages should be strengthened with the collaboration between international and national partners. The value chain of EGS production will be specified along with targets for each of the varieties to be achieved. This agreement will result in the establishment of MoUs between the relevant parties specifying roles, responsibilities, hand-offs, and targets for EGS volumes by varieties.

**Sub IR 2.1.4 Effects of market-based interventions on seed market operations and last mile delivery systems are assessed**

**NEW - Activity 2.1.4.2 Pilot the cultivation of improved forages and densification of cultivated forages into pellets (sites: one in Afar and two in SNNPR (Mission).**

*Achievements:* After consultations with USAID Ethiopia and USAID Washington, this activity was put on hold until more is known about the conditions in the post-conflict era.

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

In FY22, work under IR 2.2. on the relief–development interface has focused specifically on: (i) interventions in the context of fragile states, and (ii) cash transfer modalities (in various emergency and resilience-building contexts). Both focal areas offer some interesting questions and emerging findings in relation to support for market-based seed systems. In fragile states, for example, one such question is whether seed markets are solely being driven by donor-funded emergency seed distribution programs. One implication of this is that it will necessarily take a very long time (many years) to create genuine demand for seed by farmers in fragile states. Historically, the case of post-war Mozambique provides some relevant learning in this regard (see the Learning Section on the impacts of free seed distribution on seed system development). Looking across different transfer modalities for emergency seed security interventions – direct distribution, vouchers, and cash – it appears that implementing partners are most likely to try and address the need for market development as part of cash transfer programs. Whether this modality is the most effective in supporting market development, however, remains to be seen. More generally, Activity 2.2.2.4 will provide a typology of different seed interventions across the relief-development nexus and how they address various market dimensions in different contexts.

**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**

No activities planned under this 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**

*Continue from FY21 – Activity 2.2.2.2 Support the emergence of enhanced and resilient seed sectors in fragile states, e.g., in DRC, South Sudan, Haiti.*

*Achievements:* This activity has continued from FY21 to allow additional time to complete all three case studies and the overall synthesis report. The draft Haiti case study report was completed at the end of FY21 and is currently being reviewed by USAID. The DRC report was drafted and reviewed internally and is currently undergoing revision. Building on the lessons that emerged from the earlier work regarding the important role of government in regulating seed markets that allow private seed companies to operate with confidence (see FY21 Annual Report), Agri Experience has been contracted to provide additional inputs on private seed companies and seed law for the DRC case study. Wageningen-Center for Development Innovation (WCIDI) was contracted to undertake the South Sudan case study under a co-financing arrangement, and most of the fieldwork has now been completed. It is expected that the South Sudan case study report will be drafted in Q3.

*Learning:* Lessons that emerged from this activity include: (i) the importance of community-based seed production (CBSP) across all three countries, both for improved varieties and local varieties, though quality was generally an issue, (ii) the role of informal traders vis-a-vis NGOs in seed provisioning is seen to vary across the three case studies, and (iii) the lack of detailed information from the Haiti and DRC case studies to respond to questions relating to vulnerability in the sense of powerlessness and marginalization. In Haiti, the Madam Sarah informal traders seem to be a missed opportunity, whereas in the DRC, NGOs have been working closely with informal traders, though it is not clear whether the NGOs are merely ‘using’ the traders, or if they are ‘supporting’ them or helping to ‘develop’ their businesses. It is also not clear whether seed markets are solely being driven by donor-funded emergency seed distribution programs, or if there is also a genuine demand for seed by farmers. In addition to women, youth and people with disabilities, other types of vulnerable groups in fragile states include indigenous peoples, certain religious or ethnic groups, displaced households, returning soldiers, etc. The South Sudan case study is currently exploring these multifaceted notions of vulnerability in more detail regarding seed system resilience.

*New - Activity 2.2.2.4 Develop guidance for emergency, resilience, and development seed interventions (BHA).*

*Achievements:* This activity is designed to provide a rapid overview of dos and don'ts for seed interventions relative to a range of market conditions from extreme shock and market failure, from functioning informal markets to well-functioning formal markets. In many humanitarian and development projects, the implementing teams need to make rapid decisions on how to deal with improving access to seeds for their clients. All too often, project teams default to free or subsidized distribution or use a range of other delivery mechanisms that are supply push methods, rather than supporting mechanisms that lead to sustainable supplies of seed. Methods such as seed vouchers and fairs are commonly used with the anticipation that short-term transactions between farmers and seed suppliers will lead to long-term repeat business. In reality, however, this is rarely the case. This short document will provide project teams and agencies who are interested in using appropriate tools for improving short-, medium- and longer-term access to improved seed, with guidance on what to do and what not to do, based on their market conditions. The S34D teams have met to discuss the overall design of the document. The first draft will be completed and discussed in more detail, prior to submission of a final document.

*Learning:* There have been several documents released about the success of seed vouchers and fairs as a market-led strategy for linking farmers to seed markets. However, there has been little evidence that farmers who attend seed fairs then go on to regular procurements of quality seed from formal input supply markets. More recent studies by CRS explored the effectiveness of seed fairs for developing new formal markets for input suppliers in terms of farmers who attended seed fairs in graduating to buying seed. While seed fairs were found to be an effective mechanism to enable farmers' access to seed, the

evidence for sustainable market buying of seed thereafter was slim. This suggests that, although seed fairs offer farmers more choice in the seed they exchange for their vouchers, it does not support the view that most farmers who have been to seed fairs then graduate to the market in subsequent years. This, therefore, suggests that projects should use seed vouchers with caution if they are aiming to establish long term seed markets and that more investment should be made in market-based solutions with the private sector, rather than subsidizing the seed sector, as it may be that agencies are actually undermining the private sector even though their intentions were to support it.

## **Sub IR 2.2.3 Emergency and development seed programs to capture market opportunities are leveraged**

### **Continue from FY21 - Activity 2.2.3.1 Develop and test market-based emergency seed security interventions (BHA)**

**Achievements:** This activity is compiling an updated practice review of cash transfers for seed security, based on experiences since the completion of the earlier review by Keane et al (2019)<sup>29</sup>. Six detailed case studies and five shorter ‘examples’ of recent cash transfers for seed security have been researched, drafted, and revised, and these are currently being synthesized to draw out lessons. Interviews and correspondence with six donors were also conducted to help identify barriers that prevent the use of cash transfers for seed security. The report will be completed in Q3.

**Learning:** Cash transfers offer a very flexible programming modality for enhancing seed security in emergency and resilience-building contexts. While cash has mainly been used to support the demand side (to help farmers to acquire seed), one of the case studies shows how cash can also be used to support the supply side (to allow seed multipliers to produce seed). Cash can potentially allow farmers to access seed from either the formal or the informal seed systems, or both. Cash transfers have been used in programs across the humanitarian-development nexus fostering post-disaster recovery and building resilience into programming.

Some donors are particularly concerned to ensure the quality of seed provided through cash transfers – this is discussed in the learning piece in the Learning Section. Although in some cases this has deterred the use of cash transfers for seed security, some implementing partners have addressed the seed quality issue by the introduction of soft conditions such as messaging and labeling<sup>30</sup> or more stringent conditions such as using cash within seed fairs. Various complementary activities have also been implemented alongside cash transfer programs to encourage seed quality. These include: training for farmers in how to select quality seed from seed providers; training for vendors on the provision and importance of quality seed; linking agro-dealers to quality seed suppliers; and support to farmers for seed production, processing, and storage.

Other complementary activities implemented through the case studies aimed to promote seed market development, e.g., by facilitating links between smallholder farmers and seed multipliers; providing support to private seed multiplication centers; and using a code of conduct designed to improve service delivery by raising agro-dealer standards and demand from farmers. Such market strengthening activities as part of seed security interventions in emergency and resilience contexts are relatively new and appear to feature more as part of cash transfer modalities than other modalities such as vouchers or direct distribution.

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<sup>29</sup> [https://pdf.usaid.gov/pdf\\_docs/PA00WH2D.pdf](https://pdf.usaid.gov/pdf_docs/PA00WH2D.pdf)

<sup>30</sup> ‘Labelling; is the process by which humanitarian agencies ‘name’ a cash intervention in terms of the outcome they want it to achieve e.g. cash for shelter, or cash for food. This may be accompanied by activities to influence how recipients use their cash assistance.

## **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**

No activities planned under this Sub IR.

## **CCIR-I Improved effective policy implementation and regulatory formulation for pluralistic seed systems**

### **CCIR 1.1 Develop country-specific seed policy road maps**

No activities planned under this Sub IR.

### **CCIR 1.2 Practices to expand and liberalize seed quality possibilities are implemented and developed; market outlets and venues expanded; counterfeit seed issues addressed; free seed distribution restricted**

*NEW - Activity CCIR 1.2.7 Establish a variety registration system dedicated to farmers/pastoralists, separate from the regular variety ownership registration system in Ethiopia (Mission).*

*Achievements:* After consultations with USAID/Ethiopia and USAID/Washington, this activity was put on hold until more is known about the conditions in the post-conflict era.

### **CCIR 1.3 Linkages and coordination of seed development efforts through consolidation of data and evidence are strengthened**

*Continue from FY21 - Activity CCIR 1.3.3 Facilitates and initiate implementation of seed policies and directives in Ethiopia (FY21) (Mission).*

*Achievements:* An inventory of all seed policies and directives in Ethiopia is created. Using stakeholder consultations, the top three policy areas were identified and then deeper assessments on why they are not operationalized at scale were conducted. The results from this activity were disseminated through a webinar in March 2022.

*Learning:* The regulatory domain examined in this assessment reveals that there is a focus on theoretical precision rather than the practical convenience of implementation. Logistical and management processes are not always taken into consideration in the development of the regulatory frameworks and directives. As such, some of these regulations emanate from the notion of control rather than facilitation, making it hard for actors to comply. As a reflection of facing difficulty to comply with the regulation, different regions implement standards in varying ways. These differentiated approaches provide an opportunity to learn and take that evidence and learning to national and regional governments. However, this requires pre-designed facilitation and setting up of feedback and learning mechanisms to ensure timely adaptation and change in the design and/or implementation of policies, regulations, and directives. It is also critical to engage all actors in the process to make sure that the experiences and ideas of actors are considered in the feedback and learning mechanism.

The theoretical focus and control mentality while developing regulation is also very much related to the less developed seed market in Ethiopia. Liberalizing the seed market, with strong support for increasing production, will intensify competition. Hence, quality is becoming a major parameter of competition, and companies work toward supplying good quality seed to remain in the market. In doing so, companies establish brands and customers build trust in seed producers rather than the label attached to the seed bag. Thus, while finding an easy way of complying with the regulation by combining technological

innovation with changing the workflow, long-term development of the seed market through gradual liberalization is critical.

The level of seed policy provision awareness was found to vary across the various seed stakeholders. As a result, the variability that exists in implementing the provision is also creating greater flexibility as compared to the text in the provision. What is more important is not only the low awareness regarding the provision but also the limited understanding of the intentions. The limited understanding also goes back to the design of the regulatory framework in which some of the provisions are outside the context. The “big picture” of why a certain regulation is required and its intended flexibility often gets lost in the process. A particularly good example is Quality Declared Seed (QDS), where the directive limited its production to local variety, although in practice released varieties have been used. This also raises a question as to what extent regulatory frameworks are critically designed and professionally deliberated on, calling for revisiting some of the regulatory frameworks.

These results clearly indicate the need to (i) consider practicality in the design of the different regulations and directives, (ii) ensure adequate awareness to all relevant stakeholders, (iii) develop feedback and learning mechanisms specially to facilitate learning across regions and for timely adjustment/revision, and (iv) ensure technical and human capacities.

**NEW - Activity CCIR 1.3.5 Facilitate and conduct a stakeholder discussion session on seed reserves (Mission).**

**Achievements:** The SOW was developed, and CRS is in the process of finalizing the contract with the selected consultant.

**NEW - Activity CCIR 1.3.6 Seed systems and climate adaptation at the last mile, learnings, and best practices: A global case study approach (Mission).**

**Achievements:** The activity includes several country case study approaches. To arrive at a comprehensive picture of the ramifications of climate change and the adaptation strategy used by seed producers, the study will include seed producer groups from Ethiopia, Zambia, Uganda, Niger, and Guatemala. Field interviews with seed producer groups will take place in these geographies. Different contract mechanisms with different country partners are being put in place. We expect these contracts to be finalized by the end of April and field interviews to commence in early May 2022.

In collaboration with Oxfam Novib, S34D has finalized the survey instrument which will be deployed in these countries. A comprehensive literature review was launched and is due to be finished in early May.

**Additional NEW - Activity CCIR 1.3.7 Operationalization of the Quality Declared Seed (QDS) regulations and directives in Ethiopia (Mission).**

**Achievements:** The FY21 activity ‘CCIR 1.3.3 Facilitate and initiate implementation of seed policies and directives in Ethiopia’ examines why there was insufficient operationalization of seed policies in Ethiopia. One of the regulatory domains explored was seed quality assurance protocols in Ethiopia. During the dissemination webinar ‘Operationalization of Seed Policies and Directives at Scale’ on March 24, it appeared that several of the national stakeholders in the audience hold diverging views of the Quality Declared Seed (QDS) protocol. In the study, the authors found divergences in QDS regulatory provision and its implementation by seed producers across regions within the country. Furthermore, the Ethiopian regulatory directive on QDS diverges from the original formulation of QDS concept by FAO, which mainly frames QDS as an alternative quality assurance to reduce the burden on regulatory organizations. On the contrary, the Ethiopian QDS directive also includes the issue of variety registration, limiting QDS production to local varieties, and limiting producers to farmers’ groups/organizations, in addition to the quality assurance issues. However, implementation practices do not follow the issue of limiting

producers and varieties as stipulated in the directive. The current analysis considers QDS from a quality assurance point of view, but questions remain. These questions are:

1. Why does the formulation of the directive diverge partly from the original concept of QDS by including the issue of variety registration, limiting the type of varieties to be used for QDS production, and limiting the type of producers?
2. Why did implementers not follow the directive, particularly the varieties to be used for QDS production and types of producers eligible to produce QDS?
3. Other questions related to the experience of some neighboring and other countries, such as Uganda and Zambia, with regards to formulation and implementation of QDS.

The contract is being administered currently and work is expected to commence in early May.

## **CCIR 2 Established enhanced quality information flows for seed systems**

### **CCIR 2.1 Institutional and public policy information is better digitized**

*NEW - Activity CCIR 2.1.6 Digitize seed systems regulatory roadmaps in Ethiopia (Mission)*

*Achievements:* This activity was canceled because the seed policy has not been finalized yet in Ethiopia.

### **CCIR 2.2 Develop tools, technologies to capture quality information about seed supply in a geo-referenced manner**

*Continue from FY21 – Activity CCIR 2.2.1 Develop forage informatic dashboard using seed data and metrics and a policy brief on forage seed systems in Ethiopia (FY21) (Mission)*

*Achievements:* This FY21 activity was finished earlier this year and a dissemination webinar was concluded in February 2022. The webinar was well attended and provided a good platform to discuss the implications of the findings. A paper on this activity was submitted to a peer-review journal.

*Learning:* The forage seed industry performance in Ethiopia is weak in terms of variety development and the strength of breeding programs, early generation seed availability, commercial seed production, seed promotion, and seed quality assurance. Forage breeding programs lack trained breeders, and variety development is usually carried out by individuals trained for animal nutrition or other related disciplines. Early generation seed multiplication schemes are available at research institutes, but those schemes are too weak and do not usually consider recently released varieties. There is no EGS production of recently released varieties indicating a disconnect between the latest technologies available and promoted for adoption at the last mile.

In terms of commercial seed production, several seed companies are registered for forage seed production but not all are actively involved in seed production of forages. In addition, commercial seed production is caught in the opportunistic forage seed market. There is weak forage seed promotion and marketing concerning creating awareness and linking the forage seed industry with livestock output markets. To assure the quality of seed produced and marketed, seed standards are available for certain forage species, but there is little attention from the seed regulatory system due to limited human and physical resource capacity.

**Continue from FY21 - Activity CCIR 2.2.2 Test out recommendations from FY20 technical roadmap, in select woredas (10-15) in Ethiopia (FY21) (Mission).**

*Achievements:* This activity was put on hold, because of the need for additional information on locations and woredas where this pilot can be executed after the conflict.

**NEW - Activity CCIR 2.2.5 Establish a seed production and marketing information network at the national and regional levels in Ethiopia (Mission).**

*Achievements:* This activity was put on hold, because of the need for additional information on locations and woredas where this pilot can be executed after the conflict.

**Additional NEW - Activity 2.2.7 Landscape and scoping analysis of seed system, forage seed system, and animal feed in Ethiopia (Mission).**

*Achievements:* The procurement process for a consultant is finalized and the contract is in the process of being signed. In the interim, the survey instrument to conduct the assessment is being finalized with the Alliance and partners so that the consultant can immediately commence field data collection once the contract is finalized.

**CCIR 2.3 Last mile markets for new and quality-assured seed varieties are enabled by developing, piloting, adapting, and scaling feed-forward and feedback mechanisms that loop farmers' preferences, as well as provide information on new varieties and quality assured seed**

No activities planned under this Sub IR.

## 5. Monitoring, Evaluation and Learning

This section summarizes the activities and learnings conducted to monitor and evaluate S34D actions for the past six months. The strategy to explore the S34D learning agenda this year has been a cooperative one. Different partners and technical leads have taken ownership of the learning areas that correspond to their portfolios. What follows are a few highlights from Learning Areas 4, 7 and 8:

### Learning Area #4: What is the profile of seed security actions that lead to resilience?

Under Learning Area #4, S34D will share two pieces regarding seed security that leads to resilience: one on the impact of free seed on seed system development and another on cash transfers in emergencies.

#### **I. The impact of free seed on seed system development: Lessons from Eastern and Southern Africa**

A recent S34D literature review has explored [the changing nature of free seed distribution through emergency interventions and subsidy programs](#)<sup>31</sup>. While positive shifts in the provision of free seed have occurred, subsidy and relief programs continue to influence the establishment and expansion of the private seed sector are influenced by subsidy and relief programs – the extent to which varies according to the level of maturity of the seed sector as well as the scale of free seed provisioning. The following represent areas most impacted by subsidy and relief programs:

- **Seed supply:** Seed companies' dependence on institutional purchases for subsidies leads to volatility in seed production. Subsidy schemes and emergency interventions can also scale up with little warning, which can cause some of the larger seed companies to divert their efforts towards big government contracts, interrupting the normal seed supply chain for new varieties and creating long-lasting ripple effects. This impacts other seed companies that are not involved in supplying seed to subsidy and emergency programs by tapping into precious reserves of early generation seed which are always in short supply, even without free seed schemes.
- **Seed retail networks and last-mile delivery:** There is often little incentive for seed companies to develop agro-dealer networks or the retail and marketing strategies required to sell seed to farmers if they can sell the majority of their seed to institutional buyers for subsidy and relief programs. Evidence from research suggests that the shift to voucher-based distribution can increase agro-dealer retail networks, but whether these lead to sustainable improvements in last-mile delivery have yet to be seen.
- **Seed quality:** Given that less scrupulous companies will continue to be involved in seed programs, proper quality controls are critical within the seed sector in general and for direct seed distribution to avoid long-term negative impacts on both the development of commercial seed systems and on emergency seed aid programming.
- **Farmer demand for improved varieties:** Poor quality seed of inappropriate varieties does little to create demand among farmers, and neither does the limited range of crops and varieties that tend to be provided through subsidies and emergency seed provisioning. Though this could theoretically be addressed by e-vouchers, there are still concerns that subsidies crowd out commercial seed purchases by smallholder farmers.

Emergency seed provisioning is most often provided in response to recurrent or ongoing crises, for which a long-term approach is seen to be more appropriate than repeated emergency interventions. Promoting improved varieties among smallholder farmers takes time and cannot be achieved through short-term emergency interventions. Farmers, however, are unlikely to purchase seed when it's provided for free, making it very difficult to create demand-led last-mile delivery solutions. Such

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<sup>31</sup> <https://www.agrilinks.org/post/emergency-seed-interventions-subsidies-and-formal-seed-sector>

challenges are common where development and emergency programming are required simultaneously. Nexus programming requires enhanced coherence between emergency and development efforts. For resilience building and seed sector development to be successful, new ways of emergency seed provisioning are urgently needed, including:

- **Creating resilient farming and seed systems:** Where there are recurrent emergencies, these emergency seed interventions need to be replaced with long-term, resilience-oriented programming that invests in training and awareness-raising so that farmers have the knowledge about quality seed and improved varieties to make appropriate decisions regarding inputs. At a broader level, effective seed quality assurance is needed in the formal seed sector to protect the value of the farmers' investments when they purchase seed – such efforts are already happening, but there are many challenges, not least from ongoing subsidy and emergency seed interventions.
- **Providing cash transfers for food and seed security in emergencies:** In the event of a crisis, we propose that cash rather than vouchers or seed is provided prior to planting time to restore livelihoods and food security. Cash allows farmers to choose whether to invest in seed and/or other items, according to their own priorities. If they choose to purchase seed, then they can also choose which crops and varieties they prefer, and whether to purchase from formal or informal seed sector markets. Where formal sector seed is available, cash can support formal sector seed markets.
- **Enhancing informal sector seed quality:** Within the informal seed sector, farmer-saved seed has been shown to be of good quality, but there is a need to enhance the quality of seed available in local markets. This involves creating awareness among informal traders about how to determine which types of seed are most in-demand by farmers, how to identify farmers from whom to purchase seed, how to manage and store distinct varieties of seed, how to market informal sector seed, and how to calculate the price differential between seed and grain.

## 2. Cash transfers for seed security in emergency contexts

Cash transfers offer flexible market-led interventions to support farmers' access to seed in emergency contexts. In 2019, S34D published a review of cash transfers for seed security, which found that there was potential to increase the use of cash transfers for seed security (C4SS). It was decided to undertake another review of C4SS in FY21 because preliminary consultations suggested that cash transfers had expanded, particularly as a result of the COVID pandemic which prevented the large gatherings that typify seed fairs interventions.

A call for information identified ten C4SS interventions across eight different countries for which information was gathered through key informant interviews and the review of available documentation. Some of the C4SS interventions that feature in the report are summarized in a Table in Annex B. Although one intervention (in South Sudan) was implemented out of necessity due to COVID restrictions, most cases involved a purposeful shift to cash, indicating that aid agencies recognize the advantages offered by cash. In some cases, the shift to cash transfers was due to challenges with other modalities, especially the limited choice of seed types provided by vouchers. Interestingly, several cash interventions also involved the use of seed fairs or agro-input fairs. Although fairs necessarily limit the number of vendors and the range of inputs available for purchase, they also allow for quality control and can encourage farmers to spend their cash on the items available at the fair rather than on other needs.

As with any emergency seed intervention, seed quality is an issue of concern, and ensuring seed quality is seen by some as a particular challenge when using cash transfer modalities. How seed quality should be addressed appears to depend on one's perspectives relating to cash as a programming modality, and on the level of trust in the ability of farmers to make the 'right' choices. Some regard cash transfers as the most effective way to offer choice and dignity to farmers and believe that farmers know what they are doing and should be trusted to make good choices, possibly supported by some level of awareness-

raising or sensitization. Others are less comfortable with cash transfers and feel a sense of responsibility to ensure that farmers acquire good quality seed. In the case of the IRC intervention in NE Syria, for example, donor regulations required that germination tests were carried out to verify the quality of seed available in the market. Conversely, in the case of the Mercy Corps intervention, farmer seed multipliers were trusted to source quality seed in the absence of early generation seed through the formal sector. An innovative approach was implemented in Malawi where the code of conduct placed the onus on the agro-dealers to provide quality seed, and the combination of cash and farmer choice forced the dealers to be more competitive and provide high-quality inputs as a result.

While farmer participants appear to prefer cash to vouchers, vendors with previous voucher experience prefer vouchers because they are assured of guaranteed sales and profits. In some cases, formal-sector seed suppliers were reluctant to take part in fairs that accompanied cash transfers due to the lack of guaranteed sales. Since there is generally no contracting requirement for vendors, cash allows for a broader range of seed providers to benefit, including both men and women, farmers and informal seed sector suppliers, often with a focus on quality declared seed (QDS). This allows for smaller, niche seed providers (many of whom are women) to take part and benefit from seed sales.

The case studies themselves offered very little gender-relevant information, either about farmers or seed providers. Some programs intentionally gave money to women rather than men, and one program collected data on individual versus joint decision-making by women and men in relation to how the money was spent. The Malawi intervention included a small trial to test an electronic cash transfer mechanism, but this faced several challenges, particularly in terms of women's phone ownership,<sup>32</sup> which meant that women might have less access to or control over the cash, particularly if the project is targeting women with the transfer. Future efforts in C4SS would benefit from applying a gender-lens to the intervention design prior to implementation. Greater attention is needed in regards to gender dynamics, which influence who is accessing the cash transfer and decision-making over the cash transfer and products' use post-purchase. The design and assessments should also look closely at involvement and benefits to women as seed providers within C4SS.

Another issue that requires further investigation is the extent to which cash transfers are able to support seed market development. Some of the case study projects (Malawi, Burundi) focused on various complementary activities for market strengthening, but it seems likely that these were only made possible by the fact that the cash transfer was part of a much longer-term (4-year) intervention.

### ***Learning Area #7: To drive inclusive policies and practices, what type of evidence and processes are needed to accelerate improvements in seed security?***

S34D finished two FY21 activities and disseminated them via global webinars. There are two interesting distinct, but related, learnings on seed policy from Ethiopia. Following are brief narratives of each learning opportunity.

#### **I. Regulatory seed system maps, Ethiopia**

Regulatory System Maps (RSMs) function as analytical instruments to highlight gaps, challenges (including with implementation), intervention points, proposed legal and regulatory changes, and systemic shifts over time. Thus, RSMs serve as a regulatory tool that could raise awareness about policies, laws, and regulations

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<sup>32</sup> In general, women registered with their husband's phones. In some cases, the SIM card belonged to the woman while the handset belonged to the husband.

that govern a regulatory domain and increase the transparency of systems and processes amongst stakeholders.

Two sets of maps were developed for six key regulatory dimensions. For each dimension, two comparative RSMs were created: (i) a set focused on the seed regulatory system as it *currently exists* and is implemented in practice (based on legal assessment and stakeholder consultations), and (ii) a set focused on the *new rules and procedures* that are currently under development.

As a result of this comparative approach, S34D was able to highlight several gaps in the current formation process of regulatory provisions. During the global webinar held in January 2022, staff from Ethiopia’s Ministry of Agriculture (MoA), found the results of the comparative analysis very useful and immediately requested S34D to share those findings for uptake at their end.

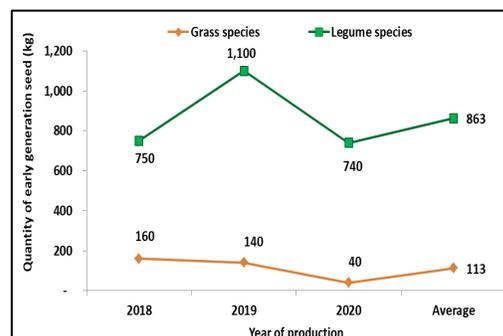
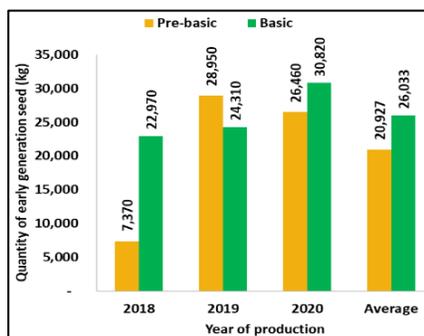
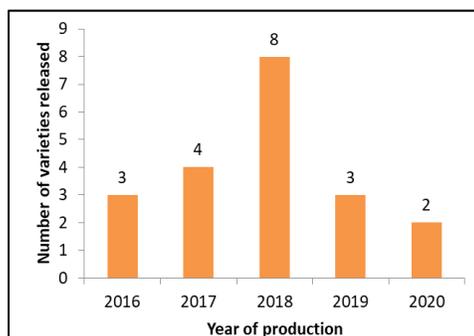
**Table I in Annex C** summarizes the findings, which were shared with the MoA. Policymaking is a long-term process, but this example highlights, with examples and evidence, how S34D influenced government strategies and recommendations related to seed security in Ethiopia.

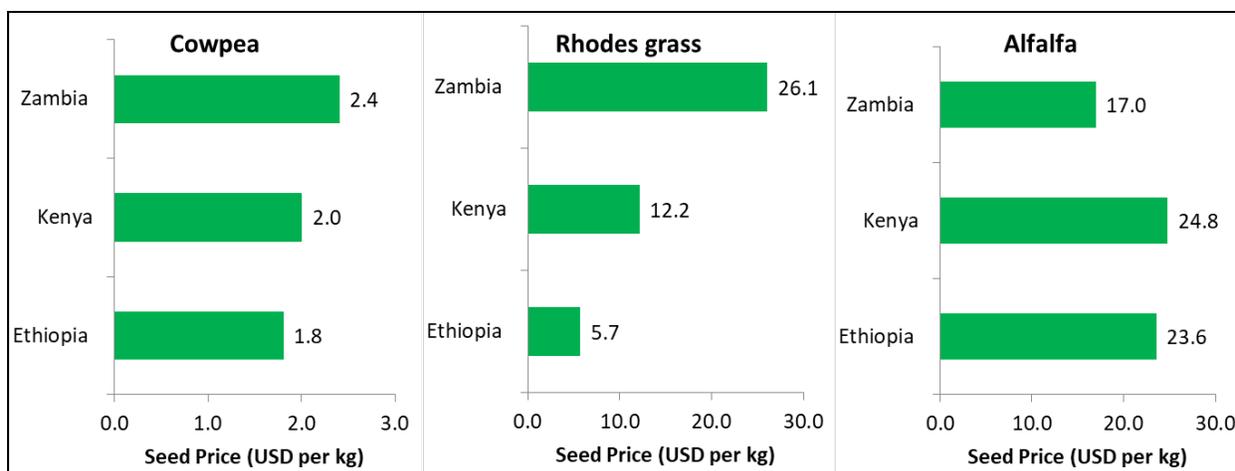
## 2. Learnings from the forage seed system informatics in Ethiopia

Forages could play a critical role in Ethiopia (Dey et al., 2022), given the importance of the livestock sector to agricultural GDP. However, an assessment of key performance metrics focusing upon the forage seed system reveals many gaps in the sector.

First, although many new varieties of forages are released in Ethiopia, the early generation seed (pre-basic and basic seed) of those newly released varieties are remarkably absent from the market. Data collected by S34D shows neither EIAR nor ILRI produces large-scale EGS of the new varieties released. This shows a gap in research and seed multiplication efforts taken up downstream by NARs, international research centers, etc. It also highlights a gap in assessing the preferences of farmers and intended research.

The development of new varieties should not be a standalone activity --- they should be adequately linked with farmers’ preferences, and subsequent value chain activities that commercialize the newly found research products to reach farmers’ fields. In addition, for big international centers, such as ILRI, there should be enough communication between breeders and EGS multipliers so that new research products are not shelved after being released.





A quick comparison of the prices for forages between Ethiopia, Zambia, and Kenya reveals Ethiopian prices are the lowest. This is because of fragmented markets, low awareness and capacity to use forages, and little demand in the formal markets for forage crops in Ethiopia. Adequate awareness creation and well-linked markets could mitigate these gaps.

***Learning area #8: Which mechanisms or interfaces enabled a greater number of women smallholder farmers to sell, access, and purchase quality seeds, and more frequently?***

Under Learning Area #8, S34D looked at gender in seed systems in Haiti.

**I. Gender Learning on Seed Systems in Fragile States**

The Fragile States in Haiti Case Study report highlighted that across most seed system sector entities – government, local NGOs, international NGOs, and donors, a gender-sensitive approach or response was not common, even in a context in which women play a key role in the seed system.

Farmers access seed or grain from weekly rural markets or permanent markets in larger towns. Seed and grain travel to and from these markets through a network of producers, importers, wholesalers, retailers, Madam Saras,<sup>33</sup> and other intermediaries who provide a robust trade network across the country (Seed System Security Assessment - Haiti, 2010). Madam Saras are female traders and entrepreneurs in the agriculture sector and play an important role in the informal seed sector. In rice, seed is usually acquired through Madam Saras who often provide seed on credit. The same Madam Saras may also be the buyer of the product and determine which variety farmers receive, though both parties negotiate this transaction. While Madam Saras bears the risk of default from the farmers to which they give seed on credit, they also gain significant power in the negotiation and transaction process. Formal seed companies rely on these networks to reach the last mile rather than establishing their own proprietary distribution systems. Security conditions in Haiti also challenge Madam Saras as roads are often controlled by different gangs making transport across the country dangerous. Women farmers are generally responsible for purchasing seed for the coming season.

The response to the 2010 earthquake marked an unprecedented level of direct distributed seed aid in Haiti, with dramatic impacts on the private sector, displacing the work of female traders and entrepreneurs (Madam Saras). Reiterating the need for donors and aid agencies to complete a thorough gender-sensitive

<sup>33</sup> Female traders in the agricultural sector are commonly known as Madam Saras.

seed assessment to understand the availability of seed, how it is accessed by men and women, male and female farmers' barriers to access and how has the crisis changed this access.

This case study also highlighted that Haiti is drafting a seed law; however, a review of the proposed law suggests that it may not have been reviewed from a gender lens. A clear, concise law that responds to the needs of women farmers and vendors and addresses gender constraints and opportunities would help strengthen Haiti's seed security that is equitable across men and women.

## 6. Problems and Solutions

CRS staff changes and deployments affected some of the activities in the EHAR portfolio. One of our colleagues from the Private Sector Investment team was replaced with someone who did not have detailed experience with seed systems, so one activity was dropped, and other aspects of their workload were re-allocated among S34D team members. Similarly, work on Activity 2.2.3.1 (Cash Transfers) had to be re-allocated after two colleagues from the Humanitarian Response Department were redeployed to work on the Ukraine response.

## 7. Planned activities for Q3-Q4

### Activity 1.1.3.1 (FY20 1.1.1.6) Digital training of seed inspectors and samplers in Zambia (core)

Finalize the Sction508 compliance. Handover the LMS from developer to SCCI, including source files, etc. Link the LMS to the MoA database for registration and payment. Conduct first seed inspector training using the LMS.

### Activity 1.3.1.1 Participatory impact assessment of emergency seed interventions (BHA)

Plan, design, and implement fieldwork in Uganda in Q3 and in DRC in Q4. Draft report through Q4 into FY23.

### Activity 1.3.2.2 Generate recommendations for integrating vegetable seeds into humanitarian responses (BHA)

Conduct literature review and determine survey questions.

### Activity 1.3.2.3 Participatory action research (BHA)

CRS staff in Ethiopia and Guatemala will be implementing their cash transfers in Q3 and data collection will take place both concurrently and through post-distribution monitoring surveys. Report-writing will begin once the data have been collected.

### Activity 1.3.3.1 Framework and response options for resilient seed systems (FY20) (BHA)

Develop framework and response options.

### Activity 1.3.3.5 Strengthen capacity for Rapid Seed Systems Security Assessments (BHA)

Finalize and digitize the tools tested during the 2020 pilot. Several tools will be digitized to simplify data collection and analysis and reinforced by a system to generate data analyses automatically. Develop a complete training curriculum to prepare field staff to conduct the RSSSA and generate an appropriate response analysis with minimal outside support. Test the revised tools during an RSSSA conducted by IRC/Somalia.

Activity 2.1.1.4 Scoping business models to strengthen forage seed systems and production of cultivated forages in Zambia (RFS)

Conduct data collection using structured survey instruments, analyze data, validate results and findings, disseminate model ideas, and plan and conduct a field visit in early July.

Activity 2.1.2.2 Strengthen the capacity of forage (certified and quality declared assurance) seed production (Mission)

Finish drafting training manuals for both seed multiplication and forage crop production. Disseminate context using multiple channels. Leverage and collaborate with other forage implementers to share content dissemination through the training of trainers.

Activity 2.1.2.3 Increase capacity of actors on animal feeding using cultivated forages (Mission)

Finish drafting training manuals for animal feeding practices using feed based on cultivated forages. Disseminate context using multiple channels. Leverage and collaborate with other forage implementers to share content dissemination through the training of trainers.

Activity 2.1.3.2 Promote access to locally grown legume seed through the use of agricultural development agents in Zambia (RFS)

Conduct training of Agriculture Development Agents (ADAs) at the end of April. Collect field data from ADAs to analyze rates of returns. Conduct a field visit in early July.

Activity 2.1.3.3 Strengthen the supply of forage early generation seed system (FEGS) (Mission)

Analyze the EGS value chain for selected forage species. Identify partners to collaborate with and establish MoUs to produce EGS.

Activity 2.2.2.2 Support the emergence of enhanced and resilient seed sectors in fragile states, e.g., in DRC, South Sudan, Haiti (FY21) (BHA)

Revise DRC case study report in Q3, with an additional annex to be drafted based on interviews with seed companies. Draft the South Sudan case study report. Draft the synthesis report in Q4.

Activity 2.2.2.4 Develop guidance for emergency, resilience, and development seed interventions (BHA)

Develop guidance for emergency, resilience, and development seed interventions.

Activity 2.2.3.1 Develop and test market-based emergency seed security interventions (FY21) (BHA)

Complete the report on cash transfers in Q3.

Activity CCIR 1.3.5 Facilitate and conduct a stakeholder discussion session on seed reserves (Mission)

Commence work once a contract is established.

Activity CCIR 1.3.6 Seed systems and climate adaptation at the last mile, learnings and best practices: A global case study approach (Mission)

Conduct field data collection, analyze data, validate findings, and share results through a global webinar.

Activity CCIR 1.3.7 Operationalization of the Quality Declared Seed (QDS) regulations and directives in Ethiopia (Mission)

Commence work once a contract is established with consultants.

Activity CCIR 2.2.7 Landscape and scoping analysis of seed system, forage seed system, and animal feed in Ethiopia (Mission)

Commence work once a contract is established with consultants.

## 8. Annexes

## Annex A. S34D Activity DIP

Activity Number	S34D Activity Description	Geography	Output(s)	Q1-2 achieved	Q3-4 plan
<b>Goal: Improved functioning of the high-impact integrated seed systems</b>					
<b>IR 1.1 Constraints in formal seed systems identified and mitigated</b>					
<b>Sub IR 1.1.3 Capacities of local seed actors strengthened</b>					
1.1.3.1	Digital training of seed inspectors and samplers in Zambia (FY21) (RFS).	Zambia	SCCI will train 60 inspectors (16 female) in Zambia.	technical content for 32 sub-units and 8 units completed, all animation and voice over completed. 27 (7 women) people trained using Zoom and in-person practicals	finalize section 508 compliance, train SCCI staff, handover e-learning platform to SCCI, and SCCI will use LMS for first cohort training
<b>IR 1.3 Strengthened capacity of emergency and humanitarian aid programs to respond effectively to acute and chronic stresses</b>					
<b>Sub IR 1.3.1 Select emergency and humanitarian past actions assessed: focus on farmer evaluation, new varieties, and markets (local and formal)</b>					
1.3.1.1	Participatory Impact Assessment (PIA) of Emergency Seed Interventions (FY21) (BHA).	Uganda and the DRC	4 3-detailed PIA reports (one for each intervention assessed); one synthesis report.	Re-selected interventions to be assessed. Identified National Consultants for Uganda. Replaced Mozambique with DRC due to lack of support from Mozambique Mission.	Fieldwork in Uganda and DRC; 3 assessment reports to be drafted.
<b>Sub IR 1.3.2 Emergency and humanitarian responses that promote climate resilience, including food, income, cover and fodder crops are catalyzed</b>					
1.3.2.2	Generate recommendations for integrating vegetable seeds into humanitarian responses (BHA).	TBD	Brief with best practice recommendations for integrating vegetable seed in humanitarian responses.	Re-appointed lead Advisor after staff changes and agreed on overall approach to be taken.	Literature review and brief.
1.3.2.3	Participatory action research into cash-based seed security responses, Guatemala & E. Africa (BHA).	Guatemala and East Africa (Ethiopia)	Synthesis report on cash-based seed security responses.	Identified cash-based interventions in Guatemala and Ethiopia and developed partnership with relevant in-country staff. Worked with in-country staff to agree on learning questions to be addressed. Provided inputs to data collection tools.	Data to be collected by in-country staff alongside cash-based interventions. Data analysis and 2 PAR reports to be drafted. Synthesis report to be drafted.
<b>Sub IR 1.3.3 Tools and information systems to frame Shock Responsive Models developed</b>					
1.3.3.1	Framework and response options for resilient seed systems (FY20) (BHA).	Global	A conceptual framework for resilient seed systems and a series of response options for resilience-building interventions in different contexts.	Additional literature sources identified.	Literature to be reviewed and framework drafted.
1.3.3.5	Strengthen Capacity for Rapid Seed System Security Assessments (BHA).	Global	A training curriculum, and automated data analysis.	Report from pilot phase completed. Tools revised. Agreements with IRC and CRS to digitize and implement revised tools (incl Power-BI data visualization tool) in Somalia and DRC.	Revised / digitized tools to be tested. Automated data analysis / visualization tool to be developed and tested. Training curriculum developed
<b>IR 2.1 Strengthened interface and collaboration between formal and informal seed systems</b>					
<b>Sub IR 2.1.1. Local seed network strategies (to interface, collaborate, and leverage) and local capacities are assessed</b>					
2.1.1.4	Scoping business models to strengthen forage seed systems and production of cultivated forage in Zambia (RFS).	Zambia	A report with two or three economics driven inclusive business model propositions and policy implications validated with stakeholders and disseminated through a webinar.	scopes of work for international and national Consultants finalized; Consultants recruited; literature gathered; survey instruments designed; roles and responsibilities between CRS and the Alliance aligned and agreed upon.	Collect field data; conduct economic and CBA; field visit to Zambia; prepare results and validate through a dissemination webinar
<b>Sub IR 2.1.2. Crop and seed platforms that link formal and informal seed systems are catalyzed and supported</b>					
2.1.2.2	Strengthen capacity of forage (certified and quality declared assurance) seed production in Ethiopia (Mission).	Ethiopia	One technical manual developed for seven forage species. At least 30 stakeholders trained through two 1.5-day long workshops. At least 7 seven stakeholders trained will be women, and at least 10 stakeholders trained will be less than 30 years of age. At least 3 partnerships formed with stakeholders leading to MoUs.	Discussions held with the Alliance to lay out criteria for the choice of forage species and contract agreement between CRS and CIAT sorted. Finalized scopes of work and approach to engage national stakeholders in Ethiopia.	develop manuals and a strategy on dissemination approach. Establish MoUs with identified partners.
2.1.2.3	Increase capacity of actors on animal feeding using cultivated forages in Ethiopia (Mission).	Ethiopia	Developed and disseminated two manuals, two training programs, and two flyers (one each for dairy farmers and the other for feedlot farmers and quarantine station managers) on balanced feeding using cultivated forages.	International Consultant recruited. and scopes of work discussed	Manuals will be produced

<b>Sub IR 2.1.3 Formal sector suppliers and NARs/breeders leveraged and linked</b>					
2.1.3.2	Promote access to locally grown legume seed through use of agricultural development agents in Zambia (RFS).	Zambia	Farmer/ community-based seed production and grain marketing system developed (Volume of seed; Volume of grain; 40 ADAs trained; 2,000 farmers reached and linked); Output marketing for soya bean and pigeon pea grain strengthened (at least 4 linkages established); One policy brief; One report.	Training manual on how to engage with women beneficiaries augmented by S34D Gender lead. Survey instrument to collect information is developed.	Launch survey. Gather data and conduct analysis.
2.1.3.3	Strengthen the supply of forage early generation seed system (FEGS) in Ethiopia (Mission).	Ethiopia	Partners identified, scoped, and three partnerships formed with a detailed understanding of roles, responsibilities, and handoffs.		understand FEGS value chain for select forage varieties and establish roles and responsibilities
<b>Sub IR 2.1.4 Effects of market-based interventions on seed market operations and last mile delivery systems are assessed</b>					
2.1.4.2	Pilot the cultivation of improved forages and densification of cultivated forages into pellets (sites: one in Afar and two in SNNPR) (Mission). PUT ON HOLD	Ethiopia	One report on the choice of improved forages and the sites for cultivation of improved forages (3 sites and corresponding forages for these sites identified for the pilot); one report on the warehouse sites to serve as feed reserves (at least 6 sites identified); one report on machine and components needed for densification and their cost estimates.		On hold
<b>IR 2.2 Strengthened interface and collaboration between development and relief to resilient and market-based seed systems</b>					
<b>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</b>					
2.2.2.2	Support the emergence of enhanced and resilient seed sectors in fragile states, e.g. in DRC, South Sudan, Haiti (FY21) (BHA).	Global	The output will be the South Sudan case study report and a synthesis paper containing proposed models based on the three global case studies and key stakeholder consultations. This will be disseminated via appropriate blogs and a webinar.	Haiti case study report completed; DRC case study report drafted; contract agreed with Agr-Experience for additional DRC work; contract agreed with WCIDI for South Sudan case study; South Sudan fieldwork completed	Additional data collection for DRC to be undertaken and report annex drafted; South Sudan case study report to be drafted; synthesis report to be drafted.
2.2.2.4	Develop guidance for emergency, resilience, and development seed interventions (BHA).	Global	a report on the types of seed exchange systems being used by humanitarian and development partners; Guidelines on Do's and Don'ts when investing in formal and informal seed systems targeted to small-scale farmers.	Initial workshop conducted and framework drafted.	Report and guideline to be drafted.
<b>Sub IR 2.2.3 Emergency and development seed programs to capture market opportunities are leveraged</b>					
2.2.3.1	Develop and test market-based emergency seed security interventions (FY21) (BHA).	Global	1 guideline on cash transfers.	Consultant contracted for review of cash transfers for seed security; data collected; case studies drafted and revised; report drafted.	Draft report to be completed and disseminated.
<b>CCIR-1 Improved effective policy implementation and regulatory formulation for pluralistic seed systems</b>					
<b>CCIR 1.2 Practices to expand and liberalize seed quality possibilities are implemented and developed; market outlets and venues expanded; counterfeit seed issues addressed; free seed distribution restricted</b>					
CCIR 1.2.7	Establish a variety registration system dedicated to farmers/ pastoralists, separate from the regular variety ownership registration system in Ethiopia (Mission).	Ethiopia	A roadmap established to create the system, human and technical capacity, use-cases, and financial resources; approach to create the system identified. On hold		repurpose funds to other activities.
<b>CCIR 1.3 Linkages and coordination of seed development efforts through consolidation of data and evidence are strengthened</b>					
CCIR 1.3.3	Facilitate and initiate implementation of seed policies and directives in Ethiopia (FY21) (Mission).	Ethiopia	At least three actions taken to address three policy issues and operationalize three policy priorities with facilitation and guidance.	Study was finalized and disseminated. Three policy issues were discussed. Webinar conducted.	
CCIR 1.3.5	Facilitate and conduct a stakeholder discussion session on seed reserves in Ethiopia (Mission).	Ethiopia	Proceeding report of the workshop and one policy dialogue facilitated.	Consultancy finalized but contact is being finalized	Once the contract is established, work will commence!
CCIR 1.3.6	Seed systems and climate adaptation at the last mile, learnings and best practices: A global case study approach (Mission).	Ethiopia/Global	One report or peer reviewed publication with recommendations and best practices for climate adaptation outlined.	Countries were chosen for the global component - Guatemala, Niger, Uganda, and Zambia. For each of the countries, partners were selected and contracts established. Literature review in progress. Survey instrument for the global study finalized	Field work will commence; data gathered and analyzed, results validated and disseminated.
CCIR 1.3.7	Operationalization of the Quality Declared Seed (QDS) regulations and directives in Ethiopia	Ethiopia	One evidence based policy brief; one policy dialogue facilitated with MoA		Contract finalized and study conducted. Dialogues will be facilitated and guidelines on streamlining QDS will be shared.

CCIR-2 Established enhanced quality information flows for seed systems				
CCIR 2.1 Institutional and public policy information is better digitized				
CCIR 2.1.6	Digitize seed systems regulatory roadmaps in Ethiopia (Mission). <b>CANCELLED</b>	Ethiopia	Six seed system road maps digitized, made interactive, and shared in the public domain. Uptake and utilization of these maps will be documented for further evaluation and sustainability.	Cancelled
CCIR 2.2 Tools and technologies to capture quality information about seed supply in a geo-referenced manner are developed				
CCIR 2.2.1	Develop forage informatic dashboard using seed data and metrics and a policy brief on forage seed systems in Ethiopia (FY21)(Mission).	Ethiopia	Forage indicator dashboard digitized; MoA hosts and shares in the public domain.	This activity completed. A report was finalized and submitted for peer review. Webinar held to disseminate findings
CCIR 2.2.2	Test out recommendations from FY20 technical roadmap, in select woredas (10-15) in Ethiopia (FY21) (Mission). <b>Put on hold</b>	Ethiopia	Augmented methodology / framework at the systemic level to conduct seed demand / market forecasting in Ethiopia. On Hold	On hold
CCIR 2.2.5	Establish a seed production and marketing information network at the national and regional levels in Ethiopia (Mission). <b>Put on hold</b>	Ethiopia	Process and approach to establish the network are identified and piloted.	On hold

## Annex B. Case studies of cash transfers for seed security

Implementing Agency, Country, Year	Summary description of intervention	Key features/lessons
UN FAO, South Sudan, 2020	FAO shifted from seed vouchers and fairs to cash transfers without fairs to avoid the need for large groups of people to congregate during the COVID pandemic.	Most cash-grant beneficiaries purchased their seed from local traders or other farmers within the village, indicating that seed was available through local seed supply systems. While the emergency program was able to pivot quickly to implement significant changes in the face of the pandemic, it was also a missed opportunity to gather post-distribution and post-harvest data to compare the effectiveness of the different cash, voucher, and in-kind modalities for seed security interventions.
International Rescue Committee (IRC), NE Syria, 2019	Cash was given in two tranches according to winter and summer planting seasons. The second payment was conditional on having planted a winter crop.	Compliance with donor regulations on restricted goods, seed quality, and the safe use of agrochemicals necessitated: <ul style="list-style-type: none"> <li>• strong messaging and awareness-raising to farmers;</li> <li>• germination tests on seed from local markets prior to the cash distribution; and</li> <li>• the collection of receipts from farmers' purchases as part of the post-distribution monitoring.</li> </ul>
Mercy Corps, NE Syria, 2020-21	Cash was provided to farmers licensed to undertake seed multiplication in order to increase the availability of quality seed in local markets.	This intervention is unique in that it is a supply-side intervention. It aimed to address the problem of poor-quality seed within the formal seed sector due to the lack of early generation seed. Cash was provided to seed producers for the purchase of source seeds and other inputs for seed multiplication.
NGO Consortium led by Concern Worldwide, Malawi, 2020/21	Cash transfers were implemented in the second year of a four-year resilience program, after various limitations were experienced with vouchers and agro-input fairs.	Cash was provided in the rainy season and again in the dry season. Farmers were also expected to contribute their own cash for the purchase of inputs. The approach involved considerable engagement with agro-dealers, who signed up to a code of conduct designed to improve service delivery by raising agro-dealer standards and demand from farmers.
CRS, Madagascar, 2019 -2020	Cash was piloted alongside seed fairs with vouchers, allowing for comparisons to be made	Beneficiary farmers appeared to value cash over vouchers which also enabled more price bargaining. Larger vendors preferred vouchers as they guaranteed seed sales. Cash transfers allowed a wider variety of smaller, local vendors to participate in the fairs, creating a greater choice of local seed

	between the two modalities.	types. More comparable data is needed to understand whether providing cash or vouchers influences seed security outcomes.
IRS, Burundi, 2021	Cash transfers and seed fairs were implemented as a Rapid Response Mechanism within a 4-year development program.	<p>Complementary seed security components included:</p> <ul style="list-style-type: none"> <li>• Facilitating links between smallholder farmers and seed multipliers;</li> <li>• Awareness-raising sessions with farmers on what to look for when buying seeds;</li> <li>• Strengthening links between smallholder farmers and extension services; and</li> <li>• Support to local seed multiplication centers to improve production, processing, and storage.</li> </ul>

## Annex C. Key summaries from the comparative analyses of regulatory seed system maps in Ethiopia

Existing Issue(s)	Existing Provisions	Draft Instruments	Challenges & Constraints	Possible Next Steps
<b>Dimension I: Varietal Research, Development and Transfer</b>				
<p>Lack of private sector engagement in variety acquisition, development, and research and production of EGS.</p> <p>PRIs are under capacitated, and resource-constrained. There are issues with funding and land access to produce EGS.</p>	<p>Agricultural and Rural Development Policy of 1992 vests varietal research and development in the PRIs.</p> <p>Under Proclamation No. 79/1997 establishing the Ethiopian Agricultural Research Organization, PRIs are mandated with conducting agricultural research and development.</p> <p>The 2020 Seed Policy sets out that the government will “Introduce a framework that encourages domestic and foreign research entities holding a CoC to engage in variety development and maintenance of prioritized crops”</p> <p>Article 6.3 of the 2013 Seed Proclamation states that a seed producer holding a CoC may access EGS from one of these PRIs.</p>	<p>The proposed Draft Seed Proclamation establishes a separate CoC for pre-basic seed production to improve private sector involvement.</p> <p>Under the Draft Seed Proclamation, a seed producer may enter into a contractual arrangement with a landholder to produce seed on the landowner’s plot.</p>	<p>The 2020 Seed Policy will not be considered a national instrument until the revised Agricultural and Rural Development Policy is integrated.</p> <p>Under the draft and current Seed Proclamation, land need not be owned but accessible, for one to obtain a seed producer CoC. Access to land remains a challenge though, with fragmented plots, high costs of reimbursing or leasing smallholder farmer plots, and increasing cases of breach of contract by out-grower farmers.</p>	<p>Draft Seed Proclamation could be revised to include a CoC on Variety Development and Research to enable private sector engagement and align with the 2020 Seed Policy (this aspect of the 2020 Seed Policy is dependent upon the establishment of the CoC on Variety Development and Research through a binding legal instrument).</p> <p>The finalization of the Agricultural and Rural Development Policy should be prioritized, as this will operationalize the 2020 Seed Policy.</p> <p>Licensing of public varieties will depend upon the approval of the Ministerial Directive on licensing of public varieties; the directive is currently before the</p>

Existing Issue(s)	Existing Provisions	Draft Instruments	Challenges & Constraints	Possible Next Steps
				Minister responsible for agriculture for endorsement.
<b>Dimension 2: Seed Dealer Registration/Certification of Competence Process</b>				
<p>Seed producer CoC requirements are quite stringent for the private sector, especially regarding access to land.</p> <p>Stakeholder consultations revealed that the legal framework establishes no flexibilities regarding CoC requirements for smallholder farmers, who are usually incapable of meeting the CoC requirements.</p> <p>No binding legal framework for CoC to the private sector for varietal research and development although provided for the 2020 Seed Policy.</p> <p>Consultations revealed the absence of a seed production database. This database would assist with projections for seed production for the</p>	<p>As per Regulation 42 of the 2016 Seed Regulation, a person applying to obtain a seed producer CoC shall: (a) have suitable and accessible farmland for seed inspection; and (b) be a sufficient professional with basic knowledge and experience in seed production. These requirements are further elaborated in the Ministerial Directive on Criteria and Implementation procedures for issuing CoC.</p> <p>2020 Seed Policy recommends the issuance of CoC to the private sector to be involved in varietal research and development.</p>	<p>The Draft Seed Proclamation allows a seed producer to enter into a contractual arrangement with a landholder to produce seed on the latter's plot.</p>	<p>Smallholder farmers still face issues in meeting CoC requirements under the 2013 Seed Proclamation and 2016 Seed Regulation.</p>	<p>Legal instruments could be revised to include flexible requirements for smallholder farmers to obtain a CoC to ensure their inclusion in the formal sector. This could be done through the Ministerial Directive on Criteria and Implementation Procedures for Issuing CoC and could also be provided for under the Draft Seed Proclamation.</p> <p>The MoA is currently developing a digital platform to regulate activities along the seed value chain, which will include a seed production database. The beta version of this platform is currently being tested.</p>

Existing Issue(s)	Existing Provisions	Draft Instruments	Challenges & Constraints	Possible Next Steps
<p>upcoming season, setting out annual production targets, type of producers, and other relevant information. This would help in meeting demand for seed, especially EGS, in Ethiopia.</p>				
<b>Dimension 3: Variety Registration and Release Process in Ethiopia</b>				
<p>Conflict of interest in relation to PRIs conducting National Performance Tests (NPTs) and DUS testing.</p>	<p>Regulation 6 of the 2016 Seed Regulation sets out that the “Ministry shall perform both NPT and DUS and generate and provide the report to National Performance Trial Evaluation Technical Committee for evaluation”. However, the tests are conducted by PRIs on all varieties (i.e., those submitted by private as well a public sector). This means that they are also evaluating varieties that are competing in the market.</p> <p>The 2020 Seed Policy proposes that the variety release and registration process should be regulated by an autonomous public institution that operates according to international regulatory practices. It shall offer its services impartially to public and private variety developers and stakeholders.</p>	<p>Draft Seed Proclamation proposes setting up an independent and autonomous body that will be responsible for variety release and registration</p>	<p>Conflict of interest was recognized as a major challenge during the variety release process.</p>	<p>Creation of an independent authority was identified as a possible solution.</p>

Existing Issue(s)	Existing Provisions	Draft Instruments	Challenges & Constraints	Possible Next Steps
<p>No DUS testing protocols in place; thus, DUS is not conducted.</p>	<p>Regulation 5 of the 2016 Seed Regulation requires MoA to conduct DUS and NPT before the varieties are released into the market.</p>	<p>None. This is an implementation gap.</p>	<p>The absence of DUS protocols is a major challenge to movement of seed across borders, because it does not comply with regional and international standards.</p>	<p>The MoA adopts DUS testing results conducted in other countries and is considering adopting DUS protocols for some crops from other countries. Incorporating DUS protocols into the Variety Release Policy and Mechanism Manual of 2001 could address this gap.</p>
<p>NPT and DUS tests not fully aligned with regional seed trade rules.</p> <p>Incomplete alignment with regional trade rules affects development of the seed system and trade in seed within regional and international markets.</p> <p>Ethiopia is a Member State, of COMESA and the COMESA Harmonized Seed Trade Regulations exempts a variety from both NPT and DUS testing if it has been registered in at least two COMESA Member States, with a maximum of one season of DUS and NPT testing when a variety has</p>	<p>Under the Variety Release Policy and Mechanism Manual of 2001, a variety that has been registered and released in one COMESA Member State need only undergo one additional season of confirmation testing (DUS and VCU/NPT) in order to be released in Ethiopia.</p>	<p>The Draft Seed Proclamation provides for “registration of a variety in Ethiopia’s national variety register if such variety is listed in a variety catalogue established in accordance with international agreements ratified by Ethiopia.”</p> <p>The Draft Seed Proclamation exempts mandatory testing of varieties that contribute to the “successful implementation of prioritized development goals”, which is not defined, or are predetermined to be beyond the capacity of the regulatory authority to test their performance and quality.</p> <p>In order for a variety to qualify for the NPT exemption, the applicant seeking registration in</p>	<p>Cumbersome, time-consuming and costly testing process for variety registration and release in Ethiopia.</p>	<p>Revise the Draft Seed Proclamation to define “prioritized development goals” to include varieties that have been released in at least two countries with which Ethiopia shares membership in a Regional Economic Community.</p>

Existing Issue(s)	Existing Provisions	Draft Instruments	Challenges & Constraints	Possible Next Steps
<p>been registered in one COMESA Member State. Ethiopia's Draft Seed Proclamation only exempts such varieties from NPT, and not DUS, testing.</p>		<p>Ethiopia may apply for a waiver of the NPT test from the MoA. The applicant must also submit any NPT and DUS trial results from the country of origin or a third country.</p>		
<p>Exorbitant testing costs. Private sector stakeholders mentioned that the costs are much higher, because the MoA does not conduct the testing, and the PRI that do set their own testing fees, which can be more than Birr 250,000 depending upon the variety.</p>	<p>As per the Rates of Fees for Seed Competency and Related Services Fees Regulation, No. 361/ (Services Fees Regulation), cost of conducting NPT is Birr 11000 per variety per season, and DUS is Birr 4000 per variety per season.</p>	<p>MoA noted that the Services Fees Regulation is not representative of the current economic situation, and it is considering revising it.</p> <p>Under the Draft Seed Proclamation, the MoA will establish an independent authority to conduct testing as highlighted above.</p>	<p>Seed companies noted payment of exorbitant and changing fees for NPT and DUS tests as a major challenge.</p> <p>Although the legally-mandated evaluation fees are reasonable in comparison with what is charged in other neighboring countries, in practice, applicants are charged much more by public research institutions, because MoA does not actually conduct the tests. Moreover, bureaucracy and time delays were also reported, even when fees are paid.</p>	<p>Revision of the Services Fees Regulation was supported by the stakeholders.</p> <p>Private seed companies expressed that Ethiopia could possibly adopt best practices from other countries, such as Kenya, where the legally-mandated fees are applied in practice and quality service is offered that is commensurate with costs.</p>
<p>Composition of NVRC is not well balanced with representation of women, and the private sector.</p>	<p>According to the Variety Release Policy and Mechanism manual of 2001, the NVRC is comprised of four breeders, an agronomist or physiologist, an entomologist, a pathologist, an economist, a person in research and</p>	<p>No proposed clauses in the Draft Seed Proclamation.</p> <p>MoA has recommended revision to the Variety Release Policy and Mechanism Manual of 2001</p>	<p>The law does not yet ensure the representation of women and private sector in the NVRC.</p>	<p>The omission of women and the private sector on the NVRC could be addressed by revising the Variety Release Policy and Mechanism manual of 2001 to include a more</p>

<b>Existing Issue(s)</b>	<b>Existing Provisions</b>	<b>Draft Instruments</b>	<b>Challenges &amp; Constraints</b>	<b>Possible Next Steps</b>
Meeting of the NVRC is not regular.	<p>extension, and other people as may be required. The Variety Release Policy and Mechanism Manual requires NVRC members from various organizations (including the MoA, EIAR, ESE).</p> <p>These organizations are not representative of the private sector, and the current composition does not include any women.</p> <p>The 2020 Seed Policy states that the participation of women and the private sector in the variety registration and release process shall be ensured.</p> <p>The NVRC is mandated to meet at least twice a year but reportedly does not keep to this schedule.</p>	to align it with the Seed Policy and Draft Seed Proclamation, including balanced public and private sector and gender representation on the NVRC and National Performance Trial Evaluation Technical Committee (NPTC).	The NVRC does not usually follow the prescribed schedule of at least twice a year, due to limited funds.	<p>balanced NVRC representation.</p> <p>Development partners could provide support to the MoA to enable proper funding of the NVRC and facilitate regular meetings.</p>
Regularly updating the National Variety Register	<p>Article 5 of the 2013 Seed Proclamation requires the MoA to enter varieties released in the National Variety Register.</p> <p>An updated national variety register is not available online, but one is available in hard copy at the MoA.</p>	Under the Draft Seed Proclamation, the MoA shall register a variety if it is listed in a variety catalog established in accordance with an international agreement ratified by the country.		The MoA is currently developing a digital platform that should house the national variety release register online in line with the draft Seed Proclamation.
<b>Dimension 4: Plant Breeders' Right</b>				
PBR System is not fully operational due to the absence of PBR Regulations, and limited	Article 5 of the PBR Proclamation No. 1068/2017 (PBR Proclamation) has criteria for the grant of PBR.	None.	The PBR Directive is generally not known by stakeholders, yet there is a	A clear institutional framework for PBR should be established through PBR Regulations.

<b>Existing Issue(s)</b>	<b>Existing Provisions</b>	<b>Draft Instruments</b>	<b>Challenges &amp; Constraints</b>	<b>Possible Next Steps</b>
<p>popularization of the 2021 Plant Breeders' Rights Directive No. 765 of 2021 (PBR Directive).</p> <p>Process for approving PBR applications and granting provisional PBR also not clear.</p>	<p>Article 32 of the PBR Proclamation states that the Council of Ministers may issue regulations for the implementation of this Proclamation.</p>		<p>time limit on when one can claim PBR.</p>	<p>The PBR Directive should be shared more widely.</p> <p>The ATA is working with the MoA and other development partners to sensitize relevant actors about the PBR Proclamation.</p>
<p>Inaccurate DUS criteria for granting PBR to farmers.</p>	<p>As per Article 6 of the PBR Directive, farmers can apply for a grant of PBR, which is based on a more flexible application of DUS linked to minimum QDS standards, yet DUS and QDS standards are different in nature.</p>	<p>None.</p>	<p>Basing the DUS criteria for farmer varieties on minimum QDS standards is inaccurate.</p>	<p>The DUS criteria should be revised to align with international standards and best practices and de-linked from QDS standards.</p>
<b>Dimension 5: Seed Quality Assurance</b>				
<p>Inadequate staffing, limited staff mobility, inconsistency in implementing testing, and limitation in seed tracking systems in relation to field inspection for seed quality assessments.</p>	<p>As per Article 45 of the 2016 Seed Regulations, a seed inspector has the responsibility to conduct field inspection on seed and inspect whether it meets Ethiopian standard prescribed by the Ethiopia Standards Agency</p>	<p>The Draft Seed Proclamation proposes the establishment of independent institutions at the federal and regional levels for seed quality assurance.</p>	<p>The independent seed quality assurance authorities already exist in some of the regions like Oromia.</p>	<p>The legal background for the creation of the independent quality assurance authorities is dependent upon the enactment of the Draft Seed Proclamation.</p>
<p>Limited private sector involvement in the seed</p>	<p>As per Regulation 18 of the 2016 Seed Regulation, the responsibility of seed</p>	<p>The Draft Seed Proclamation introduces alternate seed quality</p>	<p>Seed certification is delayed in some regions, especially in</p>	<p>Creating a legal background for alternative seed</p>

Existing Issue(s)	Existing Provisions	Draft Instruments	Challenges & Constraints	Possible Next Steps
quality assurance process which causes delays for private seed companies and access to seed to farmers.	quality control and certification rests with the MoA and regional authorities.	assurance processes including QDS, self-seed quality assurance and authorized private or cooperative seed quality assurance schemes with oversight by relevant federal and regional institutions.	relation to applications made by private seed companies.	certification schemes is dependent upon enactment of the Draft Seed Proclamation.
<p>Certification process is not yet fully aligned with regional trade rules and international seed certification standards, including seed classes, coloring requirements, labeling, and packaging.</p> <p>Incomplete alignment with regional trade rules affects seed system development and trade in seed within regional and international markets.</p>	<p>The MoA, in collaboration with the Ethiopian Standards Agency, develops field and seed standards.</p> <p>The following seed classes and coloring requirements are recognized: breeder seed (white with diagonal violet stripes), pre-basic seed (white with diagonal violet stripes), basic seed (white), certified seed 1<sup>st</sup> generation (blue), 2<sup>nd</sup> generation (red), 3<sup>rd</sup> generation (red), 4<sup>th</sup> generation (red), and quality declared seed (color determined by the RBOA).</p>	The Draft Seed Proclamation provides that seed certification, including standards, should be aligned with international rules.		<p>Fully aligning the seed certification process with internationally recognized seed classes and coloring requirements will depend upon the revision of the Seed Regulations.</p> <p>For the avoidance of ambiguity, the regulations would have to make specific recognition of seed labels issued by regional economic communities in which Ethiopia is a member.</p>
<b>Dimension 6: Anti-Counterfeiting</b>				
Gaps in the enforcement of anti-counterfeiting rules.	Under the 2013 Seed Proclamation, Article 26, the seed standards enforcement bodies in the seed industry in Ethiopia are the MoA at the federal level and the RBAs at the regional level.	None.	MoA and RBoAs supervise companies to assess whether they have the appropriate CoCs and proper storage, and they also assess the quality of seed that is for sale. These inspections are only conducted in a few	Several important regulatory aspects of this dimension require more detailed provisions that could be made clearer under the Draft Seed Proclamation (for example, the process for filing a complaint is not clear

Existing Issue(s)	Existing Provisions	Draft Instruments	Challenges & Constraints	Possible Next Steps
			<p>Woredas within selected regions, depending upon the capacity of the respective RBoA.</p> <p>Stakeholders noted that enforcement of counterfeit seed is primarily done at the regional level and depends on the resourcefulness of the respective regional authority, making enforcement inconsistent.</p> <p>Stakeholders noted court cases brought by the Regional Bureau of Agriculture (RBoA) against alleged perpetrators, and enforcement by police through market surveillance.</p>	<p>in the legal framework, the process of informing seed dealers or conforming or non-conforming seed is not clear, and the appeal process is not clear).</p> <p>The process for filing a complaint is not clear in the legal framework, although consultations with MoA noted that a formal letter can suffice.</p> <p>The process of informing seed dealers of conforming or non-conforming seed is not clear.</p> <p>The appeal process is not clear.</p>

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